UNSW

THE UNIVERSITY OF NEW SOUTH WALES

Undergraduate Handbook

2004

The courses, programs and arrangements for delivery of Programs (including specified academic staff) as set out in this Handbook are indicative only. The University may discontinue or vary arrangements, programs and courses at any time without notice and at its discretion. While the University will try to avoid or minimise any inconvenience, changes may also be made to programs, courses and staff after enrolment. The University may set limits on the number of students in a course. Students or prospective students may obtain the most recent information from the School or Faculty if required.

This document is available in large print, on audiotape, on disk or in Braille for people with print handicap. Please contact Equity & Diversity Unit on (02) 9385 4734 or equity-diversity@unsw.edu.au

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UNSW Undergraduate Handbook

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General University Rules & Student Information

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Handbook User Guide

The University has consolidated the publication of information relating to faculties, program and course offerings into an Undergraduate Handbook and a Postgraduate Handbook. The Handbooks also provide information on some of the most important administrative rules and procedures and introduce students to many of the services available to them. It is hoped that these publications will provide students with a range of detailed information and will become an important reference source while they are studying at UNSW.

While this Handbook has been designed as a detailed source of reference in all matters related to faculties, it should be used in conjunction with other University publications, especially the UNSW Student Guide which is issued annually to students as part of the Union Diary. This A-Z guide can also be accessed on web at **www.student.unsw.edu.au**

The Handbooks contain detailed information about all the programs (degrees), plans (majors, co-majors) and courses (subjects) offered at UNSW.

Within this Handbook, program outlines are presented by faculty and you should refer to the relevant faculty section for a guide to the programs offered by the faculty and their requirements. Descriptions of the individual courses (subjects) offered in these programs, including course content, staff contacts, session and prerequisite details, are listed in the back of this Handbook under 'Course Descriptions'.

As changes may be made to information provided in this Handbook, students should consult the University and faculty web pages, faculty or departmental notice-boards and the official notice-boards of the University.

It is important that students read the 'General University Rules & Student Information' section in the Handbook and the opening sections relating to the appropriate faculty, together with the summary of programs and courses. All faculty sections contain specific information relating to undergraduate degrees with which students should be familiar.

Key to Abbreviations Used in this Book:

A	programs available to Australian Full Fee Paying Students
CCH	class contact hours
F	full-time
H	programs available on a HECS basis
HPW	hours per week
I	programs available for International Fee Paying Students
L	lecture
UOC	units of credit
P/T	part-time
Sa	Saturday
S1	Session 1
S2	Session 2
SS	single session, but which session taught is not known at time of publication
T	tutorial/laboratory
WKS	weeks of duration
X	external
X1	Summer Session
X2	Winter Session

Academic Calendar for 2004 and 2005

Faculties Other than Medicine, AGSM and University College, ADFA

	2004	2005
Summer Session (9 weeks)	8 Dec 2003 to 21 Dec 2003	13 Dec 2004 to 24 Dec 2004
Xmas recess	22 Dec 2003 to 4 Jan 2004	25 Dec 2004 to 2 Jan 2005
Summer Session continues	5 Jan to 20 Feb 2004	3 Jan to 18 Feb 2005
Session 1 (14 weeks)	1 Mar to 8 Apr	28 Feb to 24 Mar
Mid-session recess	9 Apr to 18 Apr	25 Mar to 3 Apr
Session1 continues	19 Apr to 11 Jun	4 Apr to 10 Jun
Study period	12 Jun to 17 Jun	11 Jun to 16 Jun
Examinations	18 Jun to 6 Jul	17 Jun to 5 Jul
Mid-year recess	7 Jul to 25 Jul	6 Jul to 24 Jul
Session 2 (14 weeks)	26 Jul to 24 Sep	25 Jul to 25 Sep
Mid-session recess	25 Sep to 4 Oct	26 Sep to 2 Oct
Session 2 continues	5 Oct to 5 Nov	4 Oct to 4 Nov
Study period	6 Nov to 11 Nov	5 Nov to 10 Nov
Examinations	12 Nov to 30 Nov	11 Nov to 29 Nov

Public Holidays

	2004	2005
New Year's Day	Thursday 1 January	Saturday 1 January
Australia Day	Monday 26 January	Wednesday 26 January
Good Friday	Friday 9 April	Friday 25 March
Easter Monday	Monday 12 April	Monday 28 March
Anzac Day	Monday 26 April	Monday 25 April
Queen's Birthday	Monday 14 June	Monday 13 June**
Labour Day	Monday 4 October	Monday 3 October**
Christmas Day	Saturday 25 December	Monday 26 December
Boxing Day	Monday 27 December	Tuesday 27 December

*** Subject to proclamation*

Faculty of Medicine

	2004	2005
Medicine I		
Teaching Period 1	1 Mar to 30 Apr	28 Feb to 29 Apr*
Mid-Session Break	9 Apr to 18 Apr	25 Mar to 3 Apr*
Study Break	3 May to 7 May	2 May to 8 May*
Teaching Period 2	10 May to 2 Jul	9 May to 1 Jul*
Mid-Year Break	5 Jul to 25 Jul	4 Jul to 24 Jul*
Teaching Period 3	26 Jul to 17 Sep	25 Jul to 16 Sep*
Study Break	20 Sep to 24 Sep	19 Sep to 23 Sep*
Mid-Session Break	25 Sep to 4 Oct	24 Sep to 3 Oct*
Teaching Period 4	5 Oct to 26 Nov	4 Oct to 25 Nov*

**2005 dates to be approved.*

Medicine II, III	As for other faculties	To be approved.
Medicine IV		
Teaching Period 1		
Campus Program 1	27 Jan to 30 Jan	24 Jan to 25 Jan & 27 Jan to 28 Jan
Hospital Program	2 Feb to 14 Mar	31 Jan to 13 Mar
Teaching Period 2	15 Mar to 25 Apr	14 Mar to 24 Apr
Recess	26 Apr to 2 May	25 Apr to 1 May
Teaching Period 3	3 May to 13 Jun	2 May to 12 Jun
Teaching Period 4		
Campus Program 2	15 Jun to 25 Jun	14 Jun to 24 Jun
Hospital Program	28 Jun to 8 Aug	27 Jun to 7 Aug
Recess	9 Aug to 15 Aug	8 Aug to 14 Aug
Teaching Period 5	16 Aug to 26 Sep	15 Aug to 25 Sep
Teaching Period 6	27 Sep to 7 Nov	26 Sept to 6 Nov
Medicine V		
Teaching Period 1		
Campus Program	15 Jan to 16 Jan	13 Jan to 14 Jan
Hospital Program	19 Jan to 21 Mar	17 Jan to 20 Mar
Recess	22 Mar to 28 Mar	21 Mar to 28 Mar
Teaching Period 2	29 Mar to 30 May	29 Mar to 29 May
Recess	31 May to 6 Jun	30 May to 5 Jun
Teaching Period 3	7 Jun to 8 Aug	5 Jun to 7 Aug
Recess	9 Aug to 15 Aug	8 Aug to 14 Aug
Teaching Period 4	16 Aug to 17 Oct	15 Aug to 16 Oct

Medicine VI

Teaching Period 1	Elective – variable dates	Elective – variable dates
Teaching Period 2	23 Feb to 4 Apr	21 Feb to 3 Apr
Recess	5 Apr to 11 Apr	4 Apr to 10 Apr
Teaching Period 3	12 Apr to 23 May	11 Apr to 22 May
Teaching Period 4		
Hospital Program	24 May to 4 Jul	23 May to 3 Jul
Campus Program 2	5 Jul to 16 Jul	4 Jul to 15 Jul
Recess	17 Jul to 25 Jul	16 Jul to 24 Jul
Teaching Period 5	26 Jul to 5 Sep	25 Jul to 4 Sep
Teaching Period 6	8 Sep to 17 Oct	5 Sep to 16 Oct

Important Dates in 2004

January			
	M	5	Information Day
	F	9	Last day to enrol in Summer Session courses that commence after 3 January
March			
	F	5	UNSW Payment Due Date for all Session 1 fees
	F	12	Last day to enrol in Session 1 courses
	W	31	HECS Census Date for Session 1 Last day for students to discontinue without financial penalty from Session 1 courses Last day for students to finalise HECS/PELS arrangements
April			
	M	12	AVCC Common Vacation Dates
	F	30	Last day for students to discontinue without academic penalty from Session 1 courses
May			
	T	11	Publication of the provisional timetable for the June examinations
	W	19	Last day for students to advise of examination clashes
June			
	T	1	Publication of the Final Timetable for the June examinations
	F	18	Examinations begin for faculties other than Medicine, AGSM and University College, ADFA
July			
	M	5	AVCC Common Vacation Dates
	T	6	Examinations end for faculties other than Medicine, AGSM and University College, ADFA
	F	30	UNSW Payment Due Date for all Session 2 fees
August			
	F	6	Last day to enrol in Session 2 courses
	T	31	HECS Census Date for Session 2 Last day for students to discontinue without financial penalty from Session 2 courses Last day for students to finalise HECS/PELS arrangements
September			
	S	4	UNSW Courses and Careers Day
	F	17	Last day for students to discontinue without academic penalty from Session 2 courses
	M	27	AVCC Common Vacation Dates
October			
	T	5	Publication of the provisional timetable for the November examinations
	W	13	Last day for students to advise of examination clashes
	T	26	Publication of the Final Timetable for the November examinations
November			
	F	12	Examinations begin for faculties other than Medicine, AGSM and University College, ADFA
	T	30	Examinations end for faculties other than Medicine, AGSM and University College, ADFA
December			
	F	10	Last day to enrol in Summer Session courses that commence in December

Units of Credit for Courses

The University's academic structure is based on units of credit and 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. A full-time enrolment for one year is defined as 48 units of credit (24 per session). A course has the same unit of credit value and generates the same load for HECS and 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.

Identification of Courses

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 organisational unit responsible for administering the course, 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. The authority offering the course, normally a school of the University, is indicated by the four character alphabetical prefix.

2. Each course identifier is unique and is not used for more than one course title.

Courses taught in 2004 are listed in full in the back sections of the Handbooks. The identifying prefixes for each organisational unit are set out on the following pages.

Course Prefixes

Prefix	Organisational Unit	Faculty
ACCT	School of Accounting	Commerce & Economics
ACTL	Actuarial Studies Unit	Commerce & Economics
AERO	School of Mechanical and Manufacturing Engineering	Engineering
ANAM	Department of Anatomy, School of Medical Sciences	Medicine
ANAT	Department of Anatomy, School of Medical Sciences	Medicine
ANCE	Centre for Advanced Numerical Computation	Engineering
ARCH	School of the Built Environment (Architecture)	Built Environment
ARTS	Faculty of Arts & Social Sciences	
ASIA	Faculty of Arts & Social Sciences	
ATAX	Taxation	Law
AUST	Faculty of Arts & Social Sciences	
AVEN	School of Mechanical and Manufacturing Engineering	Engineering
AVIA	Department of Aviation	Science
BEES	School of Biological, Earth and Environmental Sciences	Science
BENV	School of the Built Environment	Built Environment
BINF	School of Computer Science and Engineering	Engineering
BIOC	School of Biotechnology and Biomolecular Science	Science
BIOM	Graduate School of Biomedical Engineering	Engineering
BIOS	School of Biological, Earth and Environmental Sciences	Science
BIOT	School of Biotechnology and Biomolecular Science	Science
BSSM	Faculty of Science	
BLDG	School of the Built Environment (Building)	Built Environment
CEIC	School of Chemical Engineering and Industrial Chemistry	Engineering
CHEM	School of Chemical Sciences	Science
CHEN	School of Chemical Engineering and Industrial Chemistry	Engineering
CHIN	Department of Chinese and Indonesian Studies	Arts & Social Sciences
CMED	School of Public Health and Community Medicine	Medicine
COFA	Faculty of the College of Fine Arts	
COMD	Faculty of Arts & Social Sciences	
COMM	Faculty of Commerce & Economics	
COMP	School of Computer Science and Engineering	Engineering
CONS	School of the Built Environment (Building Construction Management)	Built Environment
CRIM	School of Social Science and Policy	Arts & Social Sciences
CVEN	School of Civil and Environmental Engineering	Engineering
DANC	School of Theatre, Film and Dance	Arts & Social Sciences
ECON	School of Economics	Commerce & Economics
EDST	School of Education	Arts & Social Sciences
ELEC	School of Electrical Engineering and Telecommunications	Engineering
ENGL	School of English	Arts & Social Sciences
ENVS	School of Biological, Earth and Environmental Sciences	Science
EURO	Faculty of Arts and Social Sciences	
FILM	School of Theatre, Film and Dance	Arts & Social Sciences
FINS	School of Banking and Finance	Commerce & Economics
FOOD	School of Chemical Sciences	Science
FREN	Department of French	Arts & Social Sciences
FUEL	School of Chemical Engineering and Industrial Chemistry	Engineering
GBAT	Business Technology Program	Commerce & Economics
GENC	Faculty of Commerce & Economics	
GEND	Faculty of the College of Fine Arts	
GENE	Faculty of Engineering	
GENL	Faculty of Law	
GENM	Faculty of Medicine	
GENQ	Faculty of Law (Taxation)	
GENR	Faculty of the Built Environment	
GENS	Faculty of Science	
GENT	Faculty of Arts & Social Sciences	
GENX	Aboriginal Research and Resource Centre	Arts & Social Sciences
GEOH	School of the Built Environment	Built Environment
GEOL	School of Biological, Earth and Environmental Sciences	Science

GEOS	School of Biological, Earth and Environmental Sciences	Science
GERS	Department of German and Russian Studies	Arts & Social Sciences
GMAT	School of Surveying and Spatial Information Systems	Engineering
GREK	School of Modern Language Studies	Arts & Social Sciences
GSBE	School of the Built Environment	Built Environment
HIST	School of History	Arts & Social Sciences
HPSC	School of History and Philosophy of Science	Arts & Social Sciences
IBUS	School of International Business	Commerce & Economics
IDES	School of the Built Environment (Industrial Design)	Built Environment
IEST	Institute of Environmental Studies	
IMGT	School of Information Systems, Technology and Management	Commerce & Economics
INDC	School of Chemical Engineering and Industrial Chemistry	Engineering
INDO	Department of Chinese and Indonesian Studies	Arts & Social Sciences
INFS	School of Information Systems, Technology and Management	Commerce & Economics
INOV	Faculty of Science	
INST	Faculty of Arts & Social Sciences	
INTA	School of the Built Environment (Interior Architecture)	Built Environment
INTD	Faculty of Arts & Social Sciences	
IRSH	Faculty of Arts & Social Sciences	
IROB	School of Industrial Relations and Organisational Behaviour	Commerce & Economics
ITAL	School of Modern Languages	Arts & Social Sciences
JAPN	Department of Japanese and Korean Studies	Arts & Social Sciences
JWST	School of Politics and International Relations	Arts & Social Sciences
KORE	Department of Japanese and Korean Studies	Arts & Social Sciences
LAND	School of the Built Environment (Landscape Architecture)	Built Environment
LATN	School of Modern Language Studies	Arts & Social Sciences
LAWS	School of Law	Law
LAWX	School of Law	Law
LEGT	School of Business Law and Taxation	Commerce & Economics
LIFE	Faculty of Science	
LING	Department of Linguistics	Arts & Social Sciences
MANF	School of Mechanical and Manufacturing Engineering	Engineering
MARK	School of Marketing	Commerce & Economics
MATH	School of Mathematics	Science
MATS	School of Materials Science and Engineering	Science
MDCM	School of Media and Communications	Arts & Social Sciences
MDCN	School of Medicine	Medicine
MDSG	Medicine/Surgery Clinical Studies	Medicine
MECH	School of Mechanical and Manufacturing Engineering	Engineering
MEDM	School of Medicine	Medicine
MFAC	Faculty of Medicine	
MGMT	Faculty of Commerce and Economics	
MICR	School of Biotechnology and Biomolecular Science	Science
MINE	School of Mining Engineering	Engineering
MODL	School of Modern Language Studies	Arts & Social Sciences
MSCI	Centre for Marine and Coastal Studies	Science
MTRN	School of Mechanical and Manufacturing Engineering	Engineering
MUSC	School of Music and Music Education	Arts & Social Sciences
NANO	School of Materials Science and Engineering	Science
NAVL	School of Mechanical and Manufacturing Engineering	Engineering
OBST	School of Women's and Children's Health	Medicine
OCEA	School of Mathematics (Oceanography)	Science
OPTM	School of Optometry and Vision Science	Science
PAED	School of Women's and Children's Health	Medicine
PATH	Department of Pathology	Medicine
PATM	Department of Pathology	Medicine
PFST	School of Theatre, Film and Dance	Arts & Social Sciences
PHCM	School of Public Health & Community Medicine	Medicine
PHIL	School of Philosophy	Arts & Social Sciences
PHPH	Department of Physiology and Pharmacology	Medicine
PHPM	Department of Physiology and Pharmacology	Medicine
PHTN	School of Electrical Engineering and Telecommunications	Engineering
PHYS	School of Physics	Science
PLAN	School of the Built Environment (Planning and Urban Development)	Built Environment
POLS	School of Politics and International Relations	Arts & Social Sciences
POLY	School of Chemical Engineering and Industrial Chemistry	Engineering
PROR	School of Medical Sciences	Medicine
PSCY	School of Psychiatry	Medicine
PSYC	School of Psychology	Science
PSYM	School of Psychiatry	Medicine
PTRL	School of Petroleum Engineering	Engineering
REST	School of the Built Environment (Building Construction Management)	Built Environment
RUSS	Department of German and Russian Studies	Arts & Social Sciences
SAED	School of Art Education	College of Fine Arts

SAHT	School of Art History and Theory	College of Fine Arts
SART	School of Art	College of Fine Arts
SCOM	Faculty of Science (Science Communication)	
SDES	School of Design Studies	College of Fine Arts
SENG	School of Computer Science and Engineering	Engineering
SESC	School of Safety Science	Science
SLSP	School of Social Science and Policy	Arts & Social Sciences
SOCA	School of Sociology & Anthropology	Arts & Social Sciences
SOCF	School of Social Work	Arts & Social Sciences
SOCW	School of Social Work	Arts & Social Sciences
SOLA	School of Electrical Engineering and Telecommunications	Engineering
SOMA	School of Design Studies	College of Fine Arts
SPAN	Department of Spanish and Latin American Studies	Arts & Social Sciences
SURG	School of Surgery	Medicine
SUSD	School of the Built Environment (Sustainable Built Environment)	Built Environment
TAHM	School of Marketing	Commerce & Economics
TELE	School of Electrical Engineering and Telecommunications	Engineering
THFI	School of Theatre, Film and Dance	Arts & Social Sciences
THST	School of Theatre, Film and Dance	Arts & Social Sciences
UDES	School of the Built Environment	Built Environment
WOMS	Faculty of Arts and Social Sciences	

University College, ADFA

ACHM	School of Chemistry	University College
ACIV	School of Civil Engineering	University College
ACSC	School of Computer Science	University College
AECM	School of Economics and Management	University College
AELE	School of Electrical Engineering	University College
AENG	School of English	University College
AGOC	School of Geography and Oceanography	University College
AHIS	School of History	University College
AIND	School of Language, Literature and Communication	University College
AINT	University College (Interdisciplinary)	
AMAT	School of Mathematics	University College
AMEC	School of Mechanical Engineering	University College
APHY	School of Physics	University College
APOL	School of Politics	University College
GENZ	University College	
ZBUS	School of Business	University College
ZPEM	School of Physical, Environmental and Mathematical Sciences	University College
ZITE	School of Information Technology and Electrical Engineering	University College
ZACM	School of Aerospace, Civil and Mechanical Engineering	University College
ZHSS	School of Humanities and Social Sciences	University College
ZINT	University College (Interdisciplinary)	
ZIND	School of Humanities and Social Sciences (Indonesian)	University College

Schedule of UNSW Undergraduate Programs

In 2003, the University introduced a new method of charging fees.

Fees for courses are now primarily charged by unit of credit (UOC) according to the classification of the course (undergraduate, postgraduate or research) and secondly by the classification of the student (international or local).

Non-award study will also be charged by UOC according to the classification of the course (undergraduate, postgraduate or research).

Please refer to '2004 Fee Schedule' which follows the 'Schedule of UNSW Undergraduate Programs'.

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

Fee Category Key:

A Programs available to Australian Full Fee Paying Students
H Available on a HECS basis
I Programs available for International Fee Paying Students
***** Programs are no longer offered to commencing students
****** Additional UOC are required for Honours

Program	Award	Code	Total UOC	Fee Category
Faculty of Arts and Social Sciences				
Arts	BA	3400	144**	A/H/I
Arts*	BA(Hons)	3401	192	A/H/I
Arts (Dance/Education)	BA(Dance)BEd	3408	192**	A/H/I
Arts (Media and Communications)	BA(Media)	3402	144**	A/H/I
Arts / Education	BABEd	4055	192**	A/H/I
International Studies	BInSt	3413-3416	192**	A/H/I
Languages	DipLang	3417	42	A/H
Music	BMus	3425	144**	A/H/I
Music	DipMus	3418	42	A/H

** no longer offered to commencing students*

Program	Award	Code	Total UOC	Fee Category
Music / Arts	BMus BA	3427	192**	A/H/I
Music / Education	BMusBEd	3426	192**	A/H/I
Social Science	BSocSc	3420/3422	144**	A/H/I
Social Science *	BSocSc(Hons)	3423	192	A/H/I
Social Work	BSW	4031	192**	A/H/I
Social Work / Arts	BSW BA	4035	240**	A/H/I
Social Work / Social Science	BSW BSocSc	4036	240**	A/H/I
Faculty of the Built Environment				
Architecture	BArch	3260	264	A/H/I
Science Architecture	BSc(Arch)	3265	144**	A/H/I
Architecture / Arts	BArch BA	3262	288	A/H/I
Architecture / Social Science	BArch BSocSc	3263	288	A/H/I
Building Construction Management	BBCM	3331	204	A/H/I
Industrial Design	BIndDes	3385	192	A/H/I
Interior Architecture	BIA	3255	192	A/H/I
Landscape Architecture	BLArch	3380	216	A/H/I
Planning	BPlan	3360	240	A/H/I
Faculty of the College of Fine Arts				
Art Education	BArtEd	4801	192	A/H/I
Art Theory	BArtTh	4803	144**	A/H/I
Art Theory / Arts	BArtTh BA	4806	192**	A/H/I
Art Theory / Social Science	BArtTh BSocSc	4807	192**	A/H/I
Design	BDes	4802	192	A/H/I
Design / Art Education	BDes BArtEd	4808	240	A/H/I
Digital Media	BDM	4810	144**	A/H/I
Fine Arts	BFA	4800	144**	A/H/I
Fine Arts / Arts	BFA BA	4812	192**	A/H/I
Faculty of Commerce and Economics				
Business Information Technology	BSc	3971	192	H
Commerce	BCom	3502	144**	H/I
Commerce / Arts	BCom BA	3525	240**	H/I
Commerce / Science	BCom BSc	3529	192**	H/I
Commerce / Social Science	BCom BSocSc	3527	240**	H/I
Economics	BEc	3543	144**	H/I
Economics / Arts	BEc BA	3526	240**	H/I
Economics / Social Science	BEc BSocSc	3528	240**	H/I
Information Systems	BSc	3979	144**	H/I
Marketing, Tourism and Hospitality Management	BCom	3571	192**	H/I
Faculty of Engineering				
Bioinformatics	BE	3647	192	A/H/I
Bioinformatics / Arts	BE BA	3756	240	A/H/I
Bioinformatics / Science	BE BSc	3755	240	A/H/I
Chemical Engineering	BE	3040	192	A/H/I
Chemical Engineering (part-time)	BSc(Tech)	3050	144	A/H
Chemical Engineering / Arts	BE BA	3043	240	A/H/I
Chemical Engineering / Biomedical Engineering	BE MBiomedE	3048	240	A/H/I
Chemical Engineering / Computer Science	BE BSc	3042	240	A/H/I
Civil Engineering	BE	3620	192	A/H/I
Civil Engineering / Arts	BE BA	3621	240	A/H/I
Civil Engineering / Environmental Engineering	BE BE	3631	240	A/H/I
Civil Engineering / Mining Engineering	BE BE	3146	240	A/H/I
Civil Engineering / Science	BE BSc	3730	240	A/H/I
Computer Engineering	BE	3645	192	A/H/I
Computer Engineering / Arts	BE BA	3722	240	A/H/I
Computer Engineering / Biomedical Engineering	BE MBiomedE	3728	240	A/H/I
Computer Engineering / Science	BE BSc	3726	240	A/H/I
Computer Science	BSc	3978	144**	A/H/I
Electrical Engineering	BE	3640	192	A/H/I
Electrical Engineering / Arts	BE BA	3720	240	A/H/I
Electrical Engineering / Biomedical Engineering	BE MBiomedE	3727	240	A/H/I
Electrical Engineering / Science	BE BSc	3725	240	A/H/I

** no longer offered to commencing students*

Program	Award	Code	Total UOC	Fee Category
Environmental Engineering	BE	3625	192	A/H/I
Environmental Engineering / Arts	BE BA	3626	240	A/H/I
Environmental Engineering / Science	BE BSc	3735	240	A/H/I
Industrial Chemistry	BE	3100	192	A/H/I
Industrial Chemistry (part-time)	BSc(Tech)	3110	144	A/H
Industrial Chemistry / Arts	BE BA	3103	240	A/H/I
Industrial Chemistry / Computer Science	BSc BSc	3102	240	A/H/I
Mechanical and Manufacturing Engineering	BE	3710	192	A/H/I
Mechanical and Manufacturing Engineering / Arts	BE BA	3712	240	A/H/I
Mechanical and Manufacturing Engineering / Science	BE BSc	3711	240	A/H/I
Mechanical Engineering / Biomedical Engineering	BE MBiomedE	3683	240	A/H/I
Mechatronic Engineering / Biomedical Engineering	BE MBiomedE	3688	240	A/H/I
Mining Engineering	BE	3140	192	A/H/I
Mining Engineering / Arts	BE BA	3144	240	A/H/I
Mining Engineering / Science	BE BSc	3142	240	A/H/I
Petroleum Engineering	BE	3045	192	A/H/I
Petroleum Engineering / Chemical Engineering*	BE BE	3046	240	A/H/I
Photonic Engineering	BE	3644	192	A/H/I
Photovoltaics and Solar Energy	BE	3642	192	A/H/I
Photovoltaics and Solar Energy / Arts	BE BA	3656	240	A/H/I
Photovoltaics and Solar Energy / Science	BE BSc	3655	240	A/H/I
Renewable Energy Engineering	BE	3657	192	A/H/I
Science / Computer Science	BSc BSc	3983	192	A/H/I
Software Engineering	BE	3648	192	A/H/I
Software Engineering / Arts	BE BA	3652	240	A/H/I
Software Engineering / Commerce	BE BCom	3653	240	A/H/I
Software Engineering / Science	BE BSc	3651	240	A/H/I
Software Engineering / Biomedical Engineering	BE MBiomedE	3749	240	A/H/I
Surveying and Spatial Information Systems	BE	3741	192	A/H/I
Surveying and Spatial Information Systems / Arts	BE BA	3747	240	A/H/I
Surveying and Spatial Information Systems / Computer Science	BE BSc	3746	240	A/H/I
Telecommunications	BE	3643	192	A/H/I
Telecommunications / Arts	BE BA	3646	240	A/H/I
Telecommunications / Biomedical Engineering	BE MBiomedE	3723	240	A/H/I
Telecommunications / Science	BE BSc	3641	240	A/H/I
Faculty of Law				
Arts / Law	BA LLB	4760	240	A/H/I
Arts (Asian Studies) / Law*	BA(AsianStudies) LLB	4762	240	A/H/I
International Studies / Law	BInSt LLB	4766-4769	288	A/H/I
Social Science / Law	BSocSc LLB	4761	240	A/H/I
Social Work / Law	BSW LLB	4785	288	A/H/I
Architecture / Law	BArch LLB	4705	336	A/H/I
Town Planning / Law	BTP LLB	4707	336	A/H/I
Art Theory / Law	BArtTh LLB	4703	240	A/H/I
Civil Engineering / Law	BE LLB	4775	288	A/H/I
Environmental Engineering / Law	BE LLB	4777	288	A/H/I
Commerce / Law	BCom LLB	4733	240	A/H/I
Accounting / Law*	BCom LLB	4732	240	A/H/I
Finance / Law*	BCom LLB	4735	240	A/H/I
Industrial Relations / Law*	BCom LLB	4750	240	A/H/I
Information Systems / Law*	BCom LLB	4736	240	A/H/I
International Business / Law*	BCom LLB	4738	240	A/H/I
Marketing / Law*	BCom LLB	4710	240	A/H/I
Economics / Law	BEc LLB	4744	240	A/H/I
Economics / Law*	BEc LLB	4745	240	A/H/I
Science / Law	BSc LLB	4770	240	A/H/I
Jurisprudence / Law	BJuris LLB	4780	240	A/H/I
Law (entry restricted to graduates only)	LLB	4790	144	A/H/I
Law (part-time)	LLB	4791	144	A/H
Taxation	BTax	4620	144	A/H/I

** no longer offered to commencing students*

Program	Award	Code	Total UOC	Fee Category
Faculty of Medicine				
Arts / Medicine	BA MB BS	3841	336	H
Arts / Medicine*	BA BSc(Med) MB BS	3840	336	H/I
Health and Sports Science	BSc	3850	192	A/H/I
Medicine	MB BS	3802	288	H/I
Medicine*	BSc(Med) MB BS	3801	288	H/I
Prosthetics and Orthotics*	BSc	3860	192	A/H/I
Science / Medicine*	BSc MB BS	3821	336	H/I
Science (Medicine) Honours	BSc(Med)Hons	3831	48	H/I
Faculty of Science				
Advanced Science	BSc	3972, 3973, 3986, 3985* 3990*	192	H/I
Advanced Science / Arts	BSc BA	3931	240	H/I
Advanced Science / Social Science	BSc BSocSc	3936	240	H/I
Applied Geography*	BSc	3010	192	A/H/I
Applied Geology*	BSc	3000	192	A/H/I
Aviation – Flying	BAv	3980	144	A/H/I
Aviation – Operations Management	BAv	3981	144	A/H/I
Bioprocess Engineering*	BE	3055	192	A/H/I
Biotechnology	BSc	3052	192	A/H/I
Ceramic Engineering*	BE	3025	192	A/H/I
Ceramics (part-time)	BSc(Tech)	3030	144	A/H
Communications	BSc(Comm)	3993	144**	A/H/I
Environmental Science	BEnvSc	3988	192	A/H/I
Environmental Science / Arts	BEnvSc BA	3932	240	A/H/I
Food Science (Honours)	BSc(Hons)	3065	48	H/I
Food Science and Technology	BSc	3060	192	A/H/I
Food Science and Technology (part-time)	BSc(Tech)	3070	144	A/H
Innovation Management	DipInnovMan	3451	36	H/I
Materials Engineering*	BMatE	3615	192	A/H/I
Materials Science and Engineering	BE	3135	192	A/H/I
Materials Science and Engineering/Biomedical Engineering	BE MBiomedE	3138	240	A/H/I
Media and Communications	BSc(Media)	3994	144**	A/H/I
Medical Science	BMedSc	3991	144**	A/H/I
Metallurgical Engineering*	BMetE	3125	192	A/H/I
Metallurgy (part-time)	BSc(Tech)	3130	144	A/H
Nanotechnology	BSc	3617	192	A/H/I
Optometry	BOptom	3950	192	A/H/I
Psychology	BPsychol	3432	192	A/H/I
Safety Science*	BSc	3877	192	H/I
Science and Mathematics	BSc	3970	144**	A/H/I
Science / Arts	BSc BA	3930	192**	A/H/I
Science / Education	BScBEd	4075	192**	A/H/I
Science / Optometry	BSc BOptom	3951	240**	A/H/I
Science / Social Science	BSc BSocSc	3935	192	A/H/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	

** no longer offered to commencing students*

Course Prefixes and Associated Fees Per Unit of Credit

A standard session academic load is 24 units of credit.

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 x $390 = $2340.00

2004 Fee Schedule

			Course Classification		
			Undergraduate	**Postgraduate**	
			Student Classification		
Course Details			**Local and International Undergraduate Fee**	**Postgraduate International Fee**	**Postgraduate Local Fee**
Faculty and Course Prefixes	**Organisational Unit**	**Course ID Level (where applicable)**	**Fee Band per unit of credit**		
Faculty of Arts and Social Sciences					
ARTS	Faculty of Arts and Social Sciences		340	340	260
ASIA	Faculty of Arts and Social Sciences		340	340	260
AUST	Faculty of Arts and Social Sciences		340	340	260
CHIN	Department of Chinese and Indonesian Studies		340	340	260
COMD	Faculty of Arts and Social Sciences		340	340	260
CRIM	School of Social Science and Policy		340	340	260
DANC	School of Theatre, Film and Dance		340	340	260
EDST	School of Education		340	340	260
ENGL	School of English		340	340	260
EURO	Faculty of Arts and Social Sciences		340	340	260
FILM	School of Theatre, Film and Dance		340	340	260
FREN	Department of French		340	340	260
GENT	Faculty of Arts and Social Sciences		340	na	na
GERS	Department of German and Russian Studies		340	340	260
GREK	School of Modern Language Studies		340	340	260
HIST	School of History		340	340	260
HPSC	School of History and Philosophy of Science		340	340	260
INDO	Department of Chinese and Indonesian Studies		340	340	260
INST	Faculty of Arts and Social Sciences		340	340	260
INTD	Faculty of Arts and Social Sciences		340	340	260
IRSH	Faculty of Arts and Social Sciences		340	340	260
ITAL	Faculty of Arts and Social Sciences		340	340	260
JAPN	Department of Japanese and Korean Studies		340	340	260
JWST	School of Politics and International Relations		340	340	260
KORE	Department of Japanese and Korean Studies		340	340	260
LATN	School of Modern Language Studies		340	340	260
LING	Department of Linguistics		340	340	260
MDCM	School of Media and Communications		340	340	260
MODL	School of Modern Language Studies		340	340	260
MUSC	School of Music and Music Education		340	340	260
PFST	School of Theatre, Film and Dance		340	340	260
PHIL	School of Philosophy		340	340	260
POLS	School of Politics and International Relations		340	340	260
RUSS	Department of German and Russian Studies		340	340	260
SLSP	School of Social Science and Policy		340	340	260
SOCA	School of Sociology & Anthropology		340	340	260
SOCF	School of Social Work		na	na	315
SOCW	School of Social Work		340	340	260
SPAN	Department of Spanish and Latin American Studies		340	340	260

Course Details			Local and International Undergraduate Fee	Postgraduate International Fee	Postgraduate Local Fee
Faculty and Course Prefixes	**Organisational Unit**	**Course ID Level (where applicable)**	**Fee Band per unit of credit**		
THFI	School of Theatre, Film and Dance		340	340	260
THST	School of Theatre, Film and Dance		340	340	260
WOMS	Faculty of Arts and Social Sciences		340	340	260
Australian Graduate School of Management					
MNGT	Australian Graduate School of Management		Refer to Australian Graduate School of Management for Fee Schedule		
Faculty of Built Environment					
ARCH	Faculty of the Built Environment (Architecture)		390	390	290
BENV	Faculty of the Built Environment		390	390	290
BLDG	Faculty of the Built Environment (Building)		390	390	290
CONS	Faculty of the Built Environment (Building Construction Management)		390	390	290
GENR	Faculty of the Built Environment		340	na	na
GEOH	Faculty of the Built Environment		390	390	290
GSBE	Faculty of the Built Environment		390	390	290
HERI	Faculty of the Built Environment		390	390	290
IDES	Faculty of the Built Environment (Industrial Design)		390	390	290
INTA	Faculty of the Built Environment (Interior Architecture)		390	390	290
LAND	Faculty of the Built Environment (Landscape Architecture)		390	390	290
PLAN	Faculty of the Built Environment (Planning and Urban Development)		390	390	290
REST	Faculty of the Built Environment (Building Construction Management)		390	390	290
SUSD	Faculty of the Built Environment		390	390	290
UDES	Faculty of the Built Environment		390	390	290
College of Fine Arts					
COFA	College of Fine Arts		390	390	290
GEND	College of Fine Arts		340	na	na
SAED	School of Art Education		390	390	290
SAHT	School of Art History and Theory		390	390	290
SART	School of Art		390	390	290
SDES	School of Design Studies		390	390	290
SOMA	School of Design Studies		390	390	290
Faculty of Commerce & Economics					
ACCT	School of Accounting		390	445	315
ACTL	School of Economics (Actuarial Studies)		390	445	315
COMM	Faculty of Commerce and Economics		390	445	315
ECON	School of Economics		390	445	315
FINS	School of Banking and Finance		390	445	315
GBAT	Business and Technology Programs		na	445	315
GENC	Faculty of Commerce and Economics		340	na	na
IBUS	School of International Business		390	445	315
IMGT	School of Information Systems, Technology and Management		390	445	315
INFS	School of Information Systems, Technology and Management		390	445	315
IROB	School of Industrial Relations and Organisational Behaviour		390	445	315
LEGT	School of Business Law and Taxation		390	445	315
MARK	School of Marketing		390	445	315
MGMT	Faculty of Commerce and Economics		390	445	315
TAHM	School of Marketing		390	445	315
Faculty of Engineering					
AERO	School of Mechanical and Manufacturing Engineering		445	445	290

Course Details			Local and International Undergraduate Fee	Postgraduate International Fee	Postgraduate Local Fee
Faculty and Course Prefixes	Organisational Unit	Course ID Level (where applicable)	Fee Band per unit of credit		
AVEN	School of Mechanical and Manufacturing Engineering		445	445	290
BINF	School of Computer Science and Engineering		445	445	290
BIOM	Graduate School of Biomedical Engineering		445	445	290
CEIC	School of Chemical Engineering and Industrial Chemistry		445	445	290
CHEN	School of Chemical Engineering and Industrial Chemistry		445	445	290
COMP	School of Computer Science and Engineering		445	445	290
CVEN	School of Civil and Environmental Engineering		445	445	290
ELEC	School of Electrical Engineering and Telecommunications		445	445	290
FUEL	School of Chemical Engineering and Industrial Chemistry		445	445	290
GENE	Faculty of Engineering		340	na	na
GMAT	School of Surveying and Spatial Information Systems		445	445	290
INDC	School of Chemical Engineering and Industrial Chemistry		445	445	290
MANF	School of Mechanical and Manufacturing Engineering		445	445	290
MECH	School of Mechanical and Manufacturing Engineering		445	445	290
MINE	School of Mining Engineering		445	445	290
MINP	School of Chemical Engineering and Industrial Chemistry		445	445	290
MNNG	School of Mining Engineering		na	na	375
MTRN	School of Mechanical and Manufacturing Engineering		445	445	290
NAVL	School of Mechanical and Manufacturing Engineering		445	445	290
PHTN	School of Electrical Engineering and Telecommunications		445	445	290
POLY	School of Chemical Engineering and Industrial Chemistry		445	445	290
PTRL	School of Petroleum Engineering		445	445	290
SENG	School of Computer Science and Engineering		445	445	290
SOLA	Centre for Photovoltaic Engineering		445	445	290
TELE	School of Electrical Engineering and Telecommunications		445	445	290
Faculty of Law					
ATAX	Faculty of Law (Taxation)		390	390	290
GENL	Faculty of Law		340	na	na
GENQ	Faculty of Law (Taxation)		340	na	na
LAWS	School of Law		390	390	290
LAWX	School of Law		390	390	290
Faculty of Medicine					
ANAT	School of Medical Sciences		445	na	na
ANAM	School of Medical Sciences		695	na	na
CMED	School of Public Health and Community Medicine		695	na	na
CMED	School of Public Health and Community Medicine	9539 to 9550	na	390	290
GENM	Faculty of Medicine		340	na	na
MDCN	School of Medicine		695	na	na
MDSG	Faculty of Medicine		695	na	na
MEDM	School of Medicine		445	na	na
MFAC	Faculty of Medicine		695	na	na
OBST	School of Women's and Children's Health		695	na	na
PAED	School of Women's and Children's Health		695	na	315
PATH	School of Medical Sciences		445	na	na
PATM	School of Medical Sciences		695	na	na
PHCM	School of Public Health and Community Medicine		695	340	260

Course Details			Local and International Undergraduate Fee	Postgraduate International Fee	Postgraduate Local Fee
Faculty and Course Prefixes	**Organisational Unit**	**Course ID Level (where applicable)**	**Fee Band per unit of credit**		
PHCM	School of Public Health and Community Medicine	0006 0007 9001 9002 9200 9201 9300 9301 9506	na	na	na
PHCM	School of Public Health and Community Medicine	9003 9004 9801	na	na	na
PHPH	School of Medical Sciences		445	na	na
PHPH	School of Medical Sciences	5413 5414 5416 5417 5423 5424 5426 5433 5443 5445 5513 5514 5516 5517 5523 5526 5533 5543 5613 5623 5633 5643	na	340	315
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	445	315
PHPM	School of Medical Sciences		695	na	na
PHYS	Faculty of Medicine		445	na	na
PROR	School of Medical Sciences		445	na	na
PSCY	School of Psychiatry		445	na	na
PSYM	School of Psychiatry		695	na	na
SURG	School of Surgery		695	na	na
Faculty of Science					
AVIA	Department of Aviation		445	445	290
BEES	School of Biological, Earth and Environmental Sciences		445	445	290
BIOC	School of Biotechnology and Biomolecular Science		445	445	290
BIOD	School of Biotechnology and Biomolecular Science		445	445	290
BIOS	School of Biological, Earth and Environmental Sciences		445	445	290
BSSM	Faculty of Science		445	445	290
BIOT	School of Biotechnology and Biomolecular Science		445	445	290
CHEM	School of Chemical Sciences		445	445	290
ENVS	Faculty of Science		445	445	290
FOOD	School of Chemical Sciences		445	445	290
GENS	Faculty of Science		340	na	na
GENB	Faculty of Science		340	na	na
GEOG	School of Biological, Earth and Environmental Sciences		445	445	290
GEOL	School of Biological, Earth and Environmental Sciences		445	445	290
GEOS	School of Biological, Earth and Environmental Sciences		445	445	290
INOV	Faculty of Science		445	445	290
LIFE	Faculty of Science		445	445	290
MATH	School of Mathematics		445	445	290
MATS	School of Materials Science and Engineering		445	445	290
MICM	School of Biotechnology and Biomolecular Science		445	445	290
MICR	School of Biotechnology and Biomolecular Science		445	445	290
MSCI	Centre for Marine and Coastal Studies		445	445	290
NANO	School of Materials Science and Engineering		445	445	290
OCEA	School of Mathematics (Oceanography)		445	445	290
OPTM	School of Optometry and Vision Science		445	445	290
PHYS	School of Physics		445	445	290
PSYC	School of Psychology		445	445	290
SCOM	Faculty of Science		445	445	290
SESC	School of Safety Science		445	445	290

Course Details			Local and International Undergraduate Fee	Postgraduate International Fee	Postgraduate Local Fee
Faculty and Course Prefixes	**Organisational Unit**	**Course ID Level (where applicable)**	**Fee Band per unit of credit**		
University College – Australian Defence Force Academy					
ACHM	Chemistry		na	390	290
ACIV	Civil Engineering		na	390	290
ACSC	Computer Science		na	390	290
AECM	Economics & Mgt		na	390	290
AELE	Electrical Engineering		na	390	290
AENG	English		na	390	290
AGOC	Geography & Oceanography		na	390	290
AHIS	History		na	390	290
AIND	Indonesian		na	390	290
AINT	University College (Interdisciplinary)		na	390	290
AMAT	Mathematics		na	390	290
AMEC	Mechanical Engineering		na	390	290
APHY	Physics		na	390	290
APOL	Politics		na	390	290
ZBUS	School of Business		na	390	290
ZPEM	School of Physical, Environmental and Mathematical Sciences		na	390	290
ZITE	School of Information Technology and Electrical Engineering		na	390	290
ZACM	School of Aerospace, Civil and Mechancial Engineering		na	390	290
ZHSS	School of Humanities and Social Sciences		na	390	290
ZINT	University College (Interdisciplinary)		na	390	290
ZIND	School of Humanities & Social Sciences		na	390	290
Non Faculty Specific					
GENX	Aboriginal Research and Resource Centre		340	na	na
IEST	Institute of Environmental Studies		390	445	290

NewSouth Q (Student Enquiries)

NewSouth Q (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.

NewSouth Q is located on the lower ground floor of the Chancellery, open 8.30am – 5.30pm Monday – Thursday, 8.30am – 5.00pm on Fridays.

Information regarding fees, online enrolment, policies and procedures is also available on the web. Please refer, in the first instance, to the **Student Gateway** at **www.student.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 and graduate programs and admission requirements. This office is located in Rm LG20, The Chancellery Building and is open from 9am-5pm, Monday to Friday.

Tel: (02) 9385 1844/1866

Email: studentrecruitment@unsw.edu.au

Program information for prospective local students can also found at **www.unsw.edu.au** by accessing Future Student. Faculty information can be obtained by accessing faculties under Quick Links at **www.unsw.edu.au**

UNSW International is the initial referral point for **international students** for information on undergraduate and graduate programs and admission requirements. This office is located at the Red Centre Building.

Tel: 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 9am to 5pm Monday-Friday.

University College, Australian Defence Force Academy: The Student Centre (Student Administrative Services) is located on the Top Floor in the Administration Building, telephone (02) 6268 6000. It is open from 8.30am to 5pm Monday – Thursday and 8.30am – 4pm Friday.

Admission Requirements

You will be considered for admission to undergraduate courses at UNSW on the basis of your performance in:

- Australian Year 12 studies and/or
- Tertiary or post-secondary studies and/or
- Overseas qualifications considered equivalent to Australian studies and/or
- One of the alternative entry schemes listed below.

Some courses also have additional selection criteria such as audition, interview, and/or questionnaire.

For some degree programs and first year courses, it is also assumed that students, through their high school studies (or other equivalent study), will have achieved a level of knowledge of the subject area that is considered desirable for successful university level study. (See 'Assumed Knowledge' below).

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.

All **local applicants** 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). Students are notified by UAC of the result of their applications and provided with information regarding procedures to be followed to accept an offer of a place at UNSW. The UAC Guide, available in August, outlines admission and application requirements and procedures for all UNSW undergraduate programs. Please refer to the UAC website at **www.uac.edu.au** or telephone (02) 9752 0200

If you are an **international applicant completing Year 12 in Australia in 2003** you must apply thorough the Universities Admissions Centre (UAC). Contact details are as above.

All other **international applicants** (i.e. those 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) need to apply for admission directly to UNSW. Please refer to UNSW International's website at **www.international.unsw.edu.au** for further information, entry requirements and application procedures or telephone (+61 2) 9385 6996. You will need to provide certified copies of your original documents, including your academic transcripts from high school and any post-secondary study as well as evidence of English proficiency (see 'English proficiency' below).

Mid-Year Admission: UNSW accepts applications for admission from Session 2 each year in a limited number of undergraduate programs. Local students will need to apply through the Universities Admissions Centre and should contact the Student Recruitment Office for further information (telephone (02) 9385 1866, email studentrecruitment@unsw.edu.au). International students should contact UNSW International above.

Assumed Knowledge

For some degree programs and first year courses, it is assumed that students, through their high school studies (or other equivalent study), will have achieved a level of knowledge of the subject area that is considered desirable for successful university-level study. The table below sets out the level of achievement assumed in terms of the NSW Higher School Certificate.

Students who do not have the level of assumed knowledge are not prevented from enrolling but may be placed at a considerable disadvantage. Any students who have not achieved the recommended level of assumed knowledge are strongly advised that it is in their best interest to undertake a **bridging course** or other appropriate preparation before enrolling. There is a charge for these programs. Information on available bridging courses is available from the UAC Admissions Office at NewSouth Q, telephone 1300 36 UNSW (1300 36 8679). UNSW also offers introductory level courses which can be taken in the first year of study. Undertaking an introductory course may extend the total time for completion of the degree.

It is also assumed that students are competent at communicating in written and spoken English when they enrol in programs at UNSW. Many courses require you to make presentations, do assignments or write essays, and without a high level of written and spoken English, you will find it difficult to perform well in these courses. See English Proficiency, below.

Assumed Knowledge

Program	Assumed Knowledge (A) / Recommended Knowledge (R)
COFA (Art and Design)	
Fine Arts, Fine Arts/Arts	(A) Visual Arts
Art Education	(A) Visual Arts
Design	(A) Visual Arts
Art Theory, Art Theory/Arts, Art Theory/Social Science	None
Design/Art Education	(A) Visual Arts
Digital Media	None

Program	Assumed Knowledge (A) / Recommended Knowledge (R)
Arts and Social Sciences	
Arts	None
Media and Communications	None
Arts/Education	None
Arts (Dance)/Education	None
Music, Music/Arts	None
Music/Education	None
Social Science	None
Social Work, Social Work/Arts, Social Work/Social Science	None
International Studies	None
Criminology	None
Built Environment	
Architecture, Architecture/Arts, Architecture/Social Science	None
Building Construction Management	(R) Physics and Mathematics
Industrial Design	(A) Mathematics (R) Physics or Engineering Studies
Interior Architecture	None
Landscape Architecture	(R) Geography and Visual Arts plus Biology or Chemistry or Earth and Environmental Science or Physics
Science (Architecture)	(R) Mathematics and Physics and Chemistry and Engineering Studies depending on likely area of specialisation
Planning	None
Commerce and Economics	
Commerce, Commerce/Arts, Commerce/ Social Science	(A) Mathematics
Marketing, Tourism and Hospitality Mngt	(A) Mathematics
Economics, Economics/Arts, Economics/Social Science	(A) Mathematics
Commerce/Science	(A) Mathematics, see Science details
Information Systems, Business Information Technology	(A) Mathematics, see Science details
Engineering	
Materials Science and Engineering	(A) HSC Mathematics Extension 1, Physics and/or Chemistry
Chemical	(A) HSC Mathematics Extension 1, Physics and/or Chemistry
Mining	(A) HSC Mathematics Extension 1, Physics and/or Chemistry
Petroleum	(A) HSC Mathematics Extension 1, Physics and/or Chemistry
Civil, Civil/Mining	(A) HSC Mathematics Extension 1 and Physics
Computer, Computer/Arts, Computer/Science	(A) HSC Mathematics Extension 1 and Physics
Electrical	(A) HSC Mathematics Extension 1, Physics and/or Chemistry
Environmental, Environmental/Civil	(A) HSC Mathematics Extension 1, Physics and/or Chemistry
Surveying and Spatial Information Systems	(A) HSC Mathematics Extension 1, Physics and/or Chemistry
Aerospace, Manufacturing and Management, Mechanical, Mechatronics, Naval Architecture	(A) HSC Mathematics Extension 1, Physics and/or Chemistry
Software, Software/Arts, Software/Science	(A) HSC Mathematics Extension 1
Telecommunications	(A) HSC Mathematics Extension 1 and Physics
Photovoltaics and Solar Engineering, Renewable Energy	(A) HSC Mathematics Extension 1, Physics and/or Chemistry
Engineering/Arts	(A) HSC Mathematics Extension 1, Physics and/or Chemistry
Engineering/Science	(A) HSC Mathematics Extension 1, Physics and/or Chemistry
Engineering/Biomedical Engineering	(A) HSC Mathematics Extension 1, Physics and/or Chemistry
Computer Engineering/Biomedical Engineering	(A) HSC Mathematics Extension 1, Physics and/or Chemistry
Bioinformatics, Bioinformatics/Arts, Bioinformatics/Science	(A) HSC Mathematics Extension 1, Physics and/or Chemistry
Photonics	(A) HSC Mathematics Extension 1 and Physics
Material Science / Biomedical	(A) HSC Mathematics Extension 1, Physics and/or Chemistry
Industrial Chemistry	(A) HSC Mathematics Extension 1, Physics and/or Chemistry
Law	
Law (Combined)	None / for other area of study refer to relevant entry
Law (graduates only) Full Time	None
Law (graduates only) Part Time	None
Taxation (Distance Education)	None
Medicine	
Medicine/Surgery, Arts/Medicine/Surgery	(A) English Advanced (R) Chemistry
Science	
Science	(A) Mathematics and Chemistry plus one or more of Biology, Earth & Environmental Science, Physics. HSC Mathematics Extension 1 (depending on chosen area of study),

Program	Assumed Knowledge (A) / Recommended Knowledge (R)
Science/Arts, Science/Social Science	(A) Mathematics and Chemistry plus one or more of Biology, Earth & Environmental Science, Physics. HSC Mathematics Extension 1 (depending on chosen area of study),
Science/Education	(A) Mathematics and Chemistry plus one or more of Biology, Earth & Environmental Science, Physics. HSC Mathematics Extension 1 (depending on chosen area of study),
Science (Communications)	(A) Mathematics and Chemistry plus one or more of Biology, Earth & Environmental Science, Physics. HSC Mathematics Extension 1 (depending on chosen area of study), (R) English Advanced
Science (Media and Communications)	(A) Mathematics and Chemistry plus one or more of Biology, Earth & Environmental Science, Physics. HSC Mathematics Extension 1 (depending on chosen area of study),
Health and Sports Science	(A) Mathematics and Chemistry (R) Biology and/or Physics
Medical Science	A) Mathematics and Chemistry (R) Biology and/or Physics
Environmental Science	(A) Mathematics and Chemistry (R) Earth and Environmental Science or Biology or Physics
Nanotechnology	(A) HSC Mathematics Extension 1 and Physics and Chemistry
Prosthetics and Orthotics	(A) Mathematics and Chemistry (R) Biology
Advanced Science	(A) Mathematics and Chemistry plus one or more of Biology, Earth & Environmental Science, Physics. HSC Mathematics Extension 1 (depending on chosen area of study),
Aviation (Flying)	(A) Mathematics (R) Physics
Aviation (Management)	(A) Mathematics (R) Physics
Biotechnology	(A) Mathematics and Chemistry (R) Biology
Computer Science	(A) HSC Mathematics Extension 1 (R) Software Design and Development or Information Processes and Technology
Food Science and Technology	(A) Mathematics and Chemistry (R) Physics
Optometry	(A) Mathematics and Chemistry and English Advanced (R) Physics
Psychology	(A) Mathematics (R) Biology or Chemistry or Earth and Environmental Science or Physics
ADFA	
Arts	None
Science	None
Aeronautical Engineering	(A) Mathematics, Chemistry and Physics
Civil Engineering	(A) Mathematics, Chemistry and Physics
Electrical Engineering	(A) Mathematics, Chemistry and Physics
Mechanical Engineering	(A) Mathematics, Chemistry and Physics
Technology (Aeronautical Engineering)	(A) Mathematics, Chemistry and Physics
Technology (Aviation)	(A) Mathematics, Chemistry and Physics

Where Mathematics is listed as assumed knowledge, you are expected to have achieved performance at Band 4. If you have undertaken General Mathematics you will not have achieved the recommended level of assumed knowledge.

For all other HSC subjects listed above, you are expected to have achieved a level of performance at Band 4.

If you have undertaken Senior Science, you will not have achieved the recommended level of assumed knowledge for university level physics or chemistry.

English Proficiency

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 who first language is not English but who have undertaken at least one year 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.

Candidates who provide an English test score which fails to meet the minimum standard required by UNSW or who fail to provide any evidence of English language proficiency, will be assessed for eligibility for admission (with the exception of Commerce programs – see below) and, if successful, will be issued with a conditional offer of admission. A full offer of admission will be issued only when the English language proficiency has been met.

Candidates for all programs offered by the Faculty of Commerce and Economics, other than postgraduate research programs, must provide evidence that they satisfy the University's English requirements with their application.

For information regarding accepted tests of English competence refer to the website at **www.international.unsw.edu.au/prospective/entry_english.shtml** or contact the Direct Admissions Office on (+61 2) 9385 3656.

Admission Based on Equivalent Qualifications

Most applicants seeking admission to UNSW have completed the NSW Higher School Certificate or interstate equivalent. However, UNSW also accepts other qualifications, including:

1. Overseas Secondary and/or Tertiary Qualifications

May be assessed by the University as meeting the equivalent level for admission to a particular program.

2. NSW TAFE Associate Diploma, Diploma, Advanced Diploma or Certificate IV

Applicants holding completed approved TAFE qualifications are eligible to be considered for admission. Trade certificates are not acceptable for admission purposes.

3. Previous Tertiary Studies

A person who has successfully completed the equivalent of at least one whole year of a degree course at any recognised tertiary institution.

4. Open Learning

Applicants who have successfully completed four one-unit Open Learning degree level courses are eligible to be considered for admission. However, due to high demand for places in most programs, successful applicants generally will have completed at least eight one-unit courses with credit average results.

5. Foundation Year Program

Students may qualify for admission to undergraduate programs by successfully completing the Foundation Year Program or a recognised equivalent program. The Foundation Year Program is conducted at eight locations, the Kensington campus of the University, St Paul's International College Moss Vale, Pittwater House International Sydney, Swan College Perth, Australian International School Singapore, Uniprep Jakarta Indonesia, Kolej Damansara Utama Malaysia and the University of Otago Dunedin New Zealand. Please refer to the website at **www.ufy.unsw.edu.au** or telephone (+61 2) 9385 5396 for further information.

Alternative Entry to the University

Some avenues of alternative entry are available for (i) older students, (ii) Australian Aboriginal and Torres Strait Islander students and (iii) educationally disadvantaged students. These avenues of alternative entry are for local applicants and are described below.

Older Students

There are three avenues of entry available for older students.

(1) Applicants who are 20 years of age or older may qualify for entry to the University by completing 10 session units of study in the Certificate in Tertiary Preparation conducted by TAFE. For further information on the TPC, contact a counsellor at a college of TAFE.

(2) Applicants who are 21 years of age or older may qualify for entry to the University by undertaking 5 units of Category A courses, including English at the NSW Higher School Certificate examination and obtaining a Limited UAI. Applicants must undertake no more than nine units. The Certificate of Matriculation is undertaken at a college of TAFE.

(3) Local applicants over the age of 21 on March 1 2004 may also apply for admission to certain programs on successful completion of the University Preparation Program (UPP). The UPP is designed to help students develop the skills and strategies needed to successfully manage the demands of tertiary study.

The UPP is available in Session 1 as a 14 week or 28 week course and in Session 2 as a 14 week course. Applications open in December for the Session 1 course and in May for the Session 2 course. The cost of the program is $550 (Humanities Stream) or $800 (Science Stream) which is paid at the time of application. A limited number of reduced fee places are available for applicants in receipt of Centrelink allowances or pensions or who can otherwise demonstrate financial hardship. Applications forms are available from the UAC Admissions Office at **NewSouth Q (Student Enquiries)** or telephone (02) 9385 3228.

Points to Note:

- Entry to the Medicine or Optometry programs is not possible via the TAFE Certificate in Tertiary Preparation, Certificate of Matriculation, or the University Preparation Program.
- In addition, the UPP is not accepted for entry to the Bachelor of Psychology program.
- Completion of the Certificate of Matriculation, the TPC or UPP does not ensure entry. Selection into all programs is based on academic merit in competition with other applicants. Some programs require applicants to attend an audition or interview.
- Certain programs have assumed knowledge. Refer to the section on assumed knowledge.
- Any application for admission based on results in the Certificate of Matriculation, the TPC or UPP must be made through the Universities Admissions Centre (**www.uac.edu.au**).
- Any enquiries concerning the above should be directed to the UAC Admissions Office at **NewSouth Q (Student Enquiries)**, telephone: 1300 36 UNSW (1300 36 8679).

Aboriginal Education Program

The University provides an alternative entry scheme for Australian Aboriginal and Torres Strait Islander applicants. It is not necessary for applicants to have attempted the HSC or equivalent in order to apply for admission under this scheme although applicants must demonstrate general preparedness for tertiary study and the capacity to succeed in their chosen area of study. Preparation programs are available in Built Environment, Commerce and Economics, Law and Medicine.

All enquiries relating to this scheme should be directed to the Aboriginal Education Program, telephone (02) 9385 3805, website **www.aep.unsw.edu.au**

ACCESS Scheme

The ACCESS scheme is designed primarily to assist new to higher education applicants of high academic potential whose education has been disadvantaged by circumstances beyond their control over a substantial period of time. It is available for admission to all undergraduate programs at the University and is open to all citizens and permanent residents of Australia only.

The range of circumstances that may have contributed to educational disadvantage could include: disability, prolonged illness or medical condition, financial hardship, English language difficulties, rural isolation, serious family illness.

Applicants who are eligible under the scheme will be considered for places in programs below the standard program cut-offs. Those admitted under the Access scheme will receive special assistance during their first year at University.

Further information about the scheme may be obtained from the Admissions Officer (Equity Programs), telephone (02) 9385 3089.

Admission with Advanced Standing and Credit Transfer

The following rules apply to credit granted in undergraduate degrees or awards.

(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/Board of Studies 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.

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

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.

Student Fees

1. Student Activity Fees

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

a) Session Subscriptions:
These are charged and payable each session. Due dates are the same as for HECS and tuition fees. Subscriptions are adjusted annually by a system of indexation and those set out below have been approved for 2004. Please note that, as explained below, GST is applicable to these fees.

Kensington Campus:

University Union per session subscription:

full-time students: $119.50
part-time students: $95.00

Sports Association per session subscription:

full-time students: TBA
part-time students: TBA

Student Guild per session subscription:

full-time students: $31.00
part-time students: $24.00

College of Fine Arts:

College of Fine Arts Students' Association per session subscription:

full-time students: $123.00
part-time students: $77.00

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) 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 session or sessions 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 Session Subscriptions but not the Miscellaneous Activity Fee. Students who consider themselves eligible for a Session 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 NewSouth Q.

(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 and Deputy Principal 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 and Deputy Principal on production of an appropriate statement from the supervisor or Head of School.

(7) The Registrar and Deputy Principal 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.

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 and Deputy Principal 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.

2. Higher Education Contribution Scheme (HECS)

The Higher Education Contribution Scheme (HECS) is a scheme introduced by the Commonwealth Government in 1989 whereby students contribute towards the cost of their higher education. All students are liable for HECS unless exempted from the charge. The categories of HECS exemptions are set out below.

HECS is calculated each session at the HECS census dates and represents the proportion of the normal full-time equivalent load for the year of the program in which the student is enrolled. The load for full-year courses is assessed and reported separately for Session 1 and Session 2. Load for Summer Session courses is assessed when teaching in the courses begins and is reported at the same time as Session 1 load. Similarly, courses studied in the mid-year break (Winter Session) are assessed when teaching in the courses begins and reported at the same time as Session 2 load. Students are assessed for Session 1 course load and the Session 1 load of full-year courses on 31 March and for Session 2 course load and the Session 2 load of full-year courses on 31 August.

For most students there are two options available for payment of the charge. Students may pay 'up-front' and receive a 25% discount on the calculated charge or 'defer' payment in which case their liability is discharged through the taxation system when their income reaches certain levels. At enrolment each student must choose a payment option and complete the HECS Payment Options Form. The Commonwealth Government requires that New Zealand citizens and permanent residents of Australia who do not meet the prescribed residency requirements or whose term address is overseas pay their HECS contribution up-front without a discount.

Students who want to make a partial up front payment of $500 or more of their HECS liability for a session will receive a 25% discount on the amount paid. When a partial up front payment is made, the remaining HECS contribution will be deferred for payment through the tax system. This discount does not apply retrospectively and is only applicable to partial up-front payments of $500 or more. See item 2.12: *Deadlines for Payment of Fees, Charges and HECS* in the following entry 'Enrolment and Progression Rules and Procedures' in this Handbook.

Students who wish to pay up-front must follow the instructions they receive at enrolment and make the payment within the specified time. Students who elect the up-front option may also provide a Tax File Number (TFN) so that if they fail to pay up-front by the census date the payment will default to the deferred option. Students who do not provide their TFN and who have not paid up-front HECS by the due date will be disenrolled.

The deferred payment option requires students to provide their Tax File Number. Those who have not been issued with a TFN or do not know their TFN will need to complete a Tax File Number Application/Enquiry Form with ATO prior to the relevant census date and provide a copy of the ATO Certificate to NewSouth Q before census date.

After the HECS census dates, the University will provide an online Notice of Liability of your HECS contribution for the session. Students are required to confirm their enrolment details and HECS liability information on the web via the Student Gateway within 14 days of the date of the notice. For those students who have chosen the deferred payment option, the liability that appears on the form will be reported to the Australian Taxation Office.

Details of 2004 HECS charges are available from NewSouth Q.

Students who change their program or commence a new program are required by legislation to complete a new payment option form.

2.1 HECS Exemptions

(1) All students who have received an Australian Postgraduate Award (without stipend).

(2) Full-fee paying and sponsored overseas students.

(3) Students awarded an approved Government Equity Scholarship.

(4) All students enrolled in programs where tuition fees are payable.

Further information about HECS is provided in the HECS Information 2004 booklet available at enrolment and, during the year, from the Student Centre at each campus or on the Internet: **www.hecs.gov.au**

3. Postgraduate Education Loans Scheme (PELS)

The Postgraduate Education Loans Scheme (PELS) is an interest-free facility for tuition fee-paying postgraduate students undertaking non-research programs. It is similar to the deferred payment arrangements available under HECS. Students are eligible for a PELS loan if they are enrolled in a tuition fee-paying postgraduate non-research program, and

are an Australian citizen or holder of an Australian permanent residency visa (who meets eligibility requirements).

New Zealand citizens and Australian Temporary residents are not eligible for PELS.

Applications for PELS must be received no later than the relevant census dates.

After the PELS census dates, the University will provide an online Notice of Liability of your PELS deferral for the session. Students are required to confirm their enrolment details and PELS liability information on the web via the Student Gateway within 14 days of the date of the notice. The liability that appears on the form will be reported to the Australian Taxation Office.

4. 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.

4.1 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. Students from countries with an assessment level of 3, 4 or 5 must also provide a copy of their successful Pre-Visa Assessment (PVA). The University cannot issue the e-COE without this letter.

Deferment: Requests to defer enrolment from one year to the next, or one session to the next, must be made in writing 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 for the year in which he/she will enrol.

4.2 Fee Charges and Payments

(1) International Tuition Fees:

Tuition fees are determined by a student's enrolment in specific courses. Fees will be charged at the rate applicable to the particular year of enrolment

(2) Student Activity Fees:

International students are charged Student Activity Fees each session at the published rates. (See Item 1 in this section). Student Activity Fees are compulsory for all UNSW students and are additional to tuition fees. They are identified separately on fee statements. Student Activity Fees are subject to annual review and may increase from year to year. These fees are subject to the Australian Government's Goods and Services Tax, which is levied at 10%. Students on external/distance education programs are liable to pay fees to the Miscellaneous Activity Fee 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. OSHC fees must be paid when accepting your place together with the tuition fee deposit. 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 Medibank Private, the University's current provider for medical insurance for international students, or other approved provider, when their initial cover expires. Medibank Private regularly reviews the OSHC charges and those quoted on the offer letter are subject to change. Students should be aware that the duration of cover might be shorter than the original quote, should an increase occur after the offer letter has been sent. Students on external/distance education programs are not required to pay OSHC.

(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 in the 'International Undergraduate Prospectus' or at the UNSW website: **www.student.unsw.edu.au/fees**

(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 you enrol in the minimum full-time load, you will need to take additional courses in a future session to complete your program within the time frame specified on your 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. **The University does not produce printed fee statements. Students must access their statements online**. Students will be able to view their fee statement and payment options (Statement of Student Debt/Notice of Liability) online approximately 2 – 3 weeks before classes commence. Students should refer to this online statement (available at **www.student.online.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.

(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 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 an agreement is reached between the student and the Registrar and Deputy Principal 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.

4.3 Fee Variations (including Change of Residency)

(1) 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. Please note that because of government controls on the number of local students that can be enrolled, such students may not qualify for a HECS place.

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. Students undertaking Summer Session course/s will be liable for international tuition fees unless granted permanent residency prior to commencement of the course/s, if the course is of less than six weeks duration. If the course is of more than six weeks duration, permanent residency must have been granted within fourteen days of commencement of the course/s, otherwise the international tuition fee will be payable.

(2) 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.

(3) 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 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.

(4) 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.

4.4. 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 and Deputy Principal. 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.

OSHC will be refunded if the University has not yet sent the money to Medibank Private. If the money has been sent to Medibank Private, the student will be responsible for contacting Medibank Private directly to apply for their OSHC refund. Students must provide Medibank Private with the following information when applying for a refund: full name, date of birth, AQBJ number (provided to you by the Admissions office), together with the reason for refund and either evidence of transferring to another university, or the date of departure from Australia.

(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 and Deputy Principal.

(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.

This agreement 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)

(9) Difficulties with Payment:

Students who are unable to pay their fees by the agreed dates should contact the Student Financials Section, Student Administration Department, through NewSouth Q, 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.

4.5 Census Dates*

Session 1 – 31 March
Session 2 – 31 August

4.6 Session dates:

A complete schedule of session dates is available on the UNSW website and on page 2 of this Handbook.

4.7 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. Postgraduate students wishing to take particular elective courses should ensure that these will be available prior to arriving in Australia.

5. 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 HECS liable students.

5.1 Acceptance of an Offer of Admission

There is no tuition fee deposit required, however your reply form must be returned within 4 weeks of date of offer to secure your place. Tuition fees for the first session of the program are payable by the end of the first week of the session, as indicated on the fees statement available at **www.student.online.unsw.edu.au**

5.2 Fees Payable

(1) Postgraduate Program Tuition Fees:

Fees for postgraduate students are reviewed annually and may increase. A complete schedule of postgraduate tuition fees is available on the UNSW website: **www.student.unsw.edu.au/fees** and earlier in this Handbook.

(2) Non-Award, Cross-Institutional and Voluntary Course Fees:

Fees are charged for all non-award enrolment in a course, and for enrolment in a cross-institutional postgraduate course. Fees are charged according to the classification of the course (Undergraduate, Postgraduate, Research). For a list of fees please refer to the UNSW website: **www.student.unsw.edu.au/fees** and earlier in this Handbook.

(3) 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 (see item 1 'Student Activity Fees' in this section). 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) are subject to the Australian Government's Good and Services Tax, which is levied at 10%. Students enrolling in distance education programs are required to pay the Miscellaneous Activity Fee only.

5.3 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: **www.student.unsw.edu.au/fees/**

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.

5.4 Payment of Fees

Fees are charged and payable on a session basis. Tuition fees and Student Activity Fees are payable by session in advance. **The University does not produce printed fee statements. Students must access their statements online.** Students will be able to view their fee statement and payment options (Statement of Student Debt/Notice of Liability) online approximately 2 – 3 weeks before classes commence. Students should refer to this online statement (available at **www.student.online.unsw.edu.au**) for payment deadlines and payment options.

5.5 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 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, semester 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 and Deputy Principal 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.

5.6 Refund of Fees Paid

(1) Refund of Deposit:

Where a postgraduate 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 postgraduate student in her/his commencing session lodges a notice of discontinuation of a program after enrolment and before the census date* for that session, all tuition fees will be refunded less $500. The student will incur and retain a liability for payment of $500 regardless of whether or not fees have been paid.

(3) Refund of Program Fees – Non-Award Enrolment:

If notice of discontinuation of a course is lodged on or before the census date* for that session, 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 session

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

(4) 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 session, no refund of tuition fees paid for that session will be made. In such instances, the student will incur and retain a liability for that session's fees regardless of whether or not fees have been paid.

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

A refund may be granted to a student unable to notify the Registrar and Deputy Principal 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 and Deputy Principal for 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 student who submits a project report or thesis for examination by the census date* in any given session will not be liable for tuition fees in that session.

5.7 Census Dates*:

Session 1 - 31 March
Session 2 - 31 August

5.8 Session dates:

A complete schedule of session dates is available on the UNSW website and on page 2 of this Handbook.

5.9 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.

6. 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 HECS liability.*

7. Sponsored or Assisted Students

Scholarship holders and sponsored students must present an enrolment voucher or appropriate letter of authority from their sponsor at the time they attend to enrol.

8. 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 and Progression Rules and Procedures

1. Disclosure of Enrolment Information and Release of Information to Third Parties

Information about a student's enrolment and attendance at the University is not disclosed to any person or organisation outside the University in a form that allows the student to be identified unless:

- the student provides written consent for the release of the information; *or*
- the disclosure is required by law; *or*
- the University discovers that information supplied by the student at the time of admission to the University or subsequently is untrue or misleading in any respect, in which case the University may take such action as it believes necessary including the disclosure of the information to any person or body the University considers has a legitimate interest in receiving it.

The University treats results of assessment and information it receives from a student as confidential and will not reveal such information to third parties without the permission of the student except at the discretion of senior officers in circumstances considered of benefit to the student and when it is either impossible or impracticable to gain the student's prior permission. This happens rarely. Adhering to this policy is considered so important that it often involves officers of the University in very difficult situations, for example, when they must refuse to reveal the address of a student to parents or other relatives.

All students should be aware that students' addresses are eagerly sought by various commercial agents and that subterfuges of various kinds can be used to obtain them. From time to time, for example, people claiming to be from the University telephone students or their families and ask for information (usually another student's address) which is often given unsuspectingly. There is evidence that this is a technique used by some commercial agents.

It would be generally helpful if students, their families and friends were cautious in revealing information, making it a practice to ask the name, position, and telephone extension of any caller claiming to be from the University and, if suspicious, returning the call to the extension given.

2. Enrolment and Variations in 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 Higher Education Contribution Scheme or Postgraduate Education Loans Scheme. Refer to the Student Gateway (**www.student.unsw.edu.au**) for full details of enrolment procedures, HECS or tuition fee rules and details of Student Activity Fees. For details of fees, also see previous section 'Student Fees' in this Handbook.

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 **www.student.online.unsw.edu.au** before the semester census date.

Any enrolment issues must be referred immediately to the Program Authority in writing.

2.1 New Undergraduate Enrolments

Students applying for entry into the University must lodge an application for admission with the Universities Admissions Centre (website: **www.uac.edu.au**, telephone: (02) 9752 0200).

Those who are selected will be required to complete enrolment at a specified time before the start of session.

Application procedures may be obtained from the Student Centre at each campus.

2.2 Re-enrolling Coursework Students

Re-enrolling undergraduate and postgraduate coursework students are required to re-enrol on the web, and completing 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 sent to them by their program office. Detailed information regarding enrolment is available under the enrolment menu at the UNSW enrolled student website and students should check this site regularly for updated information: **www.student.unsw.edu.au**

2.3 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.

(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 upfront HECS where relevant) by the end of the first week of teaching may have their enrolment cancelled.

2.4 New Postgraduate Students

Students enrolling for the first time in postgraduate programs will be advised by letter concerning the method of enrolment. Enrolment other than in accordance with the procedure set out in this section may incur a penalty.

2.5 Re-enrolling Research Students

Students enrolled in research degrees will receive re-enrolment instructions in December for the following year.

2.6 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. The University does not produce printed fee statements. Students must access their Statement of Student Debt online. Students will be able to view their statement and payment options (Statement of Student Debt/Notice of Liability) online. Students should refer to this online statement (available at **www.student.online.unsw.edu.au**) for payment deadlines and payment options.

2.7 Restrictions on Re-enrolling

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

2.8 Non-Award Enrolment

Non-award students are students who are enrolled in course/s but are not proceeding to a degree, diploma or graduate certificate of the University.

Voluntary course enrolment is where a student elects to enrol in courses additional to his/her UNSW degree or diploma. Enrolment in these courses is on a non-award basis.

Enrolments by non-award students are governed by the following rules:

(1) Enrolment in a particular course or courses as a non-award student may be permitted provided that in every case the Head of the School offering the course considers that the student will benefit from the enrolment and provided also that accommodation is available and that the enrolment does not prevent a place in that course being available to a student proceeding to a degree or diploma.

(2) A student who is under suspension or exclusion from any course in the University may not enrol in that course.

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

(4) A student who is subsequently admitted to a program of the University, for which courses completed as a non-award student form a part, may receive advanced standing for those courses.

(5) As a general rule the University does not permit non-award students to enrol in first year undergraduate courses.

Applications for non-award enrolment are available from NewSouth Q.

Fees are charged for all non-award enrolment in a course, and for enrolment in a cross-institutional postgraduate course. Fees are charged according to the classification of the course (Undergraduate, Postgraduate, Research). For a list of fees please refer to the UNSW website **www.student.unsw.edu.au/fees**

2.9 Cross-Institutional Enrolment

Students proceeding to an award at another tertiary institution who have been permitted to count a course undertaken at the University towards their award at the other institution require the permission of the Head of the School offering the course in the same manner as other non-award enrolments (see 1.8 above).

Enquiries concerning application procedures and eligibility should be made at the Student Centre at your campus.

Cross-institutional non-award students will incur a HECS liability for their enrolment except that where such students are permitted to enrol in a course for which a tuition fee is charged, where they will be required to pay the tuition fee in lieu of a charge under HECS.

2.10 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 courses in Session 2 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.

2.11 Variations in Enrolment (Including Discontinuation of a Program)

(1) Undergraduate and postgraduate coursework students wishing to vary their enrolment program will be able to do so on the web 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) Discontinuation of a program

Students discontinuing programs are required to notify the Registrar in writing or to complete the discontinuation form available from NewSouth Q. Such students may be entitled to a fee refund for fees paid (see 'Student Fees' entry in this Handbook). Discontinuation of a program is acknowledged in writing by the Registrar.

(3) Discontinuation of courses

Discontinuation of courses prior to the census date for a session can generally be processed by a student 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 the end of Week 8, i.e. half the session plus one week. (Session 1 and 2 courses).

Students should be aware that they will be financially liable for all courses in which they are enrolled as at the census dates (31 March and 31 August).

Written applications to discontinue courses after the above dates may be lodged with the course authority but will result in students being regarded as having failed the courses concerned, except in special circumstances.

All variations to course enrolments can be confirmed by students on the web.

(4) Variation to 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.

(5) Discontinuation of First Year Undergraduate Students

First year students who enrol and subsequently discontinue without failure their whole program will be permitted to re-enrol the following year providing they do not enrol in another tertiary program. They must confirm their intention to re-enrol by lodging an application with the Universities Admissions Centre.

2.12 Deadlines for Payment of Fees, Charges and HECS

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 HECS 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.

Session 1

Session 1 Student Activity Fees, HECS and Tuition fees
Friday 5 th March 2004

Session 2

Session 2 Student Activity Fees, HECS and Tuition fees
Friday 30th July 2004

2.13 Multiple Enrolment

(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 and Deputy Principal may suspend from enrolment any student who is found to be enrolled, without approval, in more than one degree, diploma or certificate course.

3. 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 for some other unavoidable cause 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.

4. Discontinuation and 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.

Undergraduate Students

A new undergraduate student in Stage 1 of a program who discontinues that program without failure prior to 31 March 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 31 March may apply for leave for Session 2 prior to the Session 2 withdrawal date of 31 August. It should be noted that discontinuation after the census date for a session may result in failures being recorded.

All Students

(1) 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.

(2) Leave must be sought prior to the census date: 31 March for Session 1 or whole year leave, or prior to 31 August for Session 2 leave.

(3) 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.

(4) 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.

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

Resumption of Programs

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 NewSouth Q 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.

5. Undergraduate Program Transfers

Students wishing to transfer from one plan to another or wishing to enrol in a combined degree program within the following awards should apply through their School office: Bachelor of Commerce, Bachelor of Economics, Bachelor of Science, Bachelor of Engineering (Aerospace Engineering, Manufacturing Management, Mechatronic Engineering, Mechanical Engineering and Naval Architecture), Bachelor of Laws. Students wishing to transfer between programs within the Faculty of Arts and Social Sciences should apply through the Faculty Office except for Bachelor of Arts (Media and Communications).

All other students wishing to transfer from one program to another 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.

6. Assessment and Examinations (See also 'Assessment Policy')

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

Timetables

A provisional timetable indicating the dates and times of examinations is available in May and October. A final timetable indicating the dates, times, locations and authorised materials is available two weeks before the end of each session. Students must advise NewSouth Q of any clash in examinations as soon as the provisional timetable is released. Both the provisional and final timetable are posted on University noticeboards and on the web. It is inadvisable for students to make any vacation travel arrangements within the examination period until dates for all assessment requirements have been finalised.

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

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.

Notification of Results

Assessment results are available on the Internet via the Student Gateway. 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.

Academic Standing

At the end of every standard 14 week session each undergraduate or coursework postgraduate student's Academic Standing in his or her program of study is determined by the University. 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. How Academic Standing is determined is different for undergraduate and postgraduate students, as is detailed in the following two sections.

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 (overleaf) 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.

The undergraduate academic standing categories and their implications are listed in Table 2 (overleaf). Each student not in Good Standing is assigned an academic advisor, 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 advisor, 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 standing one step instead of two.

Academic Standing – Re-Enrolment Appeal Procedures for Undergraduate and Postgraduate Students

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.

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)

(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.

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 and all postgraduate students re-apply through the 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.

Admission to Degree or Diploma

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:

April/May – All Degrees and Diplomas

June – Overseas graduation ceremonies in Hong Kong and Kuala Lumpur or Singapore. In 2004, ceremonies will be held in Singapore and Hong Kong only.

October – All Degrees and Diplomas

December – University College, Australian Defence Force Academy

December – Undergraduate and Research Degrees within the Faculty of Medicine

Updated graduation information is posted on the UNSW Student Gateway each session before results for that session are released. All graduands and potential graduands are expected to read the detailed graduation information on the Student Gateway, and to check their graduation details. In particular, graduands and potential graduands should check that their name, address and degree details are correct. The Student Gateway is located at: **www.student.unsw.edu.au**

Tickets and ceremony information about arrangements for graduation ceremonies will be mailed to graduands approximately three weeks before the date of the ceremony.

Queries regarding graduations can be directed to the Graduations Section, Student Information and Systems Office on (02) 9385 3092/ 2435 or graduations@unsw.edu.au.

Special Consideration – Illness and Misadventure

On some occasions, sickness, misadventure, or other circumstances beyond your control may prevent you 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 you to apply for consideration for the affected assessments. Depending on the circumstances, the University may take action to allow you to overcome the disadvantage; e.g. give you additional assessment or extend a deadline.

You should note that merely submitting a request for Consideration does not automatically mean that you will be granted additional assessment, nor that you will be awarded an amended result. For example, if you have a poor record of attendance or performance throughout a session/year in a course you 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 you 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

You 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 the Student Centre at each campus, program and course offices and from the web **www.student.unsw.edu.au** 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).

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 forms are widely available on all of the University's campuses—from NewSouth Q, faculty and program offices, the University Health Service, the Counselling Service, and many course authorities.

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 NewSouth Q, the course authority may require you to contact them.

If you need advice about any of the policies or procedures relating to Consideration contact NewSouth Q.

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.

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 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 Student Administration Department.

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

- failing to acknowledge the source of material in an assignment;
- quoting without the use of quotation marks even if the source is acknowledged;
- plagiarism;
- submitting work for assessment knowing it to be the work of another person;

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 writing 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 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 are usually excluded from the University for two years. Because of the circumstances in individual cases the period of exclusion can range from one session to permanent exclusion from the University.

2.5 Academic Misconduct Procedures

The University has detailed procedures for dealing with allegations or complaints of academic misconduct. The full text of the Council resolution on academic misconduct, which contains details of these procedures, can be obtained from NewSouth Q or **www.student.unsw.edu.au/academiclife/assessment/student_misconduct_rules.shtml**

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 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 and Deputy Principal, the Director of Information Services and Deputy Principal, 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 NewSouth Q (Student Enquiries) or at **www.student.unsw.edu.au/academiclife/assessment/student_misconduct_rules.shtml**

Student ID Card – Conditions of Use

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 lossor 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.

Computing at UNSW

The University is committed to using technology to support teaching and learning. The central UNSW web site (**www.unsw.edu.au**) forms an important resource, providing access to information on every aspect of the University. This site also links to other important web resources on campus like library, faculty and school sites, UNSW computing and more. The UNSW campus is served by an optical fibre network which supports TCP/IP and IPX.

The Division of Information Services (DIS) at UNSW encompasses information technology and the UNSW Library. The DIS><Connect Help Desk provides information technology support and assistance for students and staff using services provided by the UNSW Communications Unit. Students should seek support from the DIS><Connect desk, website **www.disconnect.unsw.edu.au**, telephone (02) 9385 1777, email disconnect@unsw.edu.au.

Email facilities (UniMail) are available to all enrolled students. For remote access, the University provides a good value dial-up service (UDUS) to students. Enquiries for both these facilities should be directed to DIS><Connect. Wireless applications are also supported for laptops in some areas of the library, however students will first need to contact DIS><Connect to get a wireless card installed.

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. See below for further rules relating to the use of computing and electronic communication faculities by students.

Email

Each student is given an email address as part of their enrolment at UNSW. It is essential to check your email regularly since this is the main mode fo 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.

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.

For the complete policy on electronic mail go to:
www.infonet.unsw.edu.au/poldoc/email.htm

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.

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.

Email 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.

Prizes

The University has over 400 prizes available that are presented to students for meritorious academic achievement. A list of all prizes and the conditions of award appears in the 'University Calendar'. 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. Further details can be obtained from the website at **www.scholarships.unsw.edu.au** or by contacting the Scholarships, Loans and Research Students Office, NewSouth Q, Lower Ground Floor, Chancellery**,** telephone (02) 9385 3100/3101/1462, fax (02) 9385 3732, email: scholarships@unsw.edu.au

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.infonet.unsw.edu.au/election/index.htm**

Textbooks

Text and reference book information is available on the Internet at: **www.bookshop.unsw.edu.au/textlist.html**

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 NewSouth Q (Student Enquiries), the UNSW Freedom of Information Officer (02) 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 or contact NewSouth Q (Student Enquiries) in the Chancellery.

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.

English language standards are located at **www.unsw.edu.au/futureStudents/undergrad/sad/engregpolicy.html** or refer to the 'Admission Requirements and Procedures' entry in this Handbook.

For information on assumed knowledge see: **www.unsw.edu.au/futureStudents/undergrad/sad/assumedknowledge.html** or 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 practise 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 **www.studentadmin.unsw.edu.au/academiclife/assessment/examinations/examination_rules.shtml**

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.

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 an 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 on-line. 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 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. The policy and procedures are located at **www.student.unsw.edu.au/atoz/atoz-Review.shtml**

3.2.20 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).

3.2.21 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.)

3.2.22 Discontinuation of courses

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

3.2.23 Degrees with Merit/Distinction

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**

3.2.24 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.

3.2.25 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 Student Gateway 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**

Students can refer to the 'Academic Misconduct and Student Misconduct' entry 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 **www.student.unsw.edu.au/atoz/grievance.shtml** 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.

Charging Fees for Compulsory Course Materials

In 1997, the then DEETYA issued guidelines on the charging of fees for ancillary or additional services: the Ancillary Guidelines.

Under these Guidelines HECS liable and non-fee-paying HECS exempt students must be able to complete their program without facing course-related charges or fees imposed by the institution. This precludes charges for compulsory or essential components of a course or program, including its assessment and award.

Higher education institutions may charge students for goods or services, the purchase of which is voluntary and is not a requirement of a program of study for an award of the institution.

Under the *Disability Discrimination Act 1992*, higher education institutions must not discriminate against students with disabilities by charging fees for goods or services which are provided as 'reasonable accommodation' to the needs of such students.

The text of the advice received from DETYA follows:

Circumstances in which higher education institutions must not levy charges

Higher education institutions must not charge students for goods or services which are required for a program of study unless those goods or services or alternatives to them are also available to students at no additional charge. Cases include:

- materials such as course 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 on-line resources;
- 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 and re-assessment of results where a student has failed an assessment and thereby failed a subject or unit.

Charges which may be levied by higher education institutions

The following are cases in which higher education institutions may charge students for goods or services which are ancillary or additional to their program of study.

1. Higher education institutions may charge students for additional materials or services which are not essential components of a course:

- for example, access to Internet or word processing services (except where these are required as part of a course); printing of notes from the web or disks; and graduation ceremonies provided that the student does not need to attend the ceremony to graduate.

2. If goods or services that are an essential component of a course are made readily available at no additional charge by higher education institutions, then institutions may charge students for:

- alternative forms of those materials or services – for example, lecture notes or tapes, provided that the lectures are available to students at no charge; and the electronic provision of essential information if the information is also readily available at no charge in another form; and
- alternative access to those materials or services – for example, reading material such as anthologies of required readings provided that these texts are also available at no charge; and courses in non-standard sessions which allow accelerated completion of programs or which are offered for remedial purposes, provided that such courses are also available within normal session periods on a Higher Education Contribution Scheme liable basis.

3. In certain circumstances, higher education institutions may charge students for goods or services which are a component of a course if students have the choice of acquiring the goods or services from suppliers other than the institutions:

- goods or services which are necessary to produce items which become the physical property of students;
- food, transport and accommodation associated with field trips; and
- equipment regarded as a 'tool of the trade' which students would take with them at the completion of their program and which working professionals would normally own, for example, musical instruments, protective clothing or footwear, stethoscopes, dancing shoes and reference texts.

4. Institutions may levy charges as fines or penalties provided that such charges are 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 or late withdrawals from a course.

Heads of School are responsible for ensuring that these guidelines are followed within the courses under their control.

Any enquiries on the application of these guidelines can be directed to Kathy Keane, Assistant Registrar, Student Information and Systems Office on (02) 9385 3154.

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, in the Student Guide, from NewSouth Q 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.

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 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 Council[1].

In fulfilling this commitment, the University will:

- foster a University culture which values and responds to the rich diversity of its staff and students[2];
- 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 life[3];
- offer programs which aim to overcome past disadvantage for members of staff and student equity groups[3];
- 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, 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:

- the Equal Opportunity in Education Policy;
- the Anti-Racism Policy;
- the 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.

The Equity and Diversity Unit

The Equity and Diversity Unit provides services to students, staff and managers, including:

- disability services for students and staff;
- 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 Sciences Building, telephone (02) 9385 4734, email equity-diversity@unsw.edu.au.

Services for Equity Group and Educationally Disadvantaged Students

UNSW provides services to assist the successful completion of studies by students from equity groups through such means as:

- the Aboriginal Education Program;
- Disability Services Program (via the Equity and Diversity Unit);
- The Equity and Diversity Unit;
- The Learning Centre
- The Counselling Service

Program Content, Curriculum Design, Teaching and Assessment, and Printed Material

Schools and faculties will monitor program and course content (including titles), teaching methods, assessment procedures, written material (including study guides, Handbook and Calendar entries) and audiovisual material to ensure that they are not discriminatory or offensive and that they encourage and facilitate full participation in education by disadvantaged people.

Occupational Health and Safety on Campus

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'.

Special Government Policies

The NSW Health Department and the NSW Department of Education and Training have special requirements and policies of which students of health-related and education programs should be aware. The requirements relate to:

- clinical/internship placements which must be undertaken as part of your program; *and*
- procedures for employment after you have completed the program.

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.

Student Services and Resources

The UNSW Library

UNSW electronic library services can be accessed from campus or remotely through the UNSW Library website: **www.library.unsw.edu.au**. The website is the gateway to an expanding collection of electronic databases, full text e-journals, e-books and electronic resources and services available 24 hours a day. The main physical facilities are situated in the Library Tower on the upper campus at Kensington. Specialised collections and services are available in the Social Sciences and Humanities (enquiries Level 3), the Physical Sciences (enquiries Level 7) and Law (enquiries Level 8). Biomedical collections and services are accessible by internal walkway from the Tower but housed in the western end of the adjoining Mathews Building (enquiries Ground Floor). Collections and services in fine arts are located at the College of Fine Arts campus in Paddington. The combined holdings of these collections amount to some 2.5 million items. Other services include reference and Information Literacy resources and programs, reserve and lending services, copying and associated services, multipurpose (including Internet and email) Public Access Workstations, document delivery and interlibrary loan and digitisation services.

Opening hours of the UNSW libraries vary during the course of the academic year. For hours of opening at the Kensington and Paddington campuses see: **www.library.unsw.edu.au/~gsd/opening.htm.** Other library facilities, providing services to the students and staff of particular faculties, are also located at: Water Research Laboratory, Manly Vale, Australian Graduate School of Management, Kensington and the Australian Defence Force Academy, Canberra, ACT. ADFA Library electronic services can be accessed through **www.lib.adfa.edu.au/webvoy.htm**

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 culture. Workshop topics include time management, reading and note taking, essay and report writing, critical thinking, seminar presentations and using PowerPoint for presentations.

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 what they have written.

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 Independent Learning Centre is a self-access resource for students. It has a well-stocked library with study skills and language and communication materials; dictionaries; audio and videotapes and computer-based learning resources.

The Learning Centre is located on Level 2, Library Tower, telephone (02) 9385 3890, website **www.lc.unsw.edu.au**

The Independent Learning Centre is located at Hut G23, Upper Campus, telephone (02) 9385 2060, website **www.lc.unsw.edu.au/ILC.html**

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 at 11 am and 12 noon each day or make an appointment in advance.

The Counselling Service 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;
- Direct mail and email service for employers to forward information on opportunities to students;
- Careers Expo (April) where final year students can meet employers;
- Two Graduate Recruitment Programs (May and August) where final year students apply to organisations for employment.
- Graduate Careers Forum for Arts and Social Sciences and Science students August).

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

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.

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 (02) 9385 5434, email equity-diversity@unsw.edu.au

General Education

Contents

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 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.

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 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 subjects 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.

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 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.

Students who commenced their programs prior to 1996

These students were governed by the pre-1996 GE rules. The general principle that will be applied is that no such student is to be disadvantaged by the change. This principle is interpreted by the faculty as follows:

- Such students must satisfy the rules which applied in 1995 regarding the number of units of credit of General Education to be undertaken.
- Previously, these requirements had to be split between General Education 'Categories' in prescribed ways. This is no longer the case, and such students will be permitted to choose any General Education courses for which they possess the prerequisites and from which they are not excluded. Courses taken prior to 1996 will be aggregated with those taken subsequently, with hours converted to units of credit at the rate of 28 hours = 3 units of credit.

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 state how the proposed courses will, together with the remainder of the student's GE program, satisfy the GE objectives. 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 (LOTES) 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.

Corequisites and exclusions

The Committee on Education will determine corequisites 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 *NewSouth Student Online*, 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, as set out in this Handbook and printed faculty 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 2004, 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 *NewSouth Student Online*.

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 *NewSouth Student Online*.

Students who are unable to enrol through *NewSouth Student Online* 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, HECS and General Education

The University's academic structure is based on 'units of credit'. A full-time 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 HECS and 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.

HECS charges and tuition fees are based on the student's total study load. 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.

In addition to there being HECS charges based on a student's total study load, individual units of study attract one of three levels of HECS charges depending on the discipline grouping of that study. All General Education courses form part of the discipline group which includes Arts, Humanities, Social Studies/Behavioural Science, Visual/Performing Arts and Education and which attracts the lowest level of HECS charges.

Mainstream courses which are taken as part of the General Education Program will be charged according to the discipline grouping the unit of study falls within.

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 NewSouth Q 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 2004 can be found in alphabetical order by the course code at the back of this Handbook or in the Virtual Handbook at **www.student.unsw.edu.au/handbook**

Out-of-session General Education Courses

Summer Session – Kensington Campus

Faculty of Arts and Social Sciences

Course	Session	Title
GENT0311	X1	A History of Football: Folk Football to World Cups
GENT0420	X1	Along the Silk Road
GENT0405	X1	An Introduction to "…Isms": Ideas that have Shaped our World
GENT0906	X1	The Risks of Technology
GENT0911	X1	Maniacs, Murderers and Medical Detectives
GENT1207	X1	Crime, Sex and Gender
GENT1209	X1	Migration and Australian Society
GENT1403	X1	Global Crisis: Transition to a Sustainable Society

Faculty of Commerce and Economics

Course	Session	Title
GENC5001	X1	Introduction to the Internet and Electronic Commerce
GENC9001	X1	From Paper to the Web: Finding and Keeping Information

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
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
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
GENT0311	X2	A History of Football: Folk Football to World Cups
GENT0903	X2	Environmental Conflicts
GENT1202	X2	Social Aspects of Deviance
GENT1403	X2	Global Crisis: Transition to a Sustainable Society

Faculty of Commerce and Economics

Course	Session	Title
GENC5001	X2	Introduction to the Internet and Electronic Commerce
GENC9001	X2	From Paper to the Web: Finding and Keeping Information

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
GENM0701	X2	Contemporary Bioethics
GENM0703	X2	Concepts of Physical Fitness and Health
GENM1000	X2	Miracles and Misadventures in Modern Medicine

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

Faculty of Arts and Social Sciences

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
GENT0201	S1	Communication Skills
GENT0209	S1	Great Books
GENT0211	S2	Seeing Australia
GENT0212	S2	Creative Writing
GENT0307	S2	Sport in the Western World
GENT0308	S1	Olympic Games and Mega Events
GENT0310	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
GENT0410	S1	Life in Russia: Yesterday and Today
GENT0411	S2	What Word is That? A Brief History of where English Words come from
GENT0412	S1	Contemporary Japan
GENT0414	S2	Korea at a Glance
GENT0421	S1	Chinese Cinema
GENT0425	S1	French Language for Beginners
GENT0426	S1	German Language for Beginners
GENT0427	S1	Greek Language for Beginners
GENT0428	S1	Indonesian Language for Beginners
GENT0429	S1	Italian Language for Beginners
GENT0430	S1	Japanese Language for Beginners
GENT0431	S1	Korean Language for Beginners
GENT0432	S1	Latin Language for Beginners
GENT0434	S1	Russian Language for Beginners
GENT0435	S1	Spanish Language for Beginners
GENT0436	S1	Chinese Language for Beginners A
GENT0437	S1	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	The Use of Language, Images and Symbols
GENT0707	S2	Globalisation and the Nation State
GENT0803	S1	Introduction to Mass Media
GENT0804	S2	Internet and Cyberculture
GENT0902	S1	Witches, Quacks and Lunatics: A Social History of Health & Illness
GENT1205	S2	Experiencing the Pacific Islands
GENT1301	S1	Contemporary American Film
GENT1303	S2	Critical Approaches to Film
GENT1304	S1	Television and Video Culture
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
GENT1506	S2	Social Foundations of Education
GENT1507	S1	Learning Processes and Instructional Procedures
GENT1508	S1	Managing Stress and Anxiety
GENT1513	S1	Culture, Identity and Education
GENT1520	S2	Motivation in Learning and Teaching

Faculty of the Built Environment

Course	Session	Title
GENR0003	S2	Spirit, Myth, Sacredness in Architecture
GENR0006	S1	The City: Sydney
GENR0008	S1	History, Theory & Interpretation: Art & Architecture
GENR0010	S1	Architecture and Music
GENR0015	S1	City Planning Today
GENR0017	S2	Principles and Philosophy of Design
GENR0018	S2	The Art of Architecture
GENR0019	S1	Critical Perspectives on Twentieth Century Art and Design
GENR0026	S2	Gendered Spaces

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
GEND3238	S2	Memory and Self

Faculty of Commerce and Economics

Course	Session	Title
GENC1001	S1	Accounting and Society
GENC1003	S2	A User's Guide to Financial Management and Analysis
GENC2001	S1 & S2	An Introduction to the Australian Economy (Class: CKC1)
GENC3001	S2	Understanding Asian Banking and Finance
GENC3002	S1	Use and Misuse of Financial Markets
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

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
GENE7801	S1 & S2	Energy and Mineral Resources – Use or Abuse?

Faculty of Law

Course	Session	Title
GENL1020	S1 & S2	World Religions: Laws and Customs
GENL2020	S1 & S2	Introduction to the Australian Legal System
GENL2031	S1 & S2	Cyberspace Law: Regulation of Networked Transactions
GENL3000	S1	Selected Themes on Women in Ancient & Medieval Society
GENL3040	S2	Human Rights in Ancient Rome
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
GENS0500	S1 & S2	The Marine Environment
GENS2005	S2	History of Mathematics
GENS4001	S1 & S2	Astronomy
GENS4003	S2	Cosmology
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
GENS6012	S1	Diet – Food, Fact, Fiction and Fallacy
GENS6013	S2	Plants and People: Murder, Magic and Medicine
GENS6014	S1 & S2	Genes and Society
GENS6033	S2	HIV and Other Unconquered Infections
GENS7201	S1 & S2	Australian Wildlife Biology
GENS7601	S1 & S2	Earth – the Dynamic Planet
GENS8001	S1	Risk Perception and Reality
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
GENS9005	S2	Psychology of Work
GENS9007	S2	The Psychobiology of Sex, Love and Attraction
GENS9008	S1	Stereotyping and Prejudice

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
GEND2202	S2	Multicultural Learning
GEND2204	S2	Art Education and Aboriginal Studies
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

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 287 staff and 3477 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 current 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

Faculty of Arts and Social Sciences

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Course Codes and Sequences

Rules for the Award of Degrees

Faculty Information and Assistance

Some People Who Can Help You

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 2004 can be found in alphabetical order by the course code at the back of this Handbook or in the Virtual Handbook at **www.student.unsw.edu.au/handbook**

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

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.

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 G69 in the Morven Brown Building is available to students in the Faculty for re-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 will be expected to re-enrol via the web in 2004, apart from those who intend to enrol in an Honours program in 2004. 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 web at **www.arts.unsw.edu.au/about/societies.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 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.

6. Students whose progress is satisfactory may apply for leave of absence from their studies for no more than two semesters.

Concurrent study

7. 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

8. 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.

9. 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

10. 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

11. (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

12. 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

13. 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	
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/FILM/ PFST/THFI/ THST	School of Theatre, Film and Dance	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	Aboriginal Research and Resource Centre	
GEOH	School of Built Environment (Geography)	Built Environment
GEOS	School of Biological, Earth and Environmental Sciences	Science
GERS	Department of German & Russian Studies	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
IBUS	School of International Business	Commerce & Economics
INDO	Department of Chinese & Indonesian Studies	Arts & Social Sciences
INST	Faculty of Arts & Social Sciences	
INTD	Faculty of Arts & Social Sciences	
IROB	School of Industrial Relations & Organisational Behaviour	Commerce & Economics
IRSH	Faculty of Arts & Social Sciences	
ITAL	School of Modern Language Studies	Arts & Social Sciences
JAPN	Department of Japanese & Korean Studies	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	School of Media & Communications	Arts & Social Sciences
MODL	School of Modern Language Studies	Arts & Social Sciences
MSCI	Centre for Marine & Coastal Studies	Science
MUSC	School of Music & Music Education	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	Department of German & Russian 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	

How to Structure your Program

1. 3400 Bachelor of Arts Program

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 school or department. 24 units of credit must be obtained from courses offered specifically by the Faculty.

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)** **General Education (3)**	**Sociology (6)**	**History (6)**	
S2	**Linguistics (6)** **General Education (3)**	**Sociology (6)** **Sociology (6)**	**History (6)**	
YEAR THREE – *48 units of credit*				
S1	**European Studies (6)** **General Education (3)**	**Sociology (6)**	**History (6)** **History (6)**	**ARTS Course (6)**
S2	**General Education (3)**	**Sociology (6)**	**History (6)**	
Total required for BA – *144 units of credit*		**Major Sequence, *42 units of credit***	**Second Major Sequence, *42 units of credit***	

3. a major sequence (**List A**) in one of the following:

CHIN	Chinese Studies
EDST	Education
ENGL	English
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
MUSC	Music
PHIL	Philosophy
POLS	Politics and International Relations
RUSS	Russian Studies
SLSP	Policy Studies
SOCA	Sociology and Anthropology
SPAN	Spanish and Latin American Studies
DANC/FILM/ PFST/THFI/ THST	Theatre, Film and Dance

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 are available in: Art History and Theory, Australian Studies, Cognitive Science, Comparative Development, Computing, Economics/Economic History, Environmental Studies, European Studies, Geography, Geology, Human Resource Management, Industrial Relations, International Business, Irish Studies, Jewish Studies, Mathematics, Philosophy of Science, Psychology and Women's and Gender Studies.

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 ARTS 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 **Course Descriptions**: 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. Students should try to complement their majors with courses which provide them with skills and perspectives which will contribute to a broader and more critical approach to their special areas of interest. Major sequences offered by programs such as AUST Australian Studies are designed to provide this kind of context. Although, in most cases, they cannot be taken as the only major in your degree, they offer an interdisciplinary alternative to a second 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 students in the direction they 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. Students wanting to proceed to fourth year Honours Level in one or two schools or programs, should work out a program which fulfills the requirements for Honours Level entry with the Head of School

BA (Media and Communications) – Sample Program – Example Only

YEAR ONE *48 units of credit*			
S1 **English (6)**	**Theatre, Film & Dance (6)**	**New Media Technologies A (6)**	**Philosophy (6)**
S2 **English (6)**	**Theatre, Film & Dance (6)**	**New Media Technologies B (6)**	**Sociology (6)**
YEAR TWO *48 units of credit*			
S1	**Theatre & Film (6)**	**Researching & Writing for New Media (6)**	**General Education (3)** **General Education (3)**
S2 **Elective (6)** **MDCM Elective (6)**	**Theatre & Film (6)**	**Media Production (6)** **Multimedia Production (6)**	
YEAR THREE *48 units of credit*			
S1	**Theatre & Film (6)**	**Media Forms (6)** **Advanced Media Production (6)**	**General Education (3)** **General Education (3)**
S2 **MDCM Elective (6)**	**Theatre & Film (6)** **Theatre & Film (6)**	**Multimedia Production in Industry Contexts (6)**	
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***	

or program Coordinator concerned as early as possible in second year; with Combined Honours (Honours in two schools/programs). This can avoid many later problems such as missing prerequisites. Details of requirements for Honours entry can be found under the relevant entries.

2. 3402 Bachelor of Arts (Media and Communications) Program

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
MDCM1001

Second Year

MDCM2000
MDCM2002
MDCM2003

Third Year

MDCM3000
MDCM3002
MDCM3003

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:

CHIN	Chinese Studies
EDST	Education
ENGL	English
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
MUSC	Music
PHIL	Philosophy
POLS	Politics and International Relations
RUSS	Russian Studies
SLSP	Policy Studies
SOCA	Sociology and Anthropology
SPAN	Spanish and Latin American Studies
DANC/FILM/ PFST/THFI/ THST	Theatre, Film and Dance

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.

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.

NB: Please refer to the previous page for the sample diagram for the Bachelor of Arts (Media and Communications) program.

3. 3408 Bachelor of Arts (Dance) Bachelor of Education Program

The School of Theatre, Film and Dance 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. The BA(Dance) BEd is a professional double degree which qualifies successful graduates to be recognised as high school teachers with the NSW Department of Education & Training. The double degree also serves as an ideal basis from which to enter a range of dance and dance education professions.

Entry to the BA(Dance) BEd program is by audition, satisfactory physiotherapy report and satisfactory University academic entry requirements.

To qualify for the award of the degree, students must complete courses to the value of at least 192 units of credit, including:

1. the relevant sequences in Dance Theory, Dance Practice, Dance Education and Education as prescribed by the School of Theatre, Film and Dance for the BA(Dance) BEd degree

Bachelor of Arts (Dance) Bachelor of Education – Sample Program – Example Only

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 EDST1102	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**

2. at least 42 units of credit drawn from the following major sequences (**List E**) offered within the BA degree:

CHIN Chinese, ECON Economics, ENGL English, FREN French, GEOH/GEOS Geography, GERS German, HIST History, INDO Indonesian, JAPN Japanese, LING Linguistics, SPAN Spanish, THST Theatre

3. 12 units of credit in courses approved by the Faculty in the University's General Education program.

Second Teaching Area

The 42 units of credit drawn from the above major sequences function as the students' second teaching area. Students are strongly advised to familiarise themselves with the NSW Department of Education & Training's current pattern of employment prospects when choosing both their second teaching area and the elective courses within that program.

Honours Level

Students seeking admission to Dance Honours (Research) must have completed 192 units of credit as detailed above and achieved a minimum average grade of Credit in dance courses. Those intending to enrol in the Honours program must seek the permission of the Dance Program Coordinator during their second or third year of study so that an appropriate course of study can be planned.

4. Bachelor of International Studies Programs

The Faculty of Arts and Social Sciences currently offers four programs leading to the award of the degree of Bachelor of International Studies: **Asian Studies** (Program **3413**), **European Studies** (Program **3414**) **Globalisation** (Program **3415**) and **Languages** (Program **3416**). The programs 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, and normally require a period of overseas study of two semesters. Degree students who have made satisfactory progress in their program will be eligible for a contribution to the expenses of this study.

The four year programs lead to the degree at Pass level. A fifth, Honours year is available in all programs.

3413 Bachelor of International Studies in Asian Studies Program

Coordinator: David Reeve (School of Modern Language Studies, MB 241)
Email: d.reeve@unsw.edu.au

The Bachelor of International Studies in Asian Studies degree is an integrated program combining language study, a social science discipline and a core program in Asia-related study, together with an approved program overseas, 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 by both private and public employers.

The basic requirements for the degree are:

1. a total of 192 units of credit.

2. 48 units of credit at Level 1, including no more than 12 in any one area of study.

3. a sequence of at least 36 units of credit in one of the following Asian languages:

CHIN Chinese, INDO Indonesian, JAPN Japanese, KORE Korean

4. an approved major sequence (**List D**) in one of the following:

ECON Economics/Economic History, GEOH/GEOS Geography, HIST History, HPSC History and Philosophy of Science, IBUS International Business, IROB Human Resource Management/Industrial Relations, LING Linguistics, PHIL Philosophy, POLS Politics and International Relations, PSYC Psychology, SLSP Policy Studies, SOCA Sociology and Anthropology.

5. at least 24 units of credit in ASIA1000, ASIA1001 and the following Asia-related courses:

ECON2116	Economics of Japanese Business and Government
ECON2305	Modern Asian Economic History
ECON3112	The Newly Industrialising Economies of East Asia
ECON3113	Economic Development in ASEAN Countries
FILM2009	Japanese Cinema
HIST2043	Modern China: The Last Emperors and the Birth of Modern China
HIST2044	Modern China: War, Revolution and Reform in the Twentieth Century
HIST2050	Women in Southeast Asian Societies
HIST2052	Historical Perspectives on Chinese Culture and Society
HIST2053	Understanding Indonesia: Identity, Civil Rights and Jihad
HIST2054	Modern Japan: Political Culture, Popular Culture
HIST2055	Colonialism and Fundamentalism in India
HIST2068	East Asian History (Japan, China, Korea): Themes and Debates
HIST2076	Ancient to Modern Japan: Age of the Sword
HIST2077	The Chinese in Southeast Asia
HIST2081	Traditions, Colonialisms and Revolutions: Southeast Asian Histories
HIST2082	The 'Orient': Western Engagements with Asia
HIST2084	The Vietnam War/The American War
HIST2085	Australia's Asian Context: Resistance and Engagement
HIST2086	Coins, Costumes and Alphabets: Sources in Southeast Asian History
HIST2300	Between Dictatorship and Democracy: Contemporary Southeast Asia
HPSC2550	Sustainable Development, Globalisation and the Third World
IBUS2103	Japanese Business
IBUS2104	Korean Business
IBUS2105	Chinese Business Enterprise
PFST2201	Asian Theatre in Performance
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
POLS3046	Japan and the New World Order
SOCA3205	Modern Southeast Asia: Society and Culture
SPAN2430	Miracles of Modernisation/Crises of Capitalism: Asia and the Americas

Bachelor of International Studies in Asian Studies – Sample Program

Year	Language	UOC	Major	UOC	Asia-related	UOC	Other	UOC	Total
1	JAPN	12	HIST	12	ASIA1000 ASIA1001	6 6	INDO	12	**48**
2	JAPN	12	HIST	12	HIST POLS	6 6	Gen Ed	12	**48**
3.1	JAPN	6	HIST	6	POLS	6	ARTS	6	**24**
3.2	**Individual Study Program B**						INST3102	24	**24**
4.1	**Individual Study Program A**						INST3101	24	**24**
4.2	JAPN	12	HIST	12					**24**
Total		**42**		**42**		**30**		**78**	**192**

and appropriate courses in CHIN, INDO, JAPN and KORE.

6. 6 units of credit in an Upper Level ARTS course.

7. INST3101 and INST3102.

8. 12 units of credit from the University's General Education program at Upper Level.

Enquiries can be directed to the Modern Languages Reception Desk (MB 258) on the second floor of the Morven Brown Building or to the Coordinator as listed above.

3414 Bachelor of International Studies in European Studies Program

Coordinator: John Milfull (Centre for European Studies, MB G64)

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.

The Bachelor of International Studies in European Studies requires completion of a core European Studies program and three years' study of a European language and of a social science discipline, together with an approved program overseas, 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.

The basic requirements for the degree are:

1. a total of 192 units of credit.

2. 48 units of credit at Level 1, including no more than 12 in any one area of study.

3. a major sequence (36 units of credit) in EURO European Studies.

4. a sequence of at least 36 units of credit in one of the following European languages:

FREN French, GERS German, GREK Greek (Modern), ITAL Italian, PORT Portuguese, RUSS Russian, SPAN Spanish.

5. at least 36 units of credit from **List D**:

ECON Economics/Economic History, GEOH/GEOS Geography, HIST History, HPSC History and Philosophy of Science, IBUS International Business, IROB Human Resource Management/Industrial Relations, LING Linguistics, PHIL Philosophy, POLS Politics and International Relations, PSYC Psychology, SLSP Policy Studies, SOCA Sociology and Anthropology.

6. a major sequence in either a European language or List D above.

7. 6 units of credit in an Upper Level ARTS course.

8. INST3101 and INST3102.

9. 12 units of credit from the University's General Education program at Upper Level.

The European Studies noticeboard is located opposite the Centre for European Studies (MB G64). Enquiries may be directed to the Coordinator as listed above.

3415 Bachelor of International Studies in Globalisation Program

Coordinator: Mark T. Berger (School of Modern Language Studies, MB226)

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 globalisation 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 globalisation.

The Bachelor of International Studies in Globalisation requires the completion of a core sequence of courses on world history, international relations, international political economy, global development and the sociology of globalisation, and a major sequence in a social science discipline, together with an approved program overseas, 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 they require no previous knowledge of other languages.

The basic requirements for the degree are:

1. a total of 192 units of credit.

2. 48 units of credit at level 1, including no more than 12 in any one area of study.

3. the **core sequence** (36 units of credit) in INST International Studies:

Year	Course	
1	INST1003	Introduction to Globalisation
1	INST1004	World History 2: Global Change since 1500
2	INST2000	(Un)making the Third World: History and Global Development A
2	INST2001	Twentieth Century World History
3/4	INST3001	Theorising International Political Economy
3/4	INST3000	Globalisation and the International System

4. an approved major sequence (**List D***) in one of the following:

Bachelor of International Studies in European Studies – Sample Program

Year	Core Program	UOC	Language	UOC	Social Science	UOC	Other	UOC	Total
1	EURO1000 EURO1001	6 6	FREN	12	POLS	12	INST	12	**48**
2	EURO	12	FREN	12	POLS	12	Gen Ed	12	**48**
3.1	EURO	6	FREN	6	POLS	6	ARTS	6	**24**
3.2	**Individual Study Program B**						INST3102	24	**24**
4.1	**Individual Study Program A**						INST3101	24	**24**
4.2	EURO	6	FREN	6	POLS	6	FREN or POLS	6	**24**
Total		**36**		**36**		**36**		**84**	**192**

Bachelor of International Studies in Globalisation – Sample Program

Year	Core Program	UOC	Major	UOC	Electives	UOC	Other	UOC	Total
1	INST1003 INST1004	6 6	POLS	12	EURO	12	COMD	12	**48**
2	INST2000 INST2001	6 6	POLS	12	HIST	12	Gen Ed	12	**48**
3.1	INST3001	6	POLS	6	EURO	6	ARTS	6	**24**
3.2	**Individual Study Program B**						INST3102	24	**24**
4.1	**Individual Study Program A**						INST3101	24	**24**
4.2	INST3000	6	POLS	12	HIST	6			**24**
Total		**36**		**42**		**36**		**78**	**192**

ECON Economics/Economic History, GEOH/GEOS Geography, HIST History, HPSC History and Philosophy of Science, IBUS International Business, IROB Human Resource Management/Industrial Relations, LING Linguistics, PHIL Philosophy, POLS Politics and International Relations, PSYC Psychology, SLSP Policy Studies, SOCA Sociology and Anthropology.

** Within the Globalisation stream, a major in COMD Comparative Development may also be taken in fulfillment of this requirement.*

5. 36 units of credit in approved International Studies-related courses:

ASIA1001	Introduction to Contemporary Asia
CHIN	All courses
COMD	All courses
EURO	All courses
FREN	All courses
GEOH1601	Australian and Global Geographies: Integration and Divergence
GERS	All courses
GREK	All courses
HIST1010	Introducing Southeast Asia
HIST2013	Prophets and Millenarian Movements in World History
HIST2015	Women in the Modern World
HIST2030	History of the Arab/Israeli Conflict
HIST2039	Environmental History
HIST2044	Modern China
HIST2045	Modern America
HIST2050	Women in Southeast Asian Societies
HIST2054	Modern Japan: Political Culture, Popular Culture
HIST2055	Colonialism and Fundamentalism in India
HIST2075	Media, Modernity and History: From Print to Internet
HIST2300	Between Dictatorship & Democracy: Contemporary Southeast Asia
INDO	All courses
JAPN	All courses
KORE	All courses
POLS1008	Politics of Post-Communist Systems
POLS1014	Global Politics and the Environment
POLS2003	The Political Development of Contemporary China
POLS2023	Globalisation and Uneven Development
POLS2036	Political Development in Northeast Asia
POLS2040	Politics and Business
POLS2042	Diplomacy and Foreign Policy Analysis
POLS3023	International Security
POLS3052	Sovereignty, Order and the State
POLS3901	States, Nations and Ethnic Identities
RUSS	All courses
SOCA2103	Globalisation and Fragmentation
SOCA2108	Social Anthropology: Diversity, Difference, Identity
SOCA2205	Society and Desire
SOCA3104	Travel
SOCA3205	Modern Southeast Asia
SOCA3211	Development and Social Life
SOCA3212	Environment, Society and Culture
SOCA3703	Nationalism, Citizenship and Cultural Identity
SOCA3704	Social Movements and Society: Current Debates
SOCA3708	Cybersociety
SOCA3810	The Space of Terror
SOCA3812	Post-Human Subjects
SPAN	All courses.

6. 6 units of credit in an Upper Level ARTS course.

7. INST3101 and INST3102.

8. 12 units of credit from the University's General Education program at Upper Level.

The International Studies in Globalisation notice-board is located near Room MB 226. Enquiries can be directed in the first instance to the Modern Languages Reception Desk (MB 258) on the second floor of the Morven Brown Building.

Bachelor of International Studies in Languages – Sample Program

Year	Language 1	UOC	Language 2	UOC	Electives	UOC	Other	UOC	Total
1	GERS	12	CHIN	12	INST1003 INST1004	6 6	EURO1000 ASIA1001	6 6	**48**
2	GERS	12	CHIN	12	EURO HIST	6 6	Gen Ed	12	**48**
3.1	GERS	6	CHIN	6	EURO	6	ARTS	6	**24**
3.2	**Individual Study Program B**						INST3102	24	**24**
4.1	**Individual Study Program A**						INST3101	24	**24**
4.2	GERS	12	CHIN	12					**24**
Total		**42**		**42**		**30**		**78**	**192**

3416 Bachelor of International Studies in Languages Program

Coordinator: John Brotherton (School of Modern Language Studies, MB 213)

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, which 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 in Languages is designed for students wishing to prepare themselves for a professional 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 electives to be chosen from courses in Asian Studies, European Studies, Globalisation and Linguistics, 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.

The basic requirements for the degree are:

1. a total of 192 units of credit.

2. two major language sequences:

CHIN Chinese, FREN French, GERS German, GREK Greek (Modern), INDO Indonesian, ITAL Italian, JAPN Japanese, KORE Korean, PORT Portuguese, RUSS Russian, SPAN Spanish.

3. at least 24 units of credit in ASIA, EURO, LING or INST courses*.

4. 48 units of credit at Level 1, including no more than 12 in any one area of study.

5. 6 units of credit in an Upper Level ARTS course.

6. INST3101 and INST3102.

7. 12 units of credit from the University's General Education program at Upper Level.

** With the approval of the Coordinator, other courses offered by Schools and Programs of the Faculty may be substituted.*

Enquiries can be directed in the first instance to the Modern Languages Reception Desk (MB 258) on the second floor of the Morven Brown Building.

5. 3420 Bachelor of Social Science Program

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 and Information Management S2
SLSP1000	Social Science and Policy S1
or	
SLSP1002	Introduction to Policy Analysis S2

Second Year

SLSP2000	Economy and Society
SLSP2001	Applied Social Research 1
SLSP2002	Policy Analysis Case Studies

Third Year

SLSP3000	Social Theory and Policy Analysis
SLSP3001	Applied Social Research 2
SLSP3002	Social Science and 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:

ECON	Economics/Economic History
GEOH/GEOS	Geography/Geology
HIST	History
HPSC	History and Philosophy of Science
IBUS	International Business

Bachelor of Social Science – Sample Program

YEAR ONE *48 units of credit*			
S1 Philosophy (6)	Social Science and Policy (6)	History & Philosophy of Science (6)	Sociology (6)
S2 Philosophy (6)	Research and Information Management (6)	History & Philosophy of Science (6)	Sociology (6)
YEAR TWO *48 units of credit*			
S1 Philosophy (6)	Economy and Society (6) Applied Social Research 1 (6)	History & Philosophy of Science (6)	
S2 General Education (3) General Education (3)	Policy Analysis Case Studies (6)	History & Philosophy of Science (6)	Sociology (6)
YEAR THREE *48 units of credit*			
S1 Economic History (6)	Social Theory & Policy Analysis (6) Applied Social Research 2 (6)	History & Philosophy of Science (6)	
S2 General Education (3) General Education (3)	Social Science & Policy Project (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***	

IROB	Industrial Relations/Human Resource Management
PHIL	Philosophy
POLS	Politics and International Relations
PSYC	Psychology
SOCA	Sociology and Anthropology
SPAN	Spanish and Latin American Studies (History Stream)
DANC/FILM/ PFST/THFI/ THST	Theatre, Film and Dance*

**Students majoring in Theatre, Film and Dance 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 3. above 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, students who intend to apply for entry to the Honours year should enrol in SLSP3911 in the third year of study.

For entry to Honours in the BSocSc degree program, you must have demonstrated over the three years of the program that you have reached a sufficient standard, and apply to the Head of School for admission. If you wish to go on to Honours, you should ask staff in the program for advice on planning your program and defining your research interests at an early stage, perhaps during second year.

The BSocSc Honours Degree may be taken in two ways:

1. BSocSc Honours, with a Major in an approved area;
2. Combined BSocSc/approved area Honours. This program is undertaken in cooperation with a school offering a Combined Honours program.

6. 3422 Bachelor of Social Science in Criminology Program

Criminology, broadly defined as the study of crime and crime control institutions, is a multidisciplinary area involving contributions from the social and behavioural sciences, the humanities and law. The Bachelor of Social Science in Criminology combines the core program of the Bachelor of Social Science degree with specialist training in criminology. Graduates are prepared for careers in policy analysis or research in criminal justice agencies, quantitative and qualitative social research, project design and management in private, government and non-government sectors.

The basic requirements of the degree are:

1. a total of 144 units of credit.

2. 48 units of credit in the BSocSc core 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
SLSP1001	Research and Information Management S2
SLSP1000	Social Science and Policy S1

Second Year

CRIM2000	Criminological Theories
SLSP2000	Economy and Society
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

**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):

SLSP2820	Crime and Punishment in Historical Perspective
LAWS2709	Sentencing
LAWS2719	Community Corrections
LAWS2730	The Criminal Justice System
LAWS2759	Crime Prevention Policy
LAWS2769	The 'New' Prosecutors
LAWS2779	Juvenile Justice
LAWS2789	Policing
ENGL3460	Crime Fiction, Film and Theatre
HIST2468	History from Crime

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 Economy & Society SLSP2001 Applied Social Research 1	CRIM2000 Criminological 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**

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	MUSC3311	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**

POLS2020 Sex, Human Rights and Justice
PSYC3301 Psychology and Law
SOCA2208 Deviant Fieldwork, Data Collection and Analysis
SOCA3408 Crime in Australian Society
SOCA3409 Crime, Gender and Sexuality
SOCA3410 Deviance
SOCA3701 Discipline of the Law
SOCA3802 Fear and Hatred in Everyday Life
SOCA3810 The Space of Terror
THFI2011 Theatres of Cruelty

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 course 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 year of study.

How to Choose Your First Year Program

Enrol in the core courses CRIM1000, CRIM1001, SLSP1001 and SLSP1000; 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, students who intend to apply for entry to the Honours year should enrol in SLSP3911 in the third year of study.

For entry to Honours in the BSocSc degree program, you must have demonstrated over the three years of the program that you have reached a sufficient standard, and apply to the Head of School for admission. If you wish to go on to Honours, you should ask staff in the program for advice on planning your program and defining your research interests at an early stage, perhaps during second year.

7. 3425 Bachelor of Music Program

The School of Music and Music Education offers a Bachelor of Music (BMus) degree and also a major sequence in music within the Bachelor of Arts (BA) degree. The BMus provides additional specialisation in music and opportunities for professional development throughout the degree in the areas of musicology, ethnomusicology, performance, composition, music technology and jazz studies. Both the BMus and BA are available as an Honours degree.

Entry to the BMus is by audition and UAI or equivalent. The three major sequences in the BMus 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 includes 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.

Honours Level

Prerequisite: Completion of all requirements for the Pass degree with an average of at least credit level in music courses.

MUSC4000 Bachelor of Music Honours

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	Option	6	MUSC2301	6	MUSC2601	6	MUSC2501	6							**24**
S2			MUSC2302	6			MUSC2502	6			BA x 1	6	Gen Ed x2	6	**24**
Year 3															
S1	Option	6	MUSC3311	6	MUSC3601	6	MUSC3501	6							**24**
S2	Option	6			MUSC3602	6	MUSC3502	6	EDST x 1	6					**24**
Year 4															
S1	Option	6	Option	6	MUSC4601	6			EDST4093	3	BA x 1	6			**24**
S2			Option	6	MUSC4602	6			EDST4095	3			Gen Ed x2	6	**24**
Total		**30**		**36**		**36**		**36**		**24**		**18**		**12**	**192**

8. 3426 Bachelor of Music Bachelor of Education Program

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 (BMus BEd). The BMus BEd is a professional double degree which develops skills in six distinct areas of competence. Consolidation of the professional responsibility of music educators plays a central role throughout the music education sequence, and is consolidated in periods of practice teaching in each year of the program.

Entry to the BMus BEd is by audition and UAI or equivalent. To qualify for the BMus BEd at Pass level, a student must obtain at least 192 units of credit normally taken from the six major components listed following:

1. Musicology and Musicianship (66 units of credit): MUSC1101 and four other Musicology options; MUSC1302, MUSC2301, MUSC2302, MUSC3311 and two electives in Musicianship.

2. Music Education (36 units of credit): MUSC1601, MUSC2601, MUSC3601, MUSC3602, MUSC4601, MUSC4602.

3. Performance Studies (36 units of credit): MUSC1501, MUSC1502, MUSC2501, MUSC2502, MUSC3501, MUSC3502.

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 Education Psychology 1 and EDST1102 Social Foundations of Education are prerequisites for an additional two electives (of 6 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 & 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.

Honours Level

Prerequiste: Completion of all requirements for the Pass degree with an average of at least credit level in music (in the case of Honours in music) or music education (in the case of Honours in music education) courses.

MUSC4002 Music Education Honours

9. 3427 Bachelor of Music Bachelor of Arts Program

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 BMus BA 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. The BMus BA 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 Schools of the Faculty.

Graduates of this program will have appropriate music and musicianship skills as a basis for professional work in music organisation, direction and performance, arts administration, broadcasting, recording, and journalism.

The program is as follows:

Year 1

MUSC1101 and MUSC1401
MUSC1302 and MUSC1402
First Year BA courses (24 units of credit)

Year 2

MUSC2301 and MUSC2401 and Musicology Option
MUSC2302 and MUSC2402 and Musicology Option
Upper Level BA courses (12 units of credit)

Year 3

MUSC3311 and MUSC3401
Musicology Option and MUSC3402
Upper Level BA courses (18 units of credit)
General Education (6 units of credit)

Year 4

MUSC3101 and Musicianship Option
Musicology Option
Upper Level BA courses (24 units of credit)
General Education (6 units of credit)

The BA courses must include one major sequence for the BA degree in addition to the Music major. Students are also expected to take part in at least two of the music performance groups offered by the School.

Honours Level

Prerequisite for Honours in Music: Completion of all requirements for the Pass degrees with an average of at least credit level in music courses.

MUSC4000 Bachelor of Music Honours

10. 4031 Bachelor of Social Work Program

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 - 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.

From Years 1- 4, the sequences of Practice courses must all be followed according to the curriculum listed later in this Handbook under Social Work. The Social Work Selected Studies Elective 1 and 2 courses offer students a range of specialist types of practice.

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 x 1	6			**24**
Year 3											
S1			MUSC3311	6	MUSC3401	6	BA x 1	6	Gen Ed x 2	6	**24**
S2			Option	6	MUSC3402	6	BA x 2	12			**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**

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**

The Contextual Studies courses 'Research Methods', 'Philosophy' and 'Socio-Legal Practice' are compulsory. To enable students to pursue an area of interest, the first year elective courses can be selected from among any of the Level 1 courses available in the Faculty of Arts and Social Sciences.

12 units of credit must be selected from the approved General Education courses for students in the Faculty of Arts and Social Sciences.

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.

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.

Honours Level

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 (Class1, 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.

11. 4035 Bachelor of Social Work Bachelor of Arts Program

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). The BSW 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: 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.

12 units of credit must be selected from the approved General Education courses for students in the Faculty of Arts and Social Sciences.

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**

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**

12. 4036 Bachelor of Social Work Bachelor of Social Science Program

The School of Social Work offers a five year double degree leading to the award of the 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 (see diagram). The BSW is designed to prepare students for the professional practice of social work while providing extended study in social science, policy analysis and social research.

12 units of credit must be selected from the approved General Education courses for students in the Faculty of Arts and Social Sciences.

13. 4055 Bachelor of Arts Bachelor of Education Program

The combined degree of BA BEd at Pass level is a four year full-time program for intending secondary school teachers. Students combine academic studies in two approved teaching disciplines with both theoretical and practical aspects of education. In the final two years of the BA BEd program students develop skills in classroom competence and spend 50 days on supervised teaching practice in allocated secondary schools.

To qualify for the BA BEd at Pass level it is necessary to complete at least 192 units of credit (UOC).

1. Education courses

EDST1101, EDST1102 are compulsory Year 1 courses (12 UOC). EDST3090 (6 UOC) and EDST4093 (3 UOC) are compulsory Year 3 courses. EDST4095, EDST4081, EDST4094 and EDST4092 (27 UOC)

are compulsory Year 4 courses.

A further 18 UOC must be selected from Education Upper Level elective courses for Years 2, 3 or 4.

2. Teaching Method courses

Students must complete 12 UOC 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.

Bachelor of Arts Bachelor of Education – Sample Program

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 EDST1102	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**

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 UOC, 6 Upper Level UOC) 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 (i.e. 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.

14. 3417 Diploma in Languages Program

This Diploma 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.

15. 3418 Diploma in Music Program

This Diploma requires a program of 42 units of credit in Music, corresponding to a major in the Bachelor of Arts. It may be taken concurrently with another degree program.

16. Combined Degrees

The Faculty strongly encourages combined program study. The following programs are available to students from other faculties:

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)
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 Arts/Bachelor of Laws (4760)
BA LLB (Faculty of Law)
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)
Bachelor of Environmental Science/Bachelor of Arts (3932)
BEnvSc BA (Faculty of Science)
Bachelor of Fine Arts/Bachelor of Arts (4812)
BFA BA (College of Fine Arts)
Bachelor of International Studies/Bachelor of Laws (4766, 4767, 4768, 4769)
BInSt LLB (Faculty of Law)
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)
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)
Bachelor of Arts/Bachelor of Medicine (3841)
BA BSc(Med)MBBS (Faculty of Medicine)
Bachelor of Engineering/Bachelor of Arts (various)
BE BA (Faculty of Engineering)

For details of these combined degree programs, consult the relevant Faculty.

Course Codes and Sequences

Art History and Theory

Head of School: Graham Forsyth
Tel: (02) 9385 0779
Email: artht@unsw.edu.au
Website: www.cofa.unsw.edu.au/schools/arthistorytheory/

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 'toolbox' 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, and distinctions between the mass culture of television, films, the popular press, advertising and the culture of museums. Other issues include the relationship of culture to society, the linkage between vision and science, looking and sexuality, and the issues of trauma, memory and art. 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 unit of credits).

Level 1

SAHT1211	Theories of the Image
SAHT1212	Theories of Art History and Culture
SAHT1214	Methods of Research and Writing on Art
SAHT1221	Contexts of Art
SAHT1222	The Production of Art

Upper Level

SAHT2103	Aesthetics for Contemporary Practice
SAHT2211	Grand Narratives of Western Art
SAHT2212	Art and Cultural Difference
SAHT2214	Approaches to Australian Art
SAHT2221	Writing for Art and Design
SAHT2222	Memory and Self
SAHT3211	Theories of Meaning/Meaning of Theories
SAHT3212	Art and 'Everyday Life'
SAHT3213	Museum Studies: Exhibitions, Collections and Material Culture

ARTS Faculty Courses

Upper Level

ARTS2000 is an elective course which offers second and third year Arts and Social Sciences students a 14 day internship experience in a range of organisations. For further details, contact Zarni Jaugietis, email: zarni@unsw.edu.au

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.

ARTS2000	Arts and Social Sciences Internship	S1 & S2
ARTS3001	Censorship and Responsibility in the Performing Arts,Film, Literature and Media	S1
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

Asian Studies

Coordinator: A/Prof David Reeve, Department of Chinese and Indonesian Studies
Office: Room 241, Morven Brown
Tel: (02) 9385 1019
Email: d.reeve@unsw.edu.au

The following two first year courses are compulsory for students enrolled in the Bachelor of International Studies program **3413**.

For details of the approved **Asia-related courses**, refer to the preceding section How to Structure your Program in this Handbook.

Level 1

ASIA1000	World History 1: From the Ancient World to 1500	S1
ASIA1001	Introduction to Contemporary Asia	S2

Australian Studies

Coordinators: A/Prof Rae Frances & A/Prof Bruce Scates, School of History
Office: Room 351, Morven Brown
Tel: (02) 9385 2344
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 Theatre, Film and Dance.

Major Sequence

A major sequence is available which may be counted as a 'second major' with a home-based discipline major. It requires the completion of 36 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 18 units of credit (or three 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*	
AUST2007	Institutions and Policy: Re-evaluating Australian Politics	S1
AUST2008	In the Firing Line: Australians at 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*	
AUST2015	Contemporary Australian Women Writers*	
AUST2016	The Australian Cultural Text *	
AUST2017	Labour History	S2
AUST2018	Australian Sport: History and Culture	S1
AUST2019	A Commonwealth for a Continent: Australia 1901-1949	S2
AUST2020	Australia Since World War II	S1
AUST2022	Urban Legends: The History of Sydney	S1
AUST2023	Regional Australia: Geographies of Uneven Development	X2
AUST2024	Public Policy Making	S2
AUST2025	Sex, Human Rights and Justice	S1
AUST2026	Music of Aboriginal Australians	S1
AUST2027	Staging Australia	S1
AUST2028	Australian Cinema	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	S2
AUST2108	Gender and Frontier	S2
AUST2109	Values and Beliefs in Australian Culture*	

**Not offered in 2004.*

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	S2
HIST2047	Winners and Losers: Poverty, Welfare, Justice in Australia	S1
HIST3902	Australian History and its Constructions	S2
HIST3904	Going Public: Public History and the Historian	S1
IROB2702	Industrial Law	S1
IROB2704	Social Organisation of Work	S2
IROB3705	Management and Employment Relations	S1
SOCA3208	Colonisation and Indigenous Identity Formation	S1
SOCA3210	Whiteness – Beyond Colour: Identity and Difference	S1

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

Advisor: A/Prof Paul Adam, School of BEES
Tel: (02) 9385 2076
Email: p.adam@unsw.edu.au

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 BIOS1201) 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
BIOS1101	Evolutionary and Functional Biology

Upper Level

BEES2041	Data Analysis for Life and Earth Sciences
BIOS2011	Evolutionary and Functional Ecology
BIOS2031	Biology of Invertebrates
BIOS2041	Biometry
BIOS2051	Flowering Plants
BIOS2061	Vertebrate Zoology
BIOS3011	Animal Behaviour
BIOS3021	Comparative Animal Physiology
BIOS3061	Plant Ecosystem Processes
BIOS3071	Conservation Biology and Biodiversity
BIOS3081	Ocean Biology and Fisheries
BIOS3091	Marine and Aquatic Ecology
BIOS3111	Population and Community Ecology
BIOS3161	Life in Arid Lands

Chemistry

Office: Room 133, 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 Chemical Sciences 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

Chinese Studies

Head of Department: Associate Professor Hans Hendrischke
Administrative Assistant: Rosanna Cheung
Office: Room 240, Morven Brown
Tel: (02) 9385 2416
Email: rosanna.cheung@unsw.edu.au
Website: www.arts.unsw.edu.au/languages/chinese/chinese.html

The Department offers a flexible 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. Within each year, students are allocated to different groups, depending on their speaking ability.

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	12
Year 2	CHIN2006/7	12
Year 3	CHIN3006/7	12
	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	6
	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)

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
CHIN2800	Cantonese Phonology	S1
CHIN2801	Cantonese Morphology	S2

Chinese Studies Courses

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
CHIN2312	Chinese Seminar Option	S1 & S2
CHIN2313	Introduction to Chinese Performing Arts	S1
CHIN2314	Introduction to Chinese Musical Culture	S2
CHIN2315	Transnational Chinese Media	S2*
CHIN2400	China Imagined and Perceived	S2
CHIN2501	Chinese Business Enterprise	S1

** Offered every second year; not offered in 2004.*

Pre-Honours Courses

Year 2 and/or Year 3

CHIN3900	Advanced Chinese Studies	S1
CHIN3901	Research Methods in Chinese Studies	S2

Honours Level

CHIN4000	Chinese Honours (Research) Full-Time	S1 & S2
CHIN4050	Chinese Honours (Research) Part-Time	S1 & S2
CHIN4500	Combined Chinese Honours (Research) Full-Time	S1 & S2
CHIN4550	Combined Chinese Honours (Research) Part-Time	S1 & S2

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:

COMP1001	Introduction to Computing
COMP1011	Computing 1A
HPSC1200	Science, Good, Bad and Bogus
LING1000	The Structure of Language
PHIL1010	Thinking about Reasoning
PHIL1011	Minds, Bodies and Persons
PSYC1001	Psychology 1A
PSYC1011	Psychology 1B

Upper Level

Core course:

HPSC2610 Computers, Brains and Minds

plus at least 18 units of credit obtained in any of the following courses:

COMP2011	Data Organisation
COMP3411	Artificial Intelligence
HPSC2620	Body, Mind and Soul: The History and Philosophy of Psychology*
LING2500	Theoretical and Descriptive Linguistics
LING2520	Generative Grammar*
LING2570	Psycholinguistics*
LING2680	Language Universals and Linguistic Typology*
PHIL2206	Philosophy of Mind
PHIL2207	Philosophy of Psychology
PHIL2218	Philosophical Foundations of Artificial Intelligence
PSYC2071	Perception and Cognition
PSYC2081	Learning and Physiological Psychology

**These courses will not be offered in 2004.*

Comparative Development

Coordinator: Dr Michael Johnson, School of Social Science and Policy
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The Comparative Development program is an interdisciplinary program that introduces students to the field of Development Studies. Central issues and themes that are examined include the history and political economy of development, the causes of poverty, global inequality, the relationship between the environment and economic development, and the growing debate about globalisation.

COMD may be taken as an additional major sequence together with a major from the approved major sequences listed in the BA Rules. Students are advised that the COMD program is designed to complement, most particularly, a major in Economics, Economic History, Geography, History, History and Philosophy of Science, Policy Studies, Politics and International Relations, Sociology and Anthropology and Spanish and Latin American Studies. To complete a major sequence you must take the three compulsory COMD courses listed below, totalling 18 units of credit, and a further 18 units of credit from the other COMD courses listed below. With the approval of the Coordinator of the COMD program, courses from other schools may be substituted for 12 of these 18 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 with the school of your home-based major and the Coordinator of the Comparative Development Program about the best combinations of courses in your two major sequences.

Major Sequence

Level 1

Compulsory courses

COMD1001	Comparative Development: The Pre-Industrial World	S1
COMD1002	Comparative Development: Poor World, Rich World	S2

Recommended course

GEOH1601	Australian and Global Geographies: Integration and Divergence	S2

Upper Level

Compulsory course

COMD2000	The Theory and Practice of Development	S1

Other Upper Level Courses

COMD2010	(Un)making the Third World: History and Global Development B	S2
COMD2020	(Un)making the Third World: History and Global Development A	S1
COMD2050	Sustainable Development, Globalisation and the Third World	S1
ECON2305	Modern Asian Economic History	S1
ECON3109	Economic Growth, Technology and Structural Change	S1
GEOH2001	Field Research	S2
GEOH2611	Geographies of the Asia-Pacific	S1
GEOH3621	Place, Identity and Difference	S2
GEOH3641	Regional Australia: Geographies of Uneven Development	S2
HIST2013	Prophets and Millenarian Movements in World History	S1
HIST2039	Environmental History	S2
POLS2023	Globalisation and Uneven Development	S2
SOCA2103	Globalisation and Fragmentation	S2
SOCA2204	Pacific Island Research Fieldwork	X1
SOCA3204	Modernity and Development in the Pacific Islands	S2
SPAN2401	Colonising the Americas: The Spanish and Portuguese Empires	S2

Honours Level

Students who have completed 36 units of credit in Comparative Development, including all compulsory courses, at a good credit average may be admitted to enrol in a Combined Honours. They must have also met the requirements for a single Honours in one of the Schools or Departments teaching in the Bachelor of Arts program. If these requirements are met, and with the approval of the relevant School or Department, students can complete an Honours thesis on an interdisciplinary topic. For Combined Honours, students are required to present a thesis as approved by the Heads of the participating School or Department.

COMD4500	Combined Honours (Research) in Comparative Development Full-Time
COMD4550	Combined Honours (Research) in Comparative Development Part-Time

Computer Science

Coordinator: Dr Tim Lambert
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The School of Computer Science and Engineering (CSE) provides these courses. Quota restrictions apply to some Level III Computer Science courses. Entry to these courses will depend on a student's performance in Year 1 and enrolment is subject to the consent of the CSE Undergraduate Coordinator.

Major Sequence

A major sequence in Computing within the Faculty of Arts and Social Sciences consists of:

COMP1001 & COMP1011 & COMP2811 *or*

COMP1011 & COMP2811 *or*

COMP1711 & COMP2811

and COMP2011 and at least 3 Level III Computer Science courses to total 42 units of credit. Well-qualified students may elect to do COMP1711 and COMP2811. MATH1131 and MATH1231 are also recommended.

Note: No more than 12 Level 1 units of credit can be completed in computer science courses.

Level 1

COMP1001	Introduction to Computing
COMP1011	Computing 1A
COMP1711	Higher Computing 1A

Upper Level

COMP2011	Data Organisation
COMP2021	Digital System Structures
COMP2041	Software Construction: Techniques and Tools
COMP2711	Higher Data Organisation
COMP2811	Computing B
COMP2920	Professional Issues and Ethics
COMP3111	Software Engineering
COMP3120	Introduction to Algorithms

COMP3121	Algorithms and Programming Techniques
COMP3131	Parsing and Translation
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
COMP3511	Human Computer Interaction

Criminology

Coordinator: Dr Deborah Oxley, School of Social Science and Policy
School Office: Room G30, Morven Brown
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Website: www.arts.unsw.edu.au/ssp/

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.

Core Program

First Year

CRIM1000	Criminal Law and Justice 1
CRIM1001	Criminal Law and Justice 2
SLSP1001	Research and Information Management S2
SLSP1000	Social Science and Policy S1

Second Year

CRIM2000	Criminological Theories
SLSP2000	Economy and Society
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):

SLSP2820	Crime and Punishment in Historical Perspective
LAWS2709	Sentencing
LAWS2719	Community Corrections
LAWS2730	The Criminal Justice System
LAWS2759	Crime Prevention Policy
LAWS2769	The 'New' Prosecutors
LAWS2779	Juvenile Justice
LAWS2789	Policing
ENGL3460	Crime Fiction, Film and Theatre
HIST2468	History from Crime: Interrogating the European Past
POLS2020	Sex, Human Rights and Justice
PSYC3301	Psychology and Law
SOCA2208	Deviant Fieldwork, Data Collection and Analysis
SOCA3408	Crime in Australian Society
SOCA3409	Crime, Gender and Sexuality
SOCA3701	Discipline of the Law
SOCA3802	Fear and Hatred in Everyday Life
SOCA3810	The Space of Terror
THFI2011	Theatres of Cruelty

Honours Level

Students must have obtained 144 units of credit in accordance with the requirements for the BSocSc in Criminology degree incuding the pre-Honours course SLSP3911. Students need to have attained an average of 65% or higher in their SLSP and CRIM core and related courses, and must gain permission from the Head of School.

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	Economy and Society	S1
SLSP2001	Applied Social Research 1	S1
SLSP2002	Policy Analysis Case Studies	S2
SLSP3000	Social Theory and Policy Analysis	S1
SLSP3001	Applied Social Research 2	S1
SLSP3002	Social Science and Policy Project	S2

Economic History

See under **Economics**.

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. The General Level Sequence is the most flexible major in Economics. 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. A minimum of 60% of total assessment will be by examination.

Major Sequence General Level in Economics

For a major sequence in Economics at the general level, all students must complete at least 36 units of credit in Economics courses, including: ECON1101 and ECON1102.

Economics courses must be chosen from the following list:

Options (i):

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
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
ECON3106	Public Finance
ECON3112	The Newly Industrialising Economies of East Asia
ECON3113	Economic Development in ASEAN Countries
ECON3119	Political Economy

All other Economics courses have prerequisites which are associated with other major sequences.

Major Sequence Intermediate Level in Economics

For a major sequence in Economics at the intermediate level, all students must complete at least 36 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 (ii):

ECON3101	Markets and Public Choice	
ECON3104	International Macroeconomics	
ECON3105	Economic Analysis of Productivity	
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	

Major Sequence Professional Level in Economics

For a major sequence in Economics at the professional level, all students must complete at least 36 units of credit in Economics courses, including:

ECON1101 and ECON1102

ECON2101 and ECON2102

Economics courses chosen from Options (ii).

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.

ECON1301	Australia in the Global Economy	S1
ECON1302	Australia and the Asia-Pacific Economies	S2

Upper Level

ECON2305	Modern Asian Economic History	S1
ECON2313	Australian Economic Development	S1
ECON2319	Economic and Social Policy in Australia	S2
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 I

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	S2
ECON2321	Growth and Development of International Business	S1
ECON2322	European Integration	S2

Honours

ECON4120	Economics Honours (Arts)	S1 & S2
ECON4321	Economic History 4 Honours	S1 & S2

Education

Head of School: Dr Paul Chandler
Administrative Assistants: Jacinta d'Souza, Nancy He
School Office: Room 1307, Mathews Building
Tel: (02) 9385 1977/1988
Email: education@unsw.edu.au
Website: www.arts.unsw.edu.au/education/index.html

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.

Major Sequence

The following information refers only to single degree programs. Students in the combined Education programs listed above should follow the sequence of core and elective courses specified for their particular award.

A major sequence in Education comprises:

42 units of credit including

12 Level 1 units of credit and

30 units of credit chosen from: EDST2010, EDST2020, EDST2030, EDST2041, EDST2044, EDST2045, EDST2052, EDST2054, EDST2055, EDST2060, EDST2062, EDST2070, EDST2090, EDST4081, EDST4093, EDST4095 and PHIL2421.

Level I Courses

EDST1101	Educational Psychology 1	S1
EDST1102	Social Foundations of Education	S2

Upper Level Elective Courses

EDST2010	Educational Psychology 2	S1
EDST2030	History, Philosophy and Science Teaching	S2
EDST2041	Stress and Anxiety in Students and Teachers	S1
EDST2044	Motivation in Learning and Teaching	S2
EDST2054	Managing the Classroom Environment	S1
EDST2055	Literacy Across the Curriculum	S1

EDST2060	Educational Programs and Curricula for Intellectually Gifted Students	S2
EDST2062	Assessment as Practice	S2
EDST2070	Culture, Identity and Education	S1
EDST2090	Student Learning, Thinking and Problem Solving	S2

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	S2
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
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

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	S1, S2
EDST4050	Education Honours Part-Time	S1, S2

English

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Website: www.arts.unsw.edu.au/english/

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 some special ability in it, including the ability to write good English and a love of literature and reading.

Students who have successfully completed English at Level 1 (6 Level 1 units of credit) may enrol in Upper Level 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 an Upper Level English course is a Pass in one Level 1 English course. The choices of courses in Level 1 for 2004 are: ENGL1001 Ways of Writing: An Introduction to Literary Genres, ENGL1006 Imagining the City and ENGL1007 The Canon of English Literature. A student who has not completed 6 Level 1 units of credit but is interested in one or more of our Upper Level 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 and 36 Upper Level (or 12 Level 1 and 30 Upper Level) units of credit in English. However, provided 6 Level 1 units of credit have been completed in English, ARTS1100 will be accepted as part of an English major. 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 and 48 or 42 Upper Level units of credit. The School also requires students to have an average of 70% or better in all previous ENGL courses. Intending Honours students are also encouraged to include ENGL3902 Contemporary Critical and Cultural Theory and ENGL3900 Narrative in their major sequence.

With the permission of the Head of School, a student who is studying a combined Arts degree (eg 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 and an average of 70% or higher. Intending Honours students are also encouraged to include ENGL3902 Contemporary Critical and Cultural Theory and ENGL3900 Narrative in their major sequence.

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	S2
ENGL1006	Imagining the City	S1
ENGL1007	The Canon of English Literature	S1

Upper Level

ENGL2101	Women on the Apron Stage	S2
ENGL2103	Jane Austen in Context	S2
ENGL2159	The Renaissance Eye: Knowledge and Representation	S2
ENGL2204	The Twentieth Century: Postmodernism and Postmodernity	S2
ENGL2207	Nineteenth Century English Poetry	S2
ENGL2305	African Resistance Writing	S2
ENGL2360	Australia in the Twentieth Century: Modernity and Postmodernity	S1
ENGL2400	Twentieth Century Women Writers	S1
ENGL2404	Writing Back: Postcolonial Re-Writings of the Canon	S1
ENGL2503	Language, Text and Context	S1
ENGL3472	Modernism: Joyce	S1
ENGL3460	Crime Fiction	S1
ENGL3470	Australian Masculinities: Reading Gender, Sex and Culture	S2
ENGL3471	Contemporary Irish Literature	S2
ENGL3753	Creative Writing A	S1
ENGL3754	Creative Writing B	S2

Advanced Upper Level

ENGL3902	Contemporary Critical and 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

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Tel: (02) 9385 1597
Email: s.healy@unsw.edu.au

The Environmental Studies program is designed for students who wish to undertake a major sequence within the BA degree concentrating on the historical, theoretical, and policy implications of the human construction and transformation of the environment. Combined Honours in Environmental Studies is also available (see below).

The interdisciplinary major sequence in Environmental Studies must be accompanied by a major sequence in a home-based school or department of the Faculty as specified in the Rules for the BA degree. Particularly appropriate home-based majors to be taken in conjunction with it would be in History and Philosophy of Science, Philosophy, Politics and International Relations, History or Sociology and Anthropology. Courses may not be counted towards more than one major sequence.

Major Sequence

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 the Built Environment.

Upper Level

The following interdisciplinary **core course** is compulsory and is taken in the third year of study:

HPSC3500	Society and Environmental Process: Botany Bay (6 Upper Level units of credit)	S2

You must also take **at least one of its prerequisites**

HPSC2500	Environment, Technology and Politics	S1
HPSC2550	Sustainable Development, Globalisation, and the Third World	S1

For a pass degree a **further four Upper Level courses** are required from the following:

ARTS2002#	Arts and Social Sciences Internship	X1 S1 X2 S2
HIST2039	Environmental History	S2
HPSC2750	Energy and its Politics*	
HPSC2800	The Challenge of the New Biotechnologies	S2
HPSC2881	Cultural Heritage Management	S2
HPSC3150	Life Science in the Twentieth Century	S2
HPSC3920	Reading Option (must be an environment topic)	X1 S1 X2 S2
PHIL2420	Environmental Ethics	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	S2
SOCA3212	Environment, Society and Culture*	
SOCA3704	Social Movements and Society: Current Debates	S2
SPAN2418	Amazonia	S2

and, by approval of the Environmental Studies Coordinator, selected courses offered under the Geography program in the Faculty of the Built Environment.

 # Includable subject to agreement of Environmental Studies Coordinator that internship has appropriate environmental content.

** These courses run in alternate years and will not be offered in 2004.*

Students wanting to major in Environmental Studies, or take combined Honours, should consult with the school of their home-based major and the Coordinator of the Environmental Studies program about the best combinations of courses in their two major sequences. They should make sure that they include in their degree program any necessary prerequisites for the courses they wish to take. Please check school/department entries for course descriptions and availability.

Honours Level

Prerequisite: 1. Combined Honours prerequisites in a discipline. 2. At least 48 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 and its prerequisite HPSC2500, and may include two of the Level 1 courses recommended above. (Note: In assessing combined Honours units of credit, courses may not be counted twice.) 3. Permission of the Environmental Studies Honours Committee.

Honours in Environmental Studies must 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. Normal requirements are a thesis (50%), seminar (25%) and an additional component (25%) which could be a second seminar, an internship or a project. This assessment scheme may vary depending on the requirements of the participating school or department.

HPSC4500	Combined Honours (Research) in Environmental Studies Full-Time
HPSC4550	Combined Honours (Research) in Environmental Studies Part-Time

European Studies

Coordinator: Prof John Milfull, Centre for European Studies
Office: Room G64, Morven Brown
Tel: (02) 9385 3051
Email: J.milfull@unsw.edu.au
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, which may be counted as a 'second major' under the BA Degree Rules. It requires the completion of six EURO courses (36 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 12 units of credit. A major sequence in European Studies is a requirement for the **Bachelor of International Studies** degree in **European Studies (Program 3414)**, which is described in the section 'How to Structure your Program' in the Faculty section of this Handbook.

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 36 units of credit in European Studies, including at least 24 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 course work 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
EURO2001	Gender, Race, Nature and Reason	S2
EURO2331	Understanding Nazi Germany	S2
EURO2410	Nineteenth Centry Europe	S2
EURO2411	Spain: From Loss of Empire to European Integration	S1
EURO2470	Modern France	S1
EURO2500	The Russian Experience	S1
EURO2600	European Integration	S2
EURO2700	What is Postcommunism? Central and Eastern Europe after 1989	S1
EURO2800	Discovering Europe	S2
EURO3000	Evidence and Interpretation	S1

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

Head of Department: Dr Maurice Blackman
Office: Room 258, Morven Brown
Tel: (02) 9385 2321
Email: m.blackman@unsw.edu.au
Website: www.arts.unsw.edu.au/languages/french/french.html

Courses offered by the Department at undergraduate level are made up of studies in: Language and Linguistics, Literature and Thought, French Culture and Society and Francophone Studies. French is the language of instruction throughout.

Language and Linguistics. Emphasis is on helping students to acquire a command of modern French. Course content integrates understanding, speaking, reading and writing. All core language courses also involve comparative cultural studies.

French Literature and Thought. Focuses on the techniques of literary analysis and criticism through the close study of texts, and various methodological approaches to literature, from the 18th century to the present day. These courses also examine the relationship between literature and social history or literary theory.

French Culture and Society. Courses cover France and the French speaking world. Although literary texts are sometimes studied, courses in this category mostly use non-literary and media material and concentrate on a particular socio-historical context. Here again, French is the language of instruction.

Students are invited to collect the French Handbook from the School of Modern Language Studies (Morven Brown, Room 258 or Room 274), which contains course descriptions, book lists, sequence of courses and general information about the Department. Students should also consult the Department notice-boards for all information relating to first meetings, prior to the commencement of the academic year.

Note: Teaching at all levels is normally done in French, and in most courses all assessment tasks are performed in French. However the Department sometimes offers courses which are taught and assessed in English; these are open to all students with Upper Level status in the Faculty of Arts and Social Sciences or equivalent.

Major Sequences

At least 42 units of credit, including 12 Level 1 units of credit. Students are advised to consult the French staff to plan their program.

Core Major Requirements: For D stream students (see below for explanation of the streams), the major must include FREN1030. For C stream students, the major must include FREN2030. For B stream students, the major must include FREN3011. In certain cases approval may be given to replace FREN3011 with FREN2030. For A stream students, the major must include FREN3004 plus 1 Upper Level option.

Assessment

Most classes are of seminar and tutorial type and most teaching is conducted in French. In core language courses, students are expected to attain a prescribed proficiency level in each of the major skills, and to satisfy all other assessment required throughout the year. In other courses, assessment is continuous and, may be based on a combination of class tests, written or oral exposés, essays, or weekly assignments.

Level 1

Entry to Year 1 is available to students of all proficiency levels in French, from complete beginners to French native speakers. To accommodate such differing backgrounds at various levels, four streams are offered:

1. A stream – Designed for students with little or no knowledge of French.

2. B stream – Designed for students with some knowledge of French (eg HSC Continuers - formerly HSC 2 unit French).

3. C stream – Designed for students with a good knowledge of French (eg HSC Extension – formerly HSC 3 unit French).

4. D stream – Designed for native Francophone students with a French Baccalauréat or equivalent qualifications.

Students wishing to take French in Year 1 should enrol in the course which seems appropriate to their language skills. The Department will determine the appropriate course for every student, other than complete beginners, on the basis of a placement test. Contact the Department for the date.

Level 1

FREN1001	French 1A Introductory French 1	S1
FREN1002	French 1A Introductory French 2	S2
FREN1102	French 1A Intensive	X2
FREN1011	French 1B Intermediate French 1	S1
FREN1012	French 1B Intermediate French 2	S2
FREN1021	French 1C Language and Culture 1	S1
FREN1022	French 1C Language and Culture 2	S2
FREN1023	French 1C Language Part 1	S1
FREN1024	French 1C Language Part 2	S2
FREN1030	French 1D Language	S1
FREN1221	French 1D Literature and Society A	S1
FREN1222	French 1D Literature and Society B	S2

Upper Level

1. Core Courses

In all core language courses, students must attain the prescribed proficiency level in each major skill, as well as satisfying all other assessment requirements.

FREN2003	French 2A Intermediate French 1	S1
FREN2004	French 2A Intermediate French 2	S2
FREN2013	French 2B Language and Culture A	S1
FREN2014	French 2B Language and Culture B	S2
FREN2020	French 2C – Language and Culture	S1
FREN2030	Advanced Core Language	S2
FREN3003	French 3A Language and Culture A	S1
FREN3004	French 3A Language and Culture B	S2
FREN3011	French 3B Language and Culture	S1

2. Options

Upper Level options are available to C stream and D stream students in their second and third year of study and, in some cases, to French 2B students in Session 2. Upper level options are available to A stream and B stream students in their third year of study.

FREN3120	Exploring the French Language	S1
FREN3211	Special Reading Program	S1 or S2
FREN3510	French Cinema and Society	S1
FREN3210	French Prose Fiction	S2
FREN3216	France Today (A stream option)	S2
FREN3410	French for Special Purposes	S2

Advanced Upper Level Courses

FREN3901	Reading Program 1 (Advanced)	S1 or S2
FREN3910	Honours Preparatory Seminar	S2

Honours Level

For D stream students: at least 54 units of credit, including FREN1030 and FREN3910 at an average grade of Credit or better. For C stream students: at least 54 units of credit, including FREN2030 and FREN3910 at an average grade of Credit or better. For A and B stream students: at least 54 units of credit, including FREN3910 at an average grade of Credit or better. With permission of the Head of Department, Honours students from A stream may arrange to write their Honours dissertation in English rather than French. *Combined Honours:* A total of 48 units of credit in the Department of French.

A research program can be undertaken either in French alone or in combination with another course. (Part-time enrolment is also possible in some cases.)

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

Student Advisors: Dr Bruno Parolin (GEOH), Built Environment, Red Centre, Room 4045 or Dr Scott Mooney (GEOS), Biological Sciences Building, Room 519C
Tel: (02) 9385 4399 or (02) 9385 4389
Email: b.parolin@unsw.edu.au or s.mooney@unsw.edu.au

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, three of which must include SLSP2001, GEOH2001 and GEOH3111. (Substitute courses can be approved by the Head of the Geography program.) 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 SLSP2001, GEOH2001 and GEOH3111. (Substitute courses may be approved by the Head of the Geography program). 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	S2
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	Introduction to Remote Sensing	S1
GEOS2821	Geographic Information Systems and Science	S2
GEOS3711	Biogeography and Human Impact in Australia	S2
GEOS3721	Pedology	S2
GEOS3731	Catchment and Coastal Geomorphology	S2
GEOS3761	Environmental Change	S1
GEOS3811	Remote Sensing Applications & Digital Image Analysis	S2
GEOS3821	Applications in GIS and Remote Sensing	S2

Honours Level

Students who are to be supervised by staff in the Geography program, Faculty of the Built Environment, enrol in the following 48 unit of credit thesis course:

GEOH4418	Geography Honours (Research) Full-Time	S1 & S2
or		
GEOH4424	Combined Honours (Research) in Geography Full-time	S1 & S2

Students who are to be supervised by staff in the School of Biological, Earth and Environmental Sciences (BEES) 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 David Cohen
Email: d.cohen@unsw.edu.au

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, Dr David Cohen.

Level 1

GEOS1111	Fundamentals of Geology
GEOS1211	Environmental Earth Science

Upper Level

GEOS2071	Life Through Time
GEOS2101	Sedimentary Environments
GEOS2171	Earth Structures
GEOS2181	Earth Materials
GEOS2291	Ground and Surface Water

GEOS3131	Field Methods and Mapping	
GEOS3141	Mineral and Energy Resources	
GEOS3281	Environmental and Contaminant Geochemistry	
MSCI6200	Coastal Monitoring Techniques	
MSCI6300	Coastal Environment Assessment	

German Studies

Head of Department: Dr Ludmila Stern
Tel: (02) 9385 1188/1681
Email: german@unsw.edu.au
Website: www.arts.unsw.edu.au/languages/german

German is available as a major in Arts and also to students of all faculties as a co-major, elective/option, General Studies unit or as a major in the Diploma in Languages.

The Department has a flexible entry-point policy which allows students to enrol in the language program that builds on their existing language skills. There are three streams:

A Stream – beginners with no previous knowledge of German

B Stream – intermediate students who have studied German for the Higher School Certificate (or have equivalent knowledge).

C Stream – advanced or native speakers.

The primary aim of courses offered in the Department of German Studies is to provide students with proficiency in spoken and written German through practical language work and linguistic study, and to encourage a critical understanding of the development of the German–speaking countries, as modern societies that are different from yet similar to our own.

Teaching and Assessment

As far as practical, German is the language of instruction. There are no formal end of session examinations. Every effort is made to make student assessment part of the learning process. Assessment may include class tests, essays, take-home tests and tutorial presentations.

Further details are contained in the Department of German Studies Handbook, available from the School of Modern Languages Student Information Desk.

German Language, Literature and Civilisation

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 topics and issues of German socio-cultural history contributes to an increased awareness and understanding of the forces that have shaped the development of modern German speaking societies.

Major Sequence

Major sequences require 42 units of credit in German Studies. Students are advised to consult the German staff to plan their program.

A Stream (Beginners)

Year 1 GERS1400/1401 Year 2 GERS2400/2401 Year 3 GERS3400/3401 and one seminar in each session GERS3405/3406

B Stream (HSC or equivalent)

Year 1 GERS1600/1601 Year 2 GERS2605/2606 Year 3 GERS3605/3606 and one seminar in each session GERS3405/3406

C Stream (Advanced or Native Speaker level)

Year 1 GERS1700/1701 Year 2 GERS2700/2701 Year 3 GERS3700/3701 and one seminar in each session GERS3405/3406

Level 1

Students wishing to take Year 1 German should enrol in the course which seems appropriate for their language skills. The Department will determine the appropriate course for every student other than complete beginners.

Honours Level

Entry into the Honours program requires 54 units of credit in German Studies, including GERS3900 and GERS3901, with an average grade of Credit or better.

Combined Honours requires 48 units of credit in German Studies, including GERS3900, with an average grade of Credit or better.

Level 1

GERS1400	Introductory German A1	S1
GERS1401	Introductory German A2	S2
GERS1600	Intermediate German B1	S1
GERS1601	Intermediate German B2	S2
GERS1700	Advanced German C1	S1
GERS1701	Advanced German C2	S2

Upper Level

GERS2400	Intermediate German A1	S1
GERS2401	Intermediate German A2	S2
GERS2605	Advanced German B1	S1
GERS2606	Advanced German B2	S2
GERS2700	Advanced German C3	S1
GERS2701	Advanced German C4	S2
GERS3410	Advanced German A1	S1
GERS3411	Advanced German A2	S2
GERS3605	Advanced German B3	S1
GERS3606	Advanced German B4	S2
GERS3700	Advanced German C5	S1
GERS3701	Advanced German C6	S2

Advanced Upper Level Courses

These courses are compulsory for students intending to proceed to Honours.

GERS3900	German Option 1	S1
GERS3901	German Option 2	S2

Seminar Courses

GERS3405	German Studies Seminar 1	S1
GERS3406	German Studies Seminar 2	S2

Honours Level

GERS4000	German Honours (Research) Full-Time
GERS4050	German Honours (Research) Part-Time
GERS4500	Combined German Honours (Research) Full-Time
GERS4550	Combined German Honours (Research) Part-Time

Greek (Modern)

Coordinator: Dr Eleni Amvrazi
Office: Room 231, Morven Brown
Tel: (02) 9385 3649
Email: greek@unsw.edu.au
Website: www.arts.unsw.edu.au/languages/greek

The primary aims of the programs offered are to provide students with proficiency in spoken and written Greek through practical language work and an understanding of the way the Greek society has developed through the study of Greek literature and history and culture.

There are three streams in the language program which cater for:

- beginners with no previous knowledge of Greek
- intermediate students who have a basic knowledge of the written and spoken language
- advanced students who have studied Greek for the HSC or have equivalent knowledge.

Modern Greek programs are also offered by **correspondence** and **online**.

The correspondence and online programs provide an opportunity for students who have full-time work commitments or timetable clashes to study Modern Greek.

Teaching and Assessment

All teaching in Modern Greek Studies is carried out in small groups except for the Greek Literature and History and Culture sections. Assessment is continuous and ranges from informal class tests to literature and history and culture assignments and class oral and written presentations. Oral participation in all classes is also taken into account when determining the final mark.

Language of Instruction

Whenever possible, language programs are conducted in Greek. Literature lectures are mostly given in Greek with English explanations of difficult terms and points. The history and culture lectures, however, are given in English.

Note: Students who wish to take Modern Greek should enrol in a program that seems most appropriate to them; however, the Coordinator reserves the right to alter the enrolment, according to the student's knowledge of the language.

Further Details

Detailed information on all programs, textbooks, reading lists and other matters relating to the Modern Greek Studies is contained in the Modern Greek Studies Handbook, available free of charge from the School of Modern Language Student Information Desk.

Major Sequence

A Stream (Beginners) 42 Units of credit

Year 1	**UOC**
GREK1001	6
GREK1002	6
Year 2	
GREK2010	6
GREK2020	6
Year 3	
GREK2021	6
GREK2022	6
GREK2005	3
GREK2006	3

B Stream (Some Greek) 42 Units of credit

Year 1	**UOC**
GREK1101	6
GREK1102	6
Year 2	
GREK2003	6
GREK2004	6
GREK2005	3
GREK2006	3
Year 3	
GREK3001	3
GREK3002	3
GREK2201 or GREK2202	6

C Stream (HSC Greek) 42 Units of credit

Year 1	**UOC**
GREK1201	6
GREK1202	6
Year 2	
GREK2201	6
GREK2202	6
GREK2203	3
GREK2204	3
Year 3	
GREK3201	6
GREK3202	6

Honours

Intending Honours students are recommended to contact the Head of Department 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%.

Level 1

GREK1001	Introductory Modern Greek A1
GREK1002	Introductory Modern Greek A2
GREK1101	Intermediate Modern Greek B1
GREK1102	Intermediate Modern Greek B2
GREK1201	Advanced Modern Greek C1
GREK1202	Advanced Modern Greek C2

Upper Level

GREK2003	Advanced Modern Greek B1
GREK2004	Advanced Modern Greek B2
GREK2005	Literary Text Analysis 1
GREK2006	Literary Text Analysis 2
GREK2010	Intermediate Modern Greek A1
GREK2020	Intermediate Modern Greek A2
GREK2021	Advanced Modern Greek A1
GREK2022	Advanced Modern Greek A2
GREK2201	The Modern Greek Experience S1
GREK2202	Greek Traditional Culture S2
GREK2203	Core Language 1
GREK2204	Core Language 2
GREK3001	Advanced Modern Greek B3
GREK3002	Advanced Modern Greek B4
GREK3201	Modern Greek for Special Purposes S1
GREK3202	Greek Women Writers S2
GREK3205	Pandora's Box: Gender Issues in Greek Mythology and Tragedy 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

Head of School: Prof John Gascoigne
School Office: Room 351, Morven Brown
Tel: (02) 9385 2343
Email: history@unsw.edu.au
Website: www.arts.unsw.edu.au/history/

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 – Asian, Australian or European 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. It should be noted that ARTS1100 may be substituted for 6 first year units of credit in History.

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.

Honours Entry

Students must satisfy Faculty of Arts and Social Sciences requirements for entry to Honours programs, and must have obtained, at Credit level or better, at least 54 units of credit in the School of History, including 6 units of credit from the HIST3000 courses. For entry to a Combined Honours program, students must have obtained at Credit level or better, at least 48 units of credit in the School of History including 6 units of credit from the HIST3000 courses.

Level 1

HIST1003	The Fatal Shore: Aborigines, Immigrants and Convict Society	S1
HIST1004	Making Australia1850-1901: Land, People & 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 & Change in East Asia	S2
HIST1015	The 60s: Australia and the United States	S2
HIST1017	World History 1: From Ancient World to 1500	S1
HIST1019	World History 2: Global Change since 1500	S2
HIST1020	Women, Gender and World History	S1

HIST1030	The Modern Jewish Experience: Emancipation to the Holocaust	S1
HIST1031	The Modern Jewish Experience: Nationalism and Statehood	S2

Upper Level

HIST2000	Twentieth Century World History	S2
HIST2013	Prophets and Millenarian Movements in World History	S1
HIST2015	Women in the Modern World	S2
HIST2016	Film in History	S2
HIST2019	Identity, Culture and Politics: Ireland and Australia	S2
HIST2021	Irish History from 1800	S1
HIST2025	Slavery and Freedom: American History 1750–1890	S1
HIST2027	A Commonwealth for a Continent: 1901-1949	S2
HIST2028	Australia Since World War II	S1
HIST2030	History of the Arab/Israeli Conflict	S2
HIST2034	Gender and Frontier	S2
HIST2036	Documentary Film and History	S1
HIST2039	Environmental History	S2
HIST2041	Australian Sport: History and Culture	S1
HIST2043	Modern China: The Last Emperors & the Birth of Modern China	S1
HIST2044	Modern China: War, Revolution & Reform in the 20th Century	S2
HIST2045	Modern America	S2
HIST2047	Winners and Losers: Poverty, Welfare, Justice in Australia	S1
HIST2050	Women in Southeast Asian Societies	S2
HIST2053	Understanding Indonesia: Identity, Civil Rights and Jihad	S2
HIST2054	Modern Japan: Political Culture, Popular Culture	S1
HIST2055	Colonialism and Fundamentalism in India	S1
HIST2056	From Elizabeth to the Republic: English History 1558–1660	S1
HIST2059	The Modern Olympics	S2
HIST2060	(Un)making the Third World: History & Global Development B	S2
HIST2061	(Un)making the Third World: History & Global Development A	S1
HIST2073	Modern Jewish History	S2
HIST2074	Holocaust and Genocide in Historical Perspective	S2
HIST2078	In the Firing Line: Australians at War	S2
HIST2080	Rights & Riots: Gender & Politics in 18th-century France	S1
HIST2081	Traditions, Colonialisms & Revolutions: Southeast Asian Histories	S1
HIST2082	The Orient	S1
HIST2083	Writing Lives, Writing History	S1
HIST2084	The Vietnam War/The American War	S2
HIST2090	The Transformations of Warfare	S2
HIST2095	Talking History: Oral History and the Interview	S1
HIST2100	Urban Legends: The History of Sydney	S1
HIST2201	The Medieval World	S1
HIST2300	Between Dictatorship and Democracy: Contemporary Southeast Asia	S2
HIST2400	Concepts of Europe	S1
HIST2410	19th Century Europe: Bourgeois Culture, Peoples' Revolutions	S2
HIST2422	Understanding Nazi Germany: Origins, Structures, Explanations	S2
HIST2468	History from Crime: Interrogating the European Past	S1
HIST2470	Modern France	S1
HIST2481	Europe at War: 1914-1945	S1
HIST2500	The Pacific War: World War II in the Asia-Pacific	S1
HIST2510	The United States and Changing Global Orders	S2
HIST2600	Islamic Worlds: From Muhammad to the Present	S2
HIST2660	Ancient History 1: The Ancient Near East and Greece	S1
HIST2661	Ancient History 2: Rome	S2
HIST2731	The Unquiet Woods: Conflicting Visions of European Forests	S2
HIST2751	A Global History of Nightlife: From Moulin Rouge to Rave	S1
HIST2752	Pilgrimage: From Glastonbury to Graceland	S1
HIST2760	A History of Sexualities	S2
HIST2761	Gender, Race, Nature and Reason	S2

Advanced Upper Level Courses

HIST3900	Historiography of Southeast Asia	S2
HIST3902	Australian History and its Constructions	S2
HIST3904	Going Public: Public History and the Historian	S1
HIST3905	Evidence and Interpretation: Controversies in European History	S1
HIST3912	Researching and Writing History	S1

Honours Level

HIST4000	History Honours (Research) Full-Time
HIST4050	History Honours (Research) Part-Time
HIST4500	Combined History Honours (Research) Full-Time
HIST4550	Combined History Honours (Research) Part-Time

History and Philosophy of Science

Coordinator: Dr John Schuster, School of History & Philosophy of Science
School Office: Room LG19, Morven Brown
Tel: (02) 9385 2356
Email: j.a.schuster@unsw.edu.au

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.

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.

No previous study of mathematics or science is required. Entry to most Upper Level courses is possible without having studied Level 1 HPSC courses.

**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). From 2003, a new course structure has been introduced.*

Major Sequence

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.

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.

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.

Interdisciplinary Programs

The School coordinates interdisciplinary programs in Environmental Studies, Cognitive Science, and the Philosophy of Science. See entries under those headings for further information.

Level 1

HPSC1100	Cosmos and Culture	S1
HPSC1200	Science, Good, Bad & Bogus	S2
HPSC1400	Science, Technology, Society and Environment	S1
HPSC1500	Understanding Environmental Controversy	S2

Level 2

Fundamental Knowledge Courses

HPSC2100	The Scientific Revolution	S1
HPSC2200	Philosophy of Science	S2
HPSC2300	Sociology of Science & Technology: How Science Works	S2
HPSC2400	Knowledge and Power	S1

HPSC2500	Environment, Technology and Politics	S1
HPSC2550	Sustainable Development, Globalisation and the Third World	S1

Branch Courses

HPSC2600	Galileo, Science & Religion	S1
HPSC2605	Greek Science & Natural Philosophy: Roots of Western Thought	S2
HPSC2610	Computers, Brains and Minds	S2
HPSC2630	God, Life, the Universe and Everything: Science and Meaning	S1
HPSC2660	Cheating Death: A History of Medicine	S1
HPSC2720	Evolutionary Theories and Change	S2
HPSC2800	The Challenge of the New Biotechnologies	S2
HPSC2881	Cultural Heritage Management	S2

Level 3

HPSC3100	Advanced History of Science	S2
HPSC3150	Life Science in the 20th Century	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
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 240, Morven Brown
Tel: (02) 9385 2416
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. Beginners' 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 will have to 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	S2
HIST2081	Traditions, Colonialisms & Revolutions: Southeast Asian Histories	S1

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

Industrial Relations and Organisational Behaviour

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.irob.unsw.edu.au/

The School of Industrial Relations and Organisational Behaviour is located in the Faculty of Commerce and Economics. The School offers distinct disciplinary streams in Industrial Relations and Human Resource

Management to students within the Faculty of Arts and Social Sciences. Students within the Faculty of Arts and Social Sciences may undertake a major in Industrial Relations or Human Resource Management. It is not possible to major in both streams.

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.

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.

Major Sequence in Industrial Relations

A total of 42 units of credit obtained in the following Required and Option courses:

Required Courses (18 units of credit)

IROB1701 Industrial Relations
IROB1702 Labour Organisation
IROB2702 Industrial Law

Option List A (Minimum 12 units of credit)

IROB2704 Social Organisation of Work
IROB2715 Labour History
IROB3705 Management and Employment Relations
IROB3706 Industrial Relations Policies and Processes (not offered 2004)

Option List B (Minimum 6 units of credit)

IROB2703 International Employment Relations
IROB2718 Human Resource Management
IROB2724 Health and Safety at Work
IROB3702 International Human Resource Management Practice
IROB3708 Research Methods in Employment and Management
IROB3721 Negotiation, Bargaining and Advocacy
IROB3724 Strategic Human Resource Management
IROB3728 Managing Pay and Performance
IROB3729 Managing Workplace Training

Honours Entry

To progress to Year 4 Honours in Industrial Relations a student must:

1. Complete the specified number of Required and Options courses, including IROB3708*
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

** IROB3708 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 IROB 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:

IROB4736 Industrial Relations 4 Honours Full-Time
IROB4737 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)

IROB1701 Industrial Relations
IROB1712 Management of Organisations
IROB2718 Human Resource Management

Option List A (minimum 12 units of credit)

IROB3702 International Human Resource Management Practice
IROB3724 Strategic Human Resource Management
IROB3728 Managing Pay and Performance
IROB3729 Managing Workplace Training

Option List B (minimum 6 units of credit)

IROB2702 Industrial Law
IROB2703 International Employment Relations
IROB2704 Social Organisation of Work
IROB2715 Labour History
IROB2724 Health and Safety at Work
IROB3705 Management and Employment Relations
IROB3706 Industrial Relations Policies and Processes (not offered 2004)
IROB3708 Research Methods in Employment and Management
IROB3721 Negotiation, Bargaining and Advocacy

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, including IROB3708*
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

** IROB3708 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 IROB 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:

IROB4740 Human Resource Management 4 Honours Full-Time
IROB4741 Human Resource Management 4 Honours Part-Time

International Business

Acting Head of School: Dr Chung-Sok Suh
School Office: Room 3009, Quadrangle Building
Enquiries: Grace Setiawan
Tel: (02) 9385 5802
Email: g.setiawan@unsw.edu.au
Website: www.ibus.unsw.edu.au

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 at 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.

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)

IBUS1101	Global Business Environment	S1 & S2
IBUS1102	Managing Across Cultures	S2

Upper Level (18 units of credit)

IBUS2101	International Business and Multinational Operations	S1
IBUS3101	International Business Strategy	S2
IBUS3102	Asia-Pacific Business	S2

Options: (12 units of credit)

IBUS2103	Japanese Business	S2
IBUS2104	Korean Business	S2
IBUS2105	Chinese Business Enterprise	S1

Other courses in Arts and Social Sciences may be substituted for the above options with the approval of the Head, School of International Business.

International Studies

Coordinator: Dr Mark T Berger, School of Modern Language Studies
Office: Room 226, Morven Brown
Email: bis@unsw.edu.au

The following first year courses are only available to students enrolled in the Bachelor of International Studies program. The courses are compulsory for students in Program **3415**.

For details of the approved International Studies-related courses, refer to the section on 'How to Structure your Program' in the Faculty section of this Handbook. For further information, refer to the International Studies notice-board which is located on the second floor of the Morven Brown Building beside Room 226.

Level 1

INST1003	Introduction to Globalisation	S1
INST1004	World History 2: Global Change since 1500	S2

Upper Level

INST2000	(Un)making the Third World: History and Global Development A	S1
INST2001	Twentieth Century World History	S2
INST3001	Theorising International Political Economy	S1
INST3000	Globalisation and the International System	S2

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: www.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** 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 Australia1850-1901: Land, People & Culture	S2

Upper Level Courses

IRSH2001	Irish History from 1800	S1
IRSH2002	Identity, Culture and Politics: Ireland and Australia	S2
IRSH2003	Thatcher, Blair and Beyond: Re-inventing British Politics*	
IRSH2012	Contemporary Irish Literature	S2
IRSH2013	Myths of Self and Society - Irish Writing and Its Relevance for Australian Society*	
IRSH2021	Contemporary Theatre	S2
IRSH3472	Modernism: Joyce	S1

** Not offered in 2004.*

Italian

Coordinator: Dr Diana Palaversich, Department of Spanish & Latin American Studies
Tel: (02) 9385 1188/1681
Email: italian@unsw.edu.au
Website: www.arts.unsw.edu.au/languages/italian/italian.html

Italian is currently offered at beginners' and intermediate level within the School. Students wishing to complete a major sequence in Italian may be able to do so by combining the courses offered by the School and Upper Levels offered by Sydney University. Students with prior Italian language knowledge may be able to commence study at a course higher than ITAL1001.

Level 1

ITAL1001	Introductory Italian 1	S1
ITAL1002	Introductory Italian 2	S2

Upper Level

ITAL2001	Intermediate Italian 1	S1
ITAL2002	Intermediate Italian 2	S2

Students may also enrol in Italian externally at the University of New England. Teaching is by distance mode. For further details, contact the Faculty of Arts and Social Sciences Office, telephone (02) 9385 2289.

Japanese and Korean Studies

Head of Department: Dr William Armour
Office: Room 202, Morven Brown
Tel: (02) 9385 3773
Email: w.armour@unsw.edu.au
Website: www.arts.unsw.edu.au/languages/

In addition to its core language program, the Department of Japanese and Korean Studies offers a range of Japanese and Korean language and non-language based courses to students, including courses in Japanese and Korean cultural studies, business and management and technical language.

For students with HSC or other Japanese and Korean language studies (including background speakers), a multipoint entry system operates and, subject to an individual placement test, students will be allocated to the most suitable course level.

Note: For students admitted in their first year of studies to JAPN2000 or 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 in Japanese Studies

A major sequence in **Japanese Studies** comprises 42 units of credit including at least 24 units of credit from consecutive core Japanese language units in List A plus additional courses offered in List B, including either JAPN2500 or JAPN3900.

Those pursuing a LOTE qualification in the BA BEd program should take 36 units of credit from List A plus JAPN2500 or JAPN3900.

List A	**Core Language Units**
JAPN1000	Japanese Communication 1A
JAPN1001	Japanese Communication 1B
JAPN2000	Japanese Communication 2A
JAPN2001	Japanese Communication 2B
JAPN3000	Japanese Communication 3A
JAPN3001	Japanese Communication 3B
JAPN4000	Japanese Communication 4A
JAPN4001	Japanese Communication 4B
JAPN4100	Japanese Communication 5A
JAPN4101	Japanese Communication 5B

JAPN4200	Japanese Communication 6A	
JAPN4201	Japanese Communication 6B	
JAPN4300	Advanced Reading in Japanese A	
JAPN4301	Advanced Reading in Japanese B	

List B **Culture and other Language Units**

JAPN2300	Professional Japanese Communication	S1
JAPN2500	Introduction to Japanese Studies	S1
JAPN2501	Japan's Others: Assimilation, Exclusion, and Resistance	S2
JAPN2510	Japan and Korea: Cultures in Conflict	S1
JAPN2513	Cultures of War and Peace in Japan	S2
JAPN2600	Hospitality Japanese	S2
JAPN2700	Talking Japanese Pop Culture	S2
JAPN3300	Discover Japanese Grammar A	S1
JAPN3301	Discover Japanese Grammar B	S2
JAPN3500	Business Japanese	S2
JAPN3501	Japanese Studies Internship	S1 & S2 & X1 & X2
JAPN3601	Cultural Studies and Japan	S2
JAPN3602	Gender & Sexuality in Contemporary Japan	S2
JAPN3603	Japanese Literature and Language	S1
JAPN3605	Japan in the World	S1
JAPN3900	Introduction to Japanese Studies (Advanced)*	S1
JAPN3901	Special Topics in Japanese Studies (Advanced)*	S1
JAPN3902	Readings in Japanese Studies (Advanced)*	S2
JAPN4300	Advanced Reading in Japanese A	S1
JAPN4301	Advanced Reading in Japanese B	S2
FILM2009	Japanese Cinema	S1
HIST2054	Modern Japan: Political Culture, Popular Culture	S1
HIST2076	Ancient to Modern Japan: Age of the Sword	S1

Students who complete their major sequence with JAPN4101 or higher will be recognised as having completed the Japanese Studies Advanced Program.

** Advanced Upper Level courses*

Honours Level

Pre-requisite: Students intending to do Honours in Japanese Studies should take at least 6 consecutive core language units from List A, averaging a Credit level or higher, in addition to JAPN3900, JAPN3901 and JAPN3902.

JAPN4500	Japanese Studies Honours (Research) Full-Time
JAPN4550	Combined Japanese Honours (Research) Full-Time

Major Sequence in Korean Studies

A major sequence in **Korean Studies** comprises 42 units of credit.

Students of all levels are catered for and it is possible to commence at Beginners, Intermediate or Advanced levels of study, according to each individual's proficiency.

For students with HSC or other Korean studies (including background speakers), a multipoint entry system operates and, subject to an individual placement test, students will be allocated to the most suitable course level.

A major sequence in Korean Studies requires: (1) the completion of at least 4 consecutive language courses; (2) the completion of KORE3001 (Korean Communication 3B) [or higher]; (3) the completion of at least one course from List B (Korean Culture Studies).

In exceptional cases, a student may take Culture courses instead of Language courses with the Department's permission.

Note: For students admitted in their first year of studies to 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.

List A **Language Units**

KORE1000	Korean Communication 1A
KORE1001	Korean Communication 1B
KORE2000	Korean Communication 2A
KORE2001	Korean Communication 2B
KORE3000	Korean Communication 3A
KORE3001	Korean Communication 3B
KORE3400	Advanced Korean A
KORE3401	Advanced Korean B
KORE3500	Professional Korean A
KORE3501	Professional Korean B
KORE3600	Korean Translation A
KORE3601	Korean Translation B

List B **Culture Units**

KORE2500	Korean Civilisation and Culture	S1
KORE2602	Korean Literature: A Survey in English	S2
KORE3900	Introduction to Korean Studies (Advanced)*	S1
KORE3901	Special Topics in Korean Studies (Advanced)*	S1
JAPN2510	Japan & Korea: Cultures in Conflict	S1

Students who complete the program with KORE3501 or higher will be recognised as having completed the Korean Studies Advanced Program.

**Advanced Upper Level courses*

Honours Level

Prerequisite: Students intending to do Honours in Korean should take 6 Korean language courses, averaging a Credit level or higher, in addition to KORE3900 and KORE3901 plus either KORE2600, KORE2601, KORE2602, KORE2603, JAPN2500, JAPN2510, JAPN2511, JAPN2512 or IBUS2104.

KORE4000	Korean Studies Honours (Research) Full-Time

Jewish Studies

Coordinator: Dr Geoffrey Brahm Levey, School of Politics & International Relations
Office: Room 321, Morven Brown
Email: g.levey@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

JWST2000	Jews in Modern Society	S1
JWST2001	Jews, States and Citizenship	S2
JWST2100	Modern Jewish History	S2
JWST2101	Holocaust and Genocide in Historical Perspective	S2
JWST2102	History of the Arab-Israeli Conflict	S2
JWST2105	Religions: Judaism, Christianity, Islam	S2
JWST2108	Jerusalem: One City, Three Faiths	S1

Latin

Coordinator: School of Modern Language Studies
Office: Room 231, Morven Brown
Tel: (02) 9385 3649
Email: latin@unsw.edu.au
Website: www.arts.unsw.edu.au/languages/latin

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 Roman Sons	S2

Linguistics

Coordinator: A/Prof Peter Collins
Office: Room 231, Morven Brown
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. 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 Cross-Cultural Communication, MODL2002 Introduction to Professional Interpreting, JAPN3300 Discover Japanese Grammar A, JAPN3301 Discover Japanese Grammar B and SPAN3040 Spanish Linguistics. 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

LING2200	Foundations of Language	S2
LING2400	Language, Meaning and Context	S1
LING2500	Theoretical and Descriptive Linguistics	S1
LING2510	Analysing Talk	S1
LING2525	Language in Professional Contexts	S2
LING2535	Sociolinguistics	S2
LING2540	Semantics and Pragmatics	S1
LING2550	Introducing Grammar	S1
LING2590	The English Language	S1
LING2670	Phonology	S2
LING2800	Current Issues in English Grammar	S2

Advanced Upper Level Courses

LING3900	Theoretical and Descriptive Linguistics (Advanced)	S1
LING3902	Foundations of Language (Advanced)	S2
LING3903	Language, Meaning and Context	S1

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 two of LING3900, LING3901, LING3902, LING3903, 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: Dr Dennis Trenerry
Office: Room 3063, Red Centre
Tel: (02) 9385 7010
Email: d.trenerry@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.

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.

MATH1011, MATH1021, 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.

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 first year Mathematics 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 the period late January to February each year, starting immediately the enrolment period begins.

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
MATH1021	General Mathematics 1C
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
MATH2280	Biomathematics
MATH2301	Mathematical Computing

Pure Mathematics Level II

MATH2400 Finite Mathematics
MATH2430 Symbolic Computing
MATH2501 Linear Algebra
MATH2510 Real Analysis
MATH2520 Complex Analysis
MATH2601 Higher Linear Algebra
MATH2610 Higher Real Analysis
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
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
MATH3720 Higher Algebra 2
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 and Communications

Head of School: Philip Bell
Administrative Assistant: Julie Miller
Tel: (02) 9385 6811 **Fax:** (02) 9385 6812
Email: mdcm@unsw.edu.au
Website: http://mdcm.arts.unsw.edu.au

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 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 complete 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**) and BSc (Media and Communications) (program **3994**).

Level 1

MDCM1000	New Media Technologies A	S1
MDCM1001	New Media Technologies B	S2
MDCM2000	Researching and Writing for New Media	S1
MDCM2002	Media Production	S1
MDCM2003	Multimedia Production	S2

Year 3

MDCM3000	Media Forms	S1
MDCM3002	Advanced Media Production	S1
MDCM3003	Multimedia Production in Industry Contexts	S2

Honours Level

For entry to Honours in Media and Communications, students must have normally completed 54 units of credit in MDCM courses with a grade average of at least 65%.

MDCM4000 Media and Communications Honours F/T
MDCM4050 Media and Communications Honours P/T

Elective Courses

These courses are available to all Faculty of Arts and Social Sciences students at Upper Level.

MDCM2101	Media, Tastes and Values	S1
MDCM2102	Media Contexts: Political and Cultural	S2
MDCM3100	Introduction to Legal Issues for Media and the Arts	S2
MDCM3102	Digital Aesthetics	S1

Modern Language Studies

School Office: Reception Room 258, Morven Brown
Email: languages@unsw.edu.au

The School of Modern Language Studies teaches majors in Chinese and Indonesian Studies, French, German and Russian Studies, Japanese and

Korean Studies, Linguistics, Portuguese Studies*, Spanish and Latin American Studies, and Modern Greek. 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 taught by staff members from different departments and will emphasise cross-cultural comparison.

**Subject to staff availability.*

Upper Level

MODL2000	Cross-Cultural Communication	S2
MODL2002	Introduction to Professional Interpreting	S1

Music and Music Education

Head of School: Dr Christine Logan
School Office: Room G19, Robert Webster Building
Tel: (02) 9385 4871
Email: music@unsw.edu.au
Website: www.arts.unsw.edu.au/music/

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 and Option	BA Musicianship C and Option in Musicology

Year 3

MUSC3311 or Option	Electronic Music or Option in Musicology or Musicianship
Option	Option in Musicology or Musicianship

Performance

Performance in one of the performance ensembles offered by the School is part of each of the BA Musicianship A, B, C courses.

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 and MUSC2311	Introduction to Musicology and BA Musicianship B
MUSC2312	BA Musicianship C

Year 3

Option	Option in Musicology or Musicianship
Option	Option in Musicology or Musicianship

Performance

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.

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 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. 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 enough flexibility in their course to enable them to combine music studies with some work in a related discipline like theatre, film and dance, 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, involve the active development of the student's musicianship and develop 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, Gone Bush Band, Handbell Ensemble, Jazz Group.

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 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/19th Centuries
MUSC2132 Music of the Middle Ages and Renaissance
MUSC2201 Music of Aboriginal Australians
MUSC3112 Seminar in Musicology
MUSC3131 Jazz and Popular Music Studies
MUSC3162 Twentieth Century Music
MUSC3212 Music of India

Musicianship Options

MUSC3301 Music Analysis
MUSC3302 Orchestration and Arrangement
MUSC3311 Electronic Music
MUSC3331 Advanced Electronic Music

Honours Level

MUSC4000 Bachelor of Music Honours
MUSC4001 Music Honours (BA)
MUSC4002 Music Education Honours

Philosophy

Administrative Officer: Soon Ng
Tel: (02) 9385 2371
Email: philosophy@unsw.edu.au
Website: www.arts.unsw.edu.au/philosophy/

Studying Philosophy provides intellectual skills which 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 is 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. 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 at least 42 units of credit including no more than 12 units of credit in Level 1 courses. 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 PHIL3910 Advanced Philosophy Seminar. Also, students must 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 I, and the remainder at Upper Level. 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 – either in terms of the prescribed number of units of credit or in terms of the requirement that 12 units of credit be chosen from the specified range of courses. Students are invited to consult the School about this matter in their particular situations.

Subject to the 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.

Students contemplating Honours are urged to seek advice from the School early in their program.

Level 1

PHIL1007	Knowledge and Reality	S2
PHIL1010	Thinking about Reasoning	S2
PHIL1011	Minds, Bodies and Persons	S1
PHIL1014	Introduction to European Philosophy	S1

Upper Level

PHIL2106	Logic	S1
PHIL2116	Scientific Method	S2
PHIL2118	Philosophy and Biology	S1
PHIL2206	Philosophy of Mind	S1
PHIL2207	Philosophy of Psychology	S2
PHIL2208	Contemporary Epistemology	S2
PHIL2218	Philosophical Foundations of Artificial Intelligence	S1
PHIL2226	Twentieth Century Analytic Philosophy	S1
PHIL2229	Themes in 18th Century Philosophy	S2
PHIL2309	Hegel	S2
PHIL2316	Philosophy of Religion	S1
PHIL2407	Contemporary European Philosophy	S2
PHIL2416	Nietzsche and Philosophy	S1
PHIL2418	Ethical Issues	S2
PHIL2420	Environmental Ethics	S1
PHIL2421	Philosophy, Education and Society	S2
PHIL2505	Kant and Kantian Themes	S1
PHIL2508	Theories in Moral Philosophy	S1
PHIL2509	Philosophy of Law	S2
PHIL2510	Political Philosophy: Equality, Freedom & Justice	S1
PHIL2515	Origins of Phenomenology	S2
PHIL2519	Introduction to Chinese Philosophy	S2
PHIL2520	Aspects of Chinese Thought	S2
PHIL2608	Aesthetics: Experiencing the Spectacle	S2
PHIL2708	Reading Option	S1 & S2
PHIL3900	Themes in 17th Century Philosophy	S1
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
Office: Room LG24, Morven Brown
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.

Suitably qualified students may proceed from the program to a fourth year Honours program in Philosophy or in History and Philosophy of Science, or to a joint-Honours program in the Schools of Philosophy and History and Philosophy of Science.

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
PHIL2106	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. Note also that PHIL2107 and PHIL2117 are not on offer in 2004.*

Physics

Undergraduate Director: A/Prof C Hamer
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 67, 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

Politics and International Relations

Head of School: Professor Marc Williams
Tel: (02) 9385 2381 **Fax:** (02) 9385 1555
Email: politics_ir@unsw.edu.au
Website: www.arts@unsw.edu.au/politics/

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 in Politics and International Relations. However, provided that 6 Level 1 units in Politics and International Relations have been obtained, ARTS1100 will be accepted as part of the School major.

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 Institutions	S2
POLS1005	Politics and Crisis: An Introduction to Western Political Theory	S1
POLS1008	Politics of Post-Communist Systems	S2
POLS1017	International Relations in the 20th Century	S1
POLS1018	Politics, Power, Principle: An Introduction to Modern Political Theory	S2
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

POLS2008	Public Policy Making	S2
POLS2015	Political Language	S2
POLS2020	Sex, Human Rights and Justice	S1
POLS2023	Globalisation and Uneven Development	S2
POLS2024	Theories and Concepts of International Relations	S1
POLS2032	Globalisation, Power and Development in Australia	S2
POLS2033	Jews in Modern Society	S1
POLS2034	Jews, States and Citizenship	S2
POLS2036	Political Development in Northeast Asia	S1
POLS2037	International Law: Politics, Power and Ideology	S1
POLS2040	Politics and Business	S1
POLS2041	Sexuality and Power: The Social Relations of Sex and the Sexes	S2
POLS2044	Institutions and Policy: Re-evaluating Australian Politics	S1
POLS2045	Resource Politics: Politics in Resource-Rich Societies	S2
POLS2046	Political Rhetoric	S2
POLS2047	Human Rights and Wrongs in Australia	S1
POLS2048	International Security	S2
POLS2049	Asia and the International Political Economy	S2

Advanced Upper Level Lecture Course

POLS3901	States, Nations and Ethnic Identities	S1

Upper Level Seminar Courses

POLS3024	Australian Foreign Policy	S2
POLS3027	Liberal Democratic Thought	S1
POLS3028	Perspectives on US Politics: The American President	S2
POLS3032	The Party System in Australia	S1
POLS3040	Early Political Texts	S2
POLS3050	Theories of Nationalism	S2
POLS3054	Theorising the International Political Economy	S1
POLS3055	Prime Ministers and Leadership	S2

Advanced Upper Level Seminar Course

POLS3910	The Art of Political Science	S1

Honours Entry

Coordinator: Dr Helen Pringle
Email: h.pringle@unsw.edu.au

For entry to the Politics and International Relations Honours Program (Research) the requirement is the successful completion of 54 units of credit (9 courses) in Politics and International Relations at 70% average, including at least 6 Level 1 units of credit and 12 units of credit at Credit level from Upper Level POLS3… Seminar courses. With the written permission of the Head of School, a student may include up to 12 units of credit from related courses in other schools. Entry S1 only.

POLS4000	Politics and International Relations Honours (Research) Full-Time

Combined Honours

The Combined Honours Program allows a student to undertake an Honours year in both Politics and International Relations and an approved 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 in Politics and International Relations at 70% average or better, including at least 6 Level 1 units of credit and 12 units of credit at Credit level from Upper Level POLS3... Seminar courses. When a student undertakes Combined Honours, arrangements are made between the relevant Schools who determine, in conjunction with the student, the thesis topic, the courses undertaken and the supervisors. Entry S1 only.

POLS4500	Combined Politics and International Relations Honours (Research) Full-Time

Psychology

The School of Psychology is in the Faculty of Science.

Head of School: A/Prof Peter Lovibond
Office: Room 1017, Mathews Building
Tel: (02) 9385 3041
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	S2
PSYC3331	Health Psychology	S1
PSYC3341	Developmental Psychology	S2

Russian Studies

Head of Department: Dr Ludmila Stern
Tel: (02) 9385 1188/1681
Email: russian@unsw.edu.au
Website: www.arts.unsw.edu.au/languages/russian

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 (Stream A) and also for advanced or native speakers (Stream B). 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.

Major Sequence

Major sequences require 42 units of credit in Russian Studies and students are advised to consult with the Russian Studies staff to plan their program.

Stream A

Year 1 RUSS1111/1112 **Years 2 & 3** RUSS2111/2112 plus 18 units of credit selected from RUSS3111/3112/2100*/2101*/2102/2103* or EURO2500 and MODL2002.

Stream B

Year 1 RUSS1113*/1114*/1115* **Years 2 & 3** 30 units of credit selected from RUSS2101*/2102/2103*/3101/3102/3103/3104 or EURO2500 and MODL2002.

** Not offered in 2004.*

Further details are contained in the Russian Studies Handbook, available from the School of Modern Language Studies Student Information Desk.

Honours Level

Entry into the Honours program requires 54 units of credit in an approved sequence, including RUSS3900 and RUSS3901, with an average grade of credit or better in Russian courses or 48 units of credit in an approved sequence with an average of Credit or better for entry to the Combined Honours program.

Level 1

RUSS1111	Introductory Russian 1	S1
RUSS1112	Introductory Russian 2	S2

Upper Level

RUSS2100	Nineteenth Century Russian Literature and Society*	
RUSS2102	The Great Terror	S2
RUSS2103	The Russian Revolution*	
RUSS2111	Intermediate Russian 1	S1
RUSS2112	Intermediate Russian 2	S2
RUSS3111	Advanced Russian 1	S1
RUSS3112	Advanced Russian 2	S2
EURO2500	The Russian Experience	S1

** Not offered in 2004.*

Advanced Upper Level Courses

RUSS3900	Intermediate Russian 1 (Advanced)	S1
RUSS3901	Intermediate Russian 2 (Advanced)	S2

Options

Students enrolling in their first option should enrol in RUSS3101 and then (if necessary) in subsequent option(s).

RUSS3101	Russian Option 1
RUSS3102	Russian Option 2
RUSS3103	Russian Option 3
RUSS3104	Russian Option 4

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

Russian Upper Level and Honours Options

a. Tolstoy
b. Gogol
c. Chekhov
d. Pushkin
e. Solzhenitsyn
f. 20th Century Russian Prose
g. Russian Women Writers
h. Contemporary Russian Drama

Note: The Department reserves the right to limit or increase the number of options available.

Social Science and Policy

Head of School: Prof Janet Chan
School Office: Room G30, Morven Brown Building
Tel: (02) 9385 2292
Email: slsp@unsw.edu.au
Website: www.arts.unsw.edu.au/ssp/

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. Combined undergraduate degree programs are also offered that combine the Bachelor of Social Science with the Bachelors of Social Work, Commerce, Economics, Science, Art Theory and Law. Similar combinations of combined degrees are available within the Bachelor of Arts with a major sequence in Policy Studies.

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.

In addition, students undertake elective courses, totalling at least 42 units of credit, from the courses offered in the Faculty of Arts and Social Sciences and courses carrying the equivalent of 12 units of credit chosen from the University's General Education program.

The degree may be taken at Pass or Honours level. The Pass degree is a three year full-time program requiring the completion of 144 units of credit including the required general education courses. Honours students complete, in addition to the Pass degree program, an extra year of full-time study or an extra eighteen months of part-time study. To be eligible to enter the Honours year students must perform at a credit or better average in both the Social Science and Policy core as well as in their major study.

The Core Program in the Bachelor of Social Science

The core program is a 48 units of credit sequence consisting of eight courses taken over three years.

		UOC
SLSP1000	Social Science and Policy	6
or		
SLSP1002	Introduction to Policy Analysis	6
and		
SLSP1001	Research and Information Management	6
SLSP2000	Economy and Society	6
SLSP2001	Applied Social Research 1	6
SLSP2002	Policy Analysis Case Studies	6
SLSP3000	Social Theory and Policy Analysis	6
SLSP3001	Applied Social Research 2	6
SLSP3002	Social Science and Policy Project	6

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, and a Major concentration in an approved area, both with a good Credit 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 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.

For details concerning requirements, see Program and Course Information, and the appropriate entries of schools/departments offering Combined Honours.

Honours in Policy Studies in the Bachelor of Arts

Entry to honours in Policy Studies requires completion of 54 units of credit with at least a credit level 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	Economy and Society
SLSP2002	Policy Analysis Case Studies
SLSP3000	Social Theory and Policy Analysis
SLSP3911	Inquiry and Interpretation in the Social Sciences

Students in their honours year will enrol either in SLSP4100 or in SLSP4150.

Level 1

SLSP1000	Social Science & Policy	S1
SLSP1001	Research & Information Management	S2
SLSP1002	Introduction to Policy Analysis	S2

Upper Level

SLSP2000	Economy and Society	S1
SLSP2001	Applied Social Research 1	S1
SLSP2002	Policy Analysis Case Studies	S2
SLSP2201	Knowledge and Policy	S2
SLSP2601	Social Policy	S2
SLSP2701	The Theory and Practice of Development	S1
SLSP2800	Researching the Media	S2
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

Head of School: Prof Richard Hugman
School Office: Room 1519, Mathews Building
Administrative Assistant: Maggie O'Keeffe
Administrative Officer: Christina Mangos
Email: Social.Work@unsw.edu.au
Website: www.arts.unsw.edu.au/socialwork

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		**UOC**
Session 1		
SOCW1001	Introduction to Social Work*	6
	Psychology Elective	6
	Sociology Elective	6
	Elective	6

Session 2

SOCW1002	Communication and Social Work Practice*	6
SOCW1003	Human Behaviour 1*	6
	Elective	6
	Elective	6

Year 2 - Upper Level

Session 1

SOCW2001	Human Behaviour 2*	6
SOCW2002	Society and Social Work 1*	6
SOCW2003	Social Work Practice – Casework	6
	General Education Elective	3
	General Education Elective	3
SOCW2007	Social Work Practice – Bridge **	3

Session 2

SOCW2004	Society and Social Work 2*	6
SOCW2005	Research for Social Work*	6
SOCW2006	Social Work Practice – Community Work	6
SOCW2100	Aboriginal People and Social Work	6

Year 3 - Upper Level

Session 1

SOCW3002	Social Work Practice – Groupwork	6
SOCW3001	Social Work Practice – Third Year Practicum	12
	General Education Elective	3
	General Education Elective	3

Session 2

SOCW3004	Social Policy 1*	6
SOCW3008	Social Work Practice – Selected Studies 1	6
SOCW3006	Socio-Legal Practice*	6
	Research Elective	6
	or	
SOCW3005	Research Honours	6

Year 4 - Upper Level

Session 1

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 2

SOCW4010	Social Work Practice – Fourth Year Practicum	24

Year 5 - Honours

Session 1

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 'How to Structure your Program'.

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 a Bachelor of Social Work/Bachelor of Social Science program, refer to 'How to Structure your Program'.

Sociology and Anthropology

Head of School: A/Prof Michael Humphrey
School Office: Room 157/159, Morven Brown
Tel: (02) 9385 2399/1807
Email: sociology@unsw.edu.au
Website: www.arts.edu.au/sociology/

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 2004 of studying sociology must take at least one of the five introductory courses on offer if they wish to major in Sociology. 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
SOCA1003	Modern Sociology: Key Ideas	S1
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 no more than 12 units of credit in Level 1 courses. Provided six units of credit have been completed in Level 1 Sociology, ARTS1100 can be completed as part of a major in Sociology.

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

SOCA2102	Culture: Modernity and its Discontents	S2
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	Pacific Island Research Fieldwork	S2
SOCA2205	Society and Desire	S2
SOCA3103	Professions: Discipline, Power, Knowledge	X2
SOCA3106	Tourism and Cultural Anthropology	S2
SOCA3200	Jerusalem: One City, Three Faiths	S2
SOCA3202	Religions: Judaism, Christianity, Islam	S1
SOCA3203	Oceanic Societies: Pacific Island Living	S2
SOCA3204	Modernity and Development in the Pacific Islands	S2
SOCA3206	Current Debates in Social Anthropology	S2
SOCA3208	Colonisation and Indigenous Identity Formation	S1
SOCA3209	Indigenous Australia: Gendered Identities	S2
SOCA3210	Whiteness – Beyond Colour: Identity and Difference	S1
SOCA3301	Critical Reason: Modern Sociological Theories	S1
SOCA3407	Australian Migration Issues	X1
SOCA3409	Crime, Gender and Sexuality	X1
SOCA3410	Deviance	X2
SOCA3411	Forensic Sociology	S1
SOCA3605	Quality of Life in Australia	S1
SOCA3607	Sociology of Ageing	S1
SOCA3702	Social Power: Theories and Structures	S1
SOCA3703	Nationalism, Citizenship and Cultural Identity	S2
SOCA3704	Social Movements and Society	S2
SOCA3706	Media and the Public Sphere	S1
SOCA3801	Healing	S2
SOCA3804	Living and Dying	S2
SOCA3810	The Space of Terror	S1

Advanced Upper Level Course

SOCA3912	Risk and Trust in Modern Society	S2

Honours Program

Honours in Sociology 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.

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 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
- have achieved an average of 70%
- students who are interested in Honours, must also complete two pre Honours courses from the SOCA3810-SOCA3915 range.

Students who enrolled in their degree before 1999, who are interested in Honours, are strongly advised to enrol in these courses as well.

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
- have achieved an average of 70%
- completed at least one course from the SOCA3810-SOCA3915 range
- 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

Head of Department: A/Prof John Brotherton
Tel: (02) 9385 2421
Email: j.brotherton@unsw.edu.au
Website: www.arts.unsw.edu.au/languages/spanish/spanish.html

Courses in Spanish and Latin American Studies are available in language, literature and history. Major sequences may be followed in language and literature and/or history. In the case of language, entry to one of two streams depends on the level of knowledge a student has of the Spanish language. Intensive oral and written language work is an essential element for the elementary and intermediate streams and classes for both are conducted wherever possible in Spanish. 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

Students with no prior knowledge:

Year 1	**UOC**
SPAN1001	6
SPAN1002	6

Years 2 and 3

SPAN2003	6
SPAN2004	6
SPAN3003	6
SPAN3004	6

+ 6 Upper Level units of credit from literature, and/or history options to total 42 units of credit.

Students with some prior knowledge:

Year 1	**UOC**
SPAN1021	6
SPAN1022	6

Years 2 and 3

30 Upper Level units of credit from language, literature and/or history options to total 42 units of credit. This should include courses SPAN2023 and SPAN2024 (6 credits each) for those students requiring further language study.

Non-Language and Literature

Year 1

Other approved 12 units of credit in Level 1 courses from History, Economic History, Comparative Development, Politics and International Relations, Sociology and Anthropology or Spanish and Latin American Studies.

Years 2 and 3	**UOC**
SPAN2401 and SPAN2428	12

+ 18 Upper Level units of credit from history, and/or literature options (entry to literature options dependent on level of fluency of Spanish) to total 42 units of credit.

Level 1

SPAN1001	Introductory Spanish 1A	S1
SPAN1002	Introductory Spanish 1B	S2
SPAN1021	Introductory Spanish 1C	S1
SPAN1022	Introductory Spanish 1D	S2

Upper Level

1. Language

SPAN2003	Intermediate Spanish A	S1
SPAN2004	Intermediate Spanish B	S2
SPAN2023	Intermediate Spanish C	S1
SPAN2024	Intermediate Spanish D	S2
SPAN3003	Advanced Spanish A	S1
SPAN3004	Advanced Spanish B	S2
SPAN3031	An Introduction to Translation	S2
SPAN3040	Spanish Linguistics	S1

2. Literature

SPAN3310	The Theatre of Garcia Lorca	S1
SPAN3350	Performing Passion and Pain: The Case of Frida Kahlo	S2

3. History

SPAN2401	Colonising the Americas: The Spanish and Portuguese Empires	S1
SPAN2406	Spain: From Loss of Empire to European Integration	S1
SPAN2418	Amazonia	S2
SPAN2421	Special Topic in Latin American History 1	S1
SPAN2422	Special Topic in Latin American History 2	S2
SPAN2428	(Un)making the Third World: History and Global Development B	S2
SPAN2429	(Un)making the Third World: History and Global Development A	S1
SPAN2431	The United States and Changing Global Orders	S1
SPAN2432	Twentieth Century World History	S2

Advanced Upper Level Course

SPAN3900	Special Topic in Hispanic Studies (Advanced)	S2

Honours Level

Students from the elementary stream complete the normal major sequence as well as 12 additional Upper Level units of credit in literature or history including SPAN2401, SPAN2428 and SPAN3900 completed at Credit Level or better to total 54 units of credit. Students are reminded that they must have a proven reading competence in Spanish before they can be admitted to an Honours program.

Students with prior knowledge complete the normal major sequence as well as 12 additional Upper Level units of credit in literature, language and/or history including SPAN2401, SPAN2428 and SPAN3900 completed at Credit level or better to total 54 units of credit.

Students majoring in non-language and literature major complete the normal major sequence as well as 12 additional Upper Level units of credit in history options completed at Credit level or better and reading knowledge of Spanish to total 54 units of credit.

Combined Honours

Students wishing to undertake study at Honours Level in Spanish and Latin American Studies and another discipline should enrol in SPAN4500 Combined Honours (Research). Students should seek the advice and approval of the Head of Department prior to enrolling in the third year of study.

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

Head of School: A/Prof W. Kearsley
School Office: Room 420, 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 remotely sense images for mapping, monitoring and resource surveys).

Upper Level

GMAT0753	Introduction to Spatial Information Systems
GMAT3500	Photogrammetry & Remote Sensing

Theatre, Film and Dance

Head of School: Dr George Kouvaros
School Office: Room 205, Robert Webster Building
Tel: (02) 9385 4856
Email: g.kouvaros@unsw.edu.au
Website: www.arts.unsw.edu.au/tfd/

The School of Theatre, Film and Dance is concerned with the theoretical and historical study of theatre, film and performance studies. It also offers courses in dance theory and practice. Whilst practical work is undertaken in all areas, this is not in order that students achieve proficiency as performers or directors, but in order that they may develop a critical language for the discussion and analysis of theatre, film and dance as performance events and reach a fuller appreciation of the production processes in the respective media.

Major Sequence

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. Film, or 2. Theatre and Performance Studies. The third major sequence, which will consist of 60 units of credit, is 3. Film/Theatre and Performance Studies.

The School also offers a Bachelor of Arts (Dance) Bachelor of Education program. For details, see 'How to Structure Your Program' at the beginning of the Faculty section of this Handbook.

Before proceeding to a major sequence at Upper Level, all students must take 6 or 12 units of credit at Level 1 from any of the following courses:

Level 1			**UOC**
FILM1101	Introduction to Film	S1	6
THST1101	Introduction to Theatre and Performance Studies	S1	6
THFI1002	Reading Performance	S2	6

Upper Level

1. Film

The major in Film concentrates on the theoretical, historical and practical study of film. It will consist of no fewer than 42 units of credit, including:
6 or 12 units of credit at Level 1
and
36 or 30 units of credit at Upper Level, which must include FILM2001 Contemporary Approaches to the Cinema and at least 30 or 24 extra units of credit from any course with a FILM prefix. THFI3903 Issues in Contemporary Film Theory can also be counted as part of the major of film.

2. Theatre and Performance Studies

The major in Theatre and Performance Studies concentrates on the history, theory and practice of performance. It will consist of no fewer than 42 units of credit, including:
6 or 12 units of credit at Level 1
and
36 or 30 units of credit at Upper Level, which must include THST2202 Critical Perspectives on Theatre and Performance and at least 30 or 24 extra units of credit from any course with a THST, THFI or PFST prefix.

3. Film/Theatre and Performance Studies

The major in Film/Theatre and Performance Studies will consist of 60 units of credit, including:
6 or 12 units of credit at Level 1
and
12 units of credit made up of FILM2001 Contemporary Approaches to the Cinema and THST2202 Critical Perspectives on Theatre and Performance
and
18 units of credit from any other course with a FILM prefix
and
18 units of credit from any course with a THST, THFI or PFST prefix
and (if only 6 units of credit are taken at Level 1)
6 units of credit from any course with a FILM, THST, THFI or PFST prefix.

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
EDST1102	Social Foundations of Education	S2

plus 12 units of credit in Level 1 courses from the approved major sequences plus

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
EDST4091	Microteaching	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 Entry

Qualifications for entry to Year 4 are determined by the School. The minimum requirements, however, for students proposing to undertake in 2004 a single Honours degree in Film or Theatre and Performance Studies or Film/Theatre and Performance Studies are that they must have obtained 54 units of credit in the School of Theatre, Film and Dance, or 48 units of credit for Combined Honours, and have passed all courses in the School at an average of a good Credit grade (70%) or better. This total must include not only those courses required for one of the three major sequences, but also any additional prerequisites.

BA students proposing to undertake a single or combined Honours degree in either Film, or Theatre and Performance Studies, or Film/Theatre and Performance Studies should consult the School prior to making their enrolment.

BA(Dance) BEd students seeking to undertake Dance Honours must have completed the 192 units of credit as prescribed and achieved a minimum average grade of Credit in dance courses. These students must consult the Dance Program Coordinator during their second or third year in order to plan an appropriate program of study.

Honours in Film

All students undertaking an Honours degree in Film must have completed 54 units of credit within the School. These must include the fulfillment of the requirements for a major sequence in Film and the completion of the following advanced Upper Level course within the School:

THFI3903	Issues in Contemporary Film Theory

Honours in Theatre and Performance Studies

All students undertaking an Honours degree in Theatre and Performance Studies must have completed 54 units of credit within the School. These must include the fulfillment of the requirements for a major sequence in Theatre and Performance Studies and the completion of at least one of the following two advanced Upper Level courses within the School:

THFI3900	Interpreting the Theatrical Past
PFST3902	Performance and Performativity

Honours in Film/Theatre and Performance Studies

All students undertaking an Honours degree in Film/Theatre and Performance Studies must have completed at least 60 units of credit within the School and have fulfilled the requirements for a major sequence in Film/Theatre and Performance Studies. They must also have completed at least two advanced Upper Level courses in the School, one of which must be selected from

THFI3900	Interpreting the Theatrical Past
PFST3902	Performance and Performativity

plus the following course

THFI3903	Issues in Contemporary Film Theory

Level 1

FILM1101	Introduction to Film	S1
THST1101	Introduction to Theatre	S1
THFI1002	Reading Performance	S2

Upper Level Studies in Dance

The following courses are available only to **BA(Dance) BEd** students:

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

Upper Level Studies in Film (see also Upper Level Studies in Film/Theatre and Performance)

FILM2001	Contemporary Approaches to the Cinema	S1
FILM2002	Australian Cinema	S1
FILM2007	Movie Worlds: National Cinemas	S2
FILM2008	Film Genres	S2
FILM2010	Electronic Media in Perspective	S1
FILM2011	Major Figures in World Cinema	S1
FILM2012	Performance in Independent American Cinema	S2
FILM2013	Theories of Cinema Spectatorship	S2
FILM2014	Film Comedy: The Theory and Practice of Comedic Performance in Cinema	S2
FILM2019	Issues of Aesthetics and Representation in French Cinema	S2
FILM2021	The Hollywood System	S1
FILM3001	Video Exercise	S1

Upper Level Studies in Theatre and Performance

THST2111	Revolution and Change: European Theatre	S1
THST2135	Production Exercise	S1 and S2
THST2143	Modern Theories of Acting	S2
THST2145	Writing for Performance	S2
THST2161	Contemporary Theatre	S2
THST2163	Staging Australia	S1
THST2202	Critical Perspectives on Theatre and Performance	S1
PFST2000	Dance Analysis and Composition 1	S1
PFST2002	Theatre Production	S2
PFST2005	Dance Analysis and Composition 2	S2
PFST2007	History of Dance	S1
PFST2009	Performance and Culture	S2
PFST2149	Performance Making	S1

Advanced Upper Level Course

PFST3902	Performance and Performativity	S2

Upper Level Studies in Film/Theatre and Performance

THFI2010	Comedy and Power	S2

Advanced Upper Level Course

THFI3903	Issues in Contemporary Film Theory	S2

Honours Level

DANC4000	Dance Honours (Research) Full-Time
DANC4050	Dance Honours (Research) Part-Time
THFI4000	Theatre, Film and Dance Honours (Research) Full-Time
THFI4050	Theatre, Film and Dance Honours (Research) Part-Time
THFI4500	Combined Theatre and Film Studies Honours (Research) Full-Time
THFI4550	Combined Theatre and Film Studies Honours (Research) Part-Time

Women's and Gender Studies

Coordinator: Dr Hélène Bowen Raddeker, School of History
Office: Room 361, Morven Brown
Tel: (02) 9385 2335
Email: hbowenr@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 issues and issues of gender and sexuality. It provides an important extension to major sequences in both Arts and the Social Sciences.

The Level 1 core course WOMS1001 is designed to introduce students to important issues and debates in feminism, past and present, and in different parts of the world. 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

A major sequence in Women's and Gender Studies may only be taken as an additional major sequence together with a home-based major. It requires the completion of a total of 36 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: Introduction to Feminism, as well as two further core courses in the A-list below. The remaining 18 units of credit (or 3 courses) may be selected either from other A-list core offerings or from the B-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	S1
WOMS2002	Gender, Race, Nature and Reason	S2
WOMS2003	A History of Sexualities	S2
WOMS2004	Sex, Human Rights and Justice	S1
WOMS2005	Society and Desire	S2
WOMS2006	Sexuality and Power: The Social Relations of Sexuality and the Sexes	S2
WOMS2007	Crime, Gender and Sexuality	X1
WOMS2008	Australian Masculinities: Reading Gender, Sex and Culture	S2

List B

Upper Level Electives

ARTS3010	Feminist Thought and Action	X1
CHIN2303	Gender in Contemporary Chinese Culture and Society	S2
ENGL3401	Contemporary Australian Women Writers*	
GREK3202	Greek Women Writers	S2
GREK3205	Pandora's Box: Gender Issues in Greek Mythology and Tragedy	S1
HIST2015	Women in the Modern World	S2
HIST2034	Gender and Frontier	S2
HIST2050	Women in Southeast Asian Societies	S2
HIST2080	Rights and Riots: Gender & Politics in 18th-century France	S1
JAPN3602	Sexuality and Gender in Contemporary Japan	S2
KORE2601	Gender/Politics in Korean Literature*	
PFST2201	Asian Theatre in Performance*	
PHIL2419	Existential Phenomenology and its Critics*	
POLS2047	Human Rights and Wrongs in Australia	S1
SAHT2642	Art, Gender, Sexuality and the Body	S1
SOCA3209	Indigenous Australia: Gendered Identities	S2
SOCA3410	Deviance	X2
SOCA3704	Social Movements and Society	S2
SOCA3812	Post-Human Subjects	S1
SPAN3350	Passion and Pain: The Case of Frida Kahlo	S2

**Not offered in 2004.*

Honours

Students who have completed 42 units of credit in Women's and Gender Studies courses, including WOMS1001, Introduction to Feminism and two further Women's and Gender Studies core courses, at the level of Credit or above, may apply to be admitted to a Combined Honours program in Women's and Gender Studies if they have satisfied the prerequisite for Combined Honours in another School in the BA program, and have that School's approval to complete a thesis on an interdisciplinary topic. (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.) In their Honours year, students will be required to complete coursework nominated by the Women's and Gender Studies Coordinator (either 2 HPW seminar or reading program for one session, see WOMS4500 or WOMS4550) in addition to a thesis on an approved topic, with joint supervision, if appropriate.

WOMS4500	Combined Women's and Gender Studies Honours (Research) Full-Time
WOMS4550	Combined Women's and Gender Studies Honours (Research) Part-Time

Rules for the Award of Degrees

3400 Bachelor of Arts Program

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 *CHIN Chinese Studies, EDST Education, ENGL English, 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, MUSC Music, PHIL Philosophy, POLS Politics and International Relations, PORT Portuguese Studies, RUSS Russian Studies, SLSP Policy Studies, SOCA Sociology and Anthropology, SPAN Spanish and Latin American Studies, DANC/FILM/PFST/THFI/THST Theatre, Film, Dance*

List B *AUST Australian Studies, Cognitive Science, COMD Comparative Development, Environmental Studies, EURO European Studies, IRSH Irish Studies, JWST Jewish Studies, LATN* Latin, Philosophy of Science, SOCW* Social Work, WOMS Women's and Gender Studies*

List C *BIOS Biological Science, CHEM* Chemistry, COMP Computing, ECON Economics/Economic History, GEOH/GEOS Geography/Geology, GMAT* Surveying and Spatial Information Systems, IBUS International Business, IROB Human Resource Management/Industrial Relations, MATH Mathematics, PHYS* Physics, PSYC Psychology, SAHT Art History and Theory*

**Major sequence not offered.*

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 144 units of credit in accordance with 1.–7. 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.

3402 Bachelor of Arts (Media and Communications) Program

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. 12 units of credit from the General Education program, normally taken in the second and third year of study.

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 144 units of credit in accordance with 1.–4. 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.

3408 Bachelor of Arts (Dance) Bachelor of Education Program

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 approved sequences in Dance, Dance Practice, Dance Education and Education;

2. a sequence of 42 units of credit from List E below, including no more than 12 Level 1;

3. 12 units of credit from the General Education program, normally taken in the second and third year of study.

List E *CHIN Chinese, ECON Economics, ENGL English*, FREN French, GEOH/GEOS Geography, GERS German, HIST History, INDO Indonesian, JAPN Japanese, LING Linguistics*, SPAN Spanish, THST Theatre*

** A major sequence in ENGL English or LING Linguistics provides the appropriate background for Literacy/ESL teaching.*

Honours Degree

To qualify for the award of the degree at Honours level in one or two Schools/specialisations, a student must:

4. have obtained 192 units of credit in accordance with 1.–3. above and satisfied the appropriate prerequisites for entry to the Honours level program;

5. 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.

3413 Bachelor of International Studies in Asian Studies Program

Pass Degree

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. a sequence of at least 36 units of credit from CHIN Chinese, INDO Indonesian, JAPN Japanese or KORE Korean;

2. a major sequence from List D below;

3. at least 24 units of credit in ASIA and Asia-related 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 and C of the BA Rules;

5. at least 54 units of credit, including a minimum of 24 at Level 1, from Lists A and B of the BA Rules;

6. at least 54 units of credit outside the List D major sequence;

7. 12 units of credit from the General Education program;

8. 6 units of credit from a third year ARTS elective;

9. an approved program at an overseas institution (Overseas Study Program) normally of two semesters undertaken during the third and fourth years of study, and equivalent to 24 units of credit in each semester. Students who enrol for only one semester overseas must complete an alternative approved program of 24 units of credit at the University of New South Wales. To proceed on an Overseas Study Program, students must fulfill the requirements of the University's Exchange Program;

10. students wishing to study in a non-English speaking country must have achieved the required standard of competence in the language concerned as determined by the School of Modern Language Studies;

11. students who do not satisfy these requirements may apply to transfer to the BA program with credit for all courses completed.

List D *ECON Economics/Economic History, GEOH/GEOS Geography, HIST History, HPSC History and Philosophy of Science, IBUS International Business, IROB Human Resource Management/Industrial Relations, LING Linguistics, PHIL Philosophy, POLS Politics and International Relations, PSYC Psychology, SLSP Policy Studies, SOCA Sociology and Anthropology*

Bachelor of International Studies with Distinction

12. The Pass degree of Bachelor of International Studies may be awarded with Distinction where a student 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:

13. have obtained 192 units of credit in accordance with the above rules and satisfied the appropriate prerequisites for entry to the Honours level program;

14. 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.

3414 Bachelor of International Studies in European Studies Program

Pass Degree

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. a major sequence (36 units of credit) in EURO European Studies;

2. a sequence of at least 36 units of credit from FREN French, GERS German, GREK Greek (Modern), ITAL Italian, PORT Portuguese, RUSS Russian or SPAN Spanish;

3. a further sequence of at least 36 units of credit from List D;

4. a major sequence in either 2. or 3.;

5. 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;

6. 12 units of credit from the General Education program;

7. 6 units of credit from a third year ARTS elective;

8. an approved program at an overseas institution (Overseas Study Program) normally of two semesters undertaken during the third and fourth years of study, and equivalent to 24 units of credit in each semester. Students who enrol for only one semester overseas must complete an alternative approved program of 24 units of credit at the University of New South Wales. To proceed on an Overseas Study Program, students must fulfill the requirements of the University's Exchange Program;

9. students wishing to study in a non-English speaking country must have achieved the required standard of competence in the language concerned as determined by the School of Modern Language Studies;

10. students who do not satisfy these requirements may apply to transfer to the BA program with credit for all courses completed.

List D *ECON Economics/Economic History, GEOH/GEOS Geography, HIST History, HPSC History and Philosophy of Science, IBUS International Business, IROB Human Resource Management/ Industrial Relations, LING Linguistics, PHIL Philosophy, POLS Politics and International Relations, PSYC Psychology, SLSP Policy Studies, SOCA Sociology and Anthropology*

Bachelor of International Studies with Distinction

11. The Pass degree of Bachelor of International Studies may be awarded with Distinction where a student 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:

12. have obtained 192 units of credit in accordance with the above rules and satisfied the appropriate prerequisites for entry to the Honours level program;

13. 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.

3415 Bachelor of International Studies in Globalisation Program

Pass Degree

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. the core program (36 units of credit) in INST International Studies;

2. a major sequence from List D* below;

3. 36 units of credit in approved International Studies related 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 and C of the BA Rules;

5. at least 54 units of credit, including a minimum of 24 at Level 1, from Lists A and B of the BA Rules;

6. at least 54 units of credit outside the List D major sequence;

7. 12 units of credit from the General Education program;

8. 6 units of credit from a third year ARTS elective;

9. an approved program at an overseas institution (Overseas Study Program) normally of two semesters undertaken during the third and fourth years of study, and equivalent to 24 units of credit in each semester. Students who enrol for only one semester overseas must complete an alternative approved program of 24 units of credit at the University of New South Wales. To proceed on an Overseas Study Program, students must fulfill the requirements of the University's Exchange Program;

10. students wishing to study in a non-English speaking country must have achieved the required standard of competence in the language concerned as determined by the School of Modern Language Studies;

11. students who do not satisfy these requirements may apply to transfer to the BA program with credit for all courses completed.

List D* *ECON Economic/Economic History, GEOH/GEOS Geography, HIST History, HPSC History and Philosophy of Science, IBUS International Business, IROB Human Resource Management/Industrial Relations, LING Linguistics, PHIL Philosophy, POLS Politics and International Relations, PSYC Psychology, SLSP Policy Studies, SOCA Sociology and Anthropology*

** Within the Globalisation stream, a major in COMD Comparative Development may also be taken in fulfillment of this requirement.*

Bachelor of International Studies with Distinction

12. The Pass degree of Bachelor of International Studies may be awarded with Distinction where a student 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:

13. have obtained 192 units of credit in accordance with the above rules and satisfied the appropriate prerequisites for entry to the Honours level program;

14. 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.

3416 Bachelor of International Studies in Languages Program

Pass Degree

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. two major sequences from CHIN Chinese, FREN French, GERS German, GREK Greek (Modern), INDO Indonesian, ITAL Italian, JAPN Japanese, KORE Korean, PORT Portuguese, RUSS Russian or SPAN Spanish;

2. at least 24 units of credit in ASIA, EURO, LING or INST courses;*

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. 12 units of credit from the General Education program;

5. 6 units of credit from a third year ARTS elective;

6. an approved program at an overseas institution (Overseas Study Program) normally of two semesters undertaken during the third and fourth years of study, and equivalent to 24 units of credit in each semester. Students who enrol for only one semester overseas must complete an alternative approved program of 24 units of credit at the University of New South Wales. To proceed on an Overseas Study Program, students must fulfill the requirements of the University's Exchange Program;

7. students wishing to study in a non-English speaking country must have achieved the required standard of competence in the language concerned as determined by the School of Modern Language Studies;

8. students who do not satisfy these requirements may apply to transfer to the BA program with credit for all courses completed.

** With the approval of the Coordinator, other courses offered by Schools and programs of the Faculty may be substituted.*

Bachelor of International Studies with Distinction

9. The Pass degree of Bachelor of International Studies may be awarded with Distinction where a student 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:

10. have obtained 192 units of credit in accordance with the above rules and satisfied the appropriate prerequisites for entry to the Honours level program;

11. 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.

3420 Bachelor of Social Science Program

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 *ECON Economics/Economic History, GEOH/GEOS Geography/Geology, HIST History, HPSC History and Philosophy of Science, IBUS International Business, IROB Human Resource Management/Industrial Relations, PHIL Philosophy, POLS Politics and International Relations, PSYC Psychology, SOCA Sociology and Anthropology, SPAN Spanish and Latin American Studies (history stream), DANC/FILM/PFST/THFI/THST* Theatre, Film and Dance*

** Students majoring in Theatre, Film and Dance must complete at least 24 units of credit in other sequences from **List F**.*

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.–5. 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.

3422 Bachelor of Social Science in Criminology Program

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 and 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.

Honours Degree

To qualify for the award of the degree at Honours level, a student must:

6. have obtained 144 units of credit in accordance with 1.–5. above and satisfied the appropriate prerequisites for entry to the Honours level program;

7. 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.

3425 Bachelor of Music Program

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 and 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.

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 144 units of credit in accordance with 1.–4. 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.

3426 Bachelor of Music Bachelor of Education Program

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 and 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.

Honours Degree

To qualify for the award of the degree at Honours level in one or two Schools/specialisations, a student must:

4. have obtained 192 units of credit in accordance with 1.–3. above and satisfied the appropriate prerequisites for entry to the Honours level program;

5. 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.

3427 Bachelor of Music Bachelor of Arts Program

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, 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 and 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.

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.–7. 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.

4031 Bachelor of Social Work Program

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 and C of the BA Rules;

3. 12 units of credit from the General Education program.

Honours Degree

To qualify for the award of the degree at Honours level, a student must:

4. have obtained 192 units of credit in accordance with 1.–3. above and satisfied the appropriate prerequisites for entry to the Honours level program;

5. 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.

4035 Bachelor of Social Work Bachelor of Arts Program

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 and 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.

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.

4036 Bachelor of Social Work Bachelor of Social Science Program

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 and C (excepting SOCW and SLSP) of the BA Rules;

5. 12 units of credit from the General Education program.

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.

4055 Bachelor of Arts Bachelor of Education Program

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*, SPAN Spanish, THST Theatre*

**A major sequence in ENGL English or LING Linguistics provides the appropriate background for Literacy/ESL teaching.*

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 192 units of credit in accordance with 1.–6. 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.

3417 Diploma in Languages

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.

3418 Diploma in Music

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.

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, Planning & Urban Development and Human Geography and the interface to Sustainable Resources Management.

FBE has an academic structure aimed at encouraging synergy among the disciplines in the Faculty as well as providing 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 discipline as well as the 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
Acting Dean
Faculty of the Built Environment

Faculty of the Built Environment

Contents

Faculty Information and Assistance

Some People Who Can Help You

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 Foyer, Red Centre Building.

To speak to the Associate Dean (Undergraduate Studies) or 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 an expanding range of combined degrees (with programs like Law, Arts and Social Science) and fast-track programs (leading into Masters programs such as Commerce and Environmental Management).

Course Descriptions

Descriptions of courses offered in 2004 can be found in alphabetical order by the course code at the back of this Handbook or in the Virtual Handbook at **www.student.unsw.edu.au/handbook**

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, 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 complimented 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 via the *NewSouth Student Online*. 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 semester 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 International Student Services for detailed information on course options and scholarships or refer to their website at: **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). Some of these student clubs have websites which can be found at:
www.fbe.unsw.edu.au/students/useful.shtml

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 development of 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. Transfer between programs in the Faculty should not be considered automatic and is always subject to the approval of the Program Head in which admission is being sought. Applications are assessed on academic performance and approval is subject to places being available in the program.

5. 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.

6. 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.

7. 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.

8. 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.

9. 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.

10. Students may not enrol in two design studios as core courses in any one session.

Architecture Program

Program Head: Graham Bell

Architecture today is an art, a technology and a business. In the modern building industry, the architect is the one person who considers the building as a whole end product: serving a purpose, built of materials using technology, to a cost, for a client, providing an environment of space, light and climate, changing its context by its location and form and conveying artistic and social meaning.

For small buildings, the architect can lead and manage the whole process. As projects become larger and more complex, the architect becomes a member of a team and sometimes captain of the team, but always seeing the end product as a whole. From a comprehensive study of the requirements for a building, the architect prepares a design concept which is continually adjusted and refined over the life of the project. The architect's role is one of continual creativity.

The BArch program provides graduates with an understanding of the forces that shape buildings and with the skills to guide those forces to a desired end product.

3260 Bachelor of Architecture

BArch

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 including six months work experience that must be completed prior to the Graduation Project. There are two central goals. The primary goal is to equip students with the theoretical and practical knowledge, the 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:

1. Architectural Design
2. Architectural Communications
3. Architectural History and Theory
4. Architectural Technology
5. Architectural Practice

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 to facilitate midyear 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.

Registration/Professional Recognition

The degree of Bachelor of Architecture from the University of New South Wales is recognised by the Board of Architects of New South Wales for the purpose of legal registration. In addition, the candidate must satisfy the following requirements to become registered:

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 a special examination in Architectural Practice administered by the Board of Architects.

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.

Table 3260–1 Program Schedule

Year 1		
Session 1		**UOC**
BENV1101	Design Fundamentals: Studio 1	8
ARCH1121	Architectural History and Theory 1	4
BENV1141	Computers and Information Technology	3
ARCH1171	Architectural Technologies 1	9
	Total	**24**
Session 2		
ARCH1102	Architectural Design Workshop 1	8
ARCH1122	Architectural History and Theory 2	4
ARCH1142	Communications 1	4
ARCH1172	Architectural Technologies 2	8
	Total	**24**
Year 2		
Session 1		
ARCH1201	Architectural Design Workshop 2	8
ARCH1221	Architectural History and Theory 3	4
ARCH1241	Communications 2	3
ARCH1271	Architectural Technologies 3	6
	General Education	3
	Total	**24**
Session 2		
ARCH1202	Architectural Design Workshop 3	8
ARCH1222	Architectural History and Theory 4	3
BENV1242	Computer-Aided Design	3
ARCH1272	Architectural Technologies 4	4
ARCH1282	Research Practice	3
	General Education	3
	Total	**24**
Year 3		
Session 1		
ARCH1301	Architectural Design Studio 1	8
ARCH1321	Architectural History and Theory 5	3
BENV1341	Design Modelling and Visualisation	3
ARCH1371	Architectural Technologies 5	4
	Electives	3
	General Education	3
	Total	**24**
Session 2		
ARCH1302	Architectural Design Studio 2	9
ARCH1382	Practicum	3
	Electives	9
	General Education	3
	Total	**24**

Opportunity for alternate off-campus exchange program with the approval of the Program Head.

Year 4		
Session 1		**UOC**
ARCH1401	Architectural Design Studio 3	9
	Electives	15
	Total	**24**

Opportunity for alternate off-campus exchange program with the approval of the Program Head.

Session 2		
ARCH1402	Architectural Design Studio 4	9
ARCH1381	Professional Practice 1	3
ARCH1470	Building Services 1 & 2	6
	Electives	6
	Total	**24**

Opportunity for alternate off-campus exchange program with the approval of the Program Head.

Additional Requirement (completed after Yr 1 and before Yr 5):

ARCH1583	Work Experience	**24**

Year 5		
Session 1		
ARCH1501	Investigation Workshop	9
ARCH1582	Professional Practice 2	6
	Electives	9
	Total	**24**
Session 2		
ARCH1502	Graduation Studio	9
	Electives	15
	Total	**24**

Degree 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 fulfill these requirements, students must complete:

- 171 units of core courses, 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.
- 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.

Faculty Regulations for the BArch

Core Courses

The core courses prescribed for the program are all those named in Table 3260–1 Program Schedule.

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.

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.

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.

Science (Architecture) Program

Program Head: Graham Bell

Program Coordinator: Stephen Peter

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.

3265 Bachelor of Science (Architecture)

BSc(Arch)

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 specialize in an area of computing such as computer-aided design (CAD), building modelling, rendering, animation, multimedia and IT management.

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.

Table 3265–1 Program Schedule

Year 1		
Session 1		**UOC**
BENV1101	Design Fundamentals: Studio 1	8
ARCH1121	Architectural History and Theory 1	4
BENV1141	Computers and Information Technology	3
ARCH1171	Architectural Technologies 1	9
	Total	**24**
Session 2		**UOC**
ARCH1102	Architectural Design Workshop 1	8
ARCH1142	Communications 1	4
ARCH1122	Architectural History and Theory 2	4
ARCH1172	Architectural Technologies 2	8
	Total	**24**
Year 2		
Session 1		
ARCH1241	Communications 2	3
	Electives	18
	General Education	3
	Total	**24**
Session 2		
BENV1242	Computer-Aided Design	3
ARCH1282	Research Practice	3
	Electives	15
	General Education	3
	Total	**24**
Year 3		
Session 1		
ARCH1398	Research Project 1	6
BENV1382	Social Responsibility & Professional Ethics	3
	Electives	12
	General Education	3
	Total	**24**
Session 2		
ARCH1399	Research Project 2	9
	Electives	12
	General Education	3
	Total	**24**
Year 4 (Honours only)		
Session 1		
ARCH1498	Honours Project 1	24
	Total	**24**
Session 2		
ARCH1499	Honours Project 2	24
	Total	**24**

Table 3265–2 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 (and the 2 projects) to receive the major, while this recommended program includes 42 units of computing electives. It should be noted that students are not obliged to complete these electives in the order set out in the table. Also, the list below is not an exhaustive list of the available computing electives, so some students may choose to complete courses not listed here.

Year 2		
Session 1		**UOC**
BENV1042	World Wide Web in Presentation & Communication	6
	Electives	12
	Total	**18**
Session 2		
BENV1043	Multimedia in Design Presentation	6
BENV2403	Information Technology in Design and Construction	3
BENV2410	Advanced Webpage Design	6
	Total	**15**
Year 3		
Session 1		
BENV2405	Computer Graphics Programming	6
BENV2406	Design and Computation	3
BENV1341	Design Modelling and Visualisation	3
	Total	**12**
Session 2		
BENV2404	CAD Management for Architects	3
BENV2409	Advanced Multimedia	6
	Electives	3
	Total	**12**

Degree 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 fulfill 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.

Faculty Regulations for the BSc(Arch)

Core Courses

The core courses prescribed for the program are all those named in Table 3265–1 Program Schedule.

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.

Interior Architecture Program

Program Head: Judith O'Callaghan

Interior Architecture is the specialist area of architecture concerned predominantly with interior environments. The professional practice of the discipline demands, simultaneously, broad theoretical knowledge 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).

3255 Bachelor of Interior Architecture

BIA

The Bachelor of Interior Architecture is a four year full-time 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 the program, as well as developing and presenting its own material.

Student Exchange

Students in the BIA program may go on exchange any time after the completion of Year 2.

Registration/Professional Recognition

The degree of Bachelor of Interior Architecture from UNSW 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.

Table 3255–1 Program Schedule

Year 1		
Session 1		**UOC**
INTA2101	Design Studio 1	6
INTA2111	Theory 1	3
INTA2121	History 1	3
INTA2141	Communication 1	6
INTA2171	Technology 1	6
	Total	**24**
Session 2		
INTA2102	Design Studio 2	6
INTA2112	Theory 2	3
INTA2122	History 2	3
INTA2142	Communications 2	6
INTA2172	Technology 2	6
	Total	**24**
Year 2		
Session 1		
INTA2201	Design Studio 3	6
INTA2211	Theory 3	3
INTA2221	History 3	3
INTA2241	Communications 3	3
INTA2271	Technology 3	3
	General Education/Open Electives	6
	Total	**24**
Session 2		
INTA2202	Design Studio 4	6
INTA2212	Theory 4	3
INTA2222	History 4	3
BENV1242	Computer-Aided Design	3
INTA2272	Technology 4	3
	General Education/Open Electives	6
	Total	**24**
Year 3		
Session 1		
INTA2301	Design Studio 5	6
BENV1341	Design Modelling and Visualisation	3
INTA2371	Technology 5	3
	General Education/Open Electives	12
	Total	**24**
Session 2		
INTA2302	Design Studio 6	6
INTA2372	Technology 6	3
INTA2382	Professional Practice 1	3
	General Education/Open Electives	12
	Total	**24**
Year 4		
Session 1		
INTA2401	Design Studio 7	6
INTA2441	Project Research	6
INTA2411	Dissertation	6
	Open Electives	6
	Total	**24**
Session 2		
INTA2402	Graduation Project	15
INTA2482	Professional Practice 2	3
	Open Electives	6
	Total	**24**

Degree 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 fulfill 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.

Faculty Regulations for the BIA

Core Courses

The core courses prescribed for the program are all those listed in Table 3255–1 Program Schedule.

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.

Building Construction Management Program

Program Head: George Earl

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.

3331 Bachelor of Building Construction Management

BBCM

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

Assumed Knowledge

Before entry to the BBCM program, it is strongly recommended that students complete studies in at least HSC Mathematics (previously known as 2 unit Mathematics) and HSC English (previously 2 unit General English) or their equivalent. Students who have not achieved a mark of 65% or better in Mathematics (or equivalent) are advised to complete a bridging course in Mathematics prior to commencing the program.

Registration/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.

BENV2813 Construction Marketing
BENV2814 Property Law
BLDG4315 Business and Financial Control
BENV2911 Land Economics and Valuation
BENV2986 Property Management and Development

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

Table 3331–1 Program Schedule

Year 1		
Session 1		**UOC**
BENV1141	Computers and Information Technology	3
BLDG1211	Construction Technology 1A (Domestic Technology)	6
BLDG1121	Construction Science	6
BLDG1260	Construction Management 1 (Management Principles)	6
BLDG1281	Construction Law 1A	3
	Total	**24**
Session 2		
BLDG1212	Construction Technology 1B (Low Rise Residential)	6
BLDG1050	Structures 1	6
BLDG1302	Construction Economics	6
GMAT0411	Surveying in Building and Construction	3
BLDG1282	Construction Law 1B	3
	Total	**24**
Year 2		
Session 1		
ACCT9003	Introduction to Accounting Principles	3
BLDG2101	Construction Technology 2A (Framed Buildings)	6
BLDG2280	Construction Management 2A (Occupational Psychology, Health & Safety)	6
BLDG2052	Structures 2	6
	General Education	3
	Total	**24**
Session 2		
BLDG2212	Construction Technology 2B (Building Services)	6
BLDG2282	Construction Management 2B (People & Process Management)	6
BLDG2332	Measurement & Documentation	6
BLDG2482	Computer Applications in Construction	3
	General Education	3
	Total	**24**
Year 3		
Session 1		
BLDG3101	Construction Technology 3A (Tall Buildings)	6
BLDG3281	Construction Management 3A (Contracts)	6
BLDG3301	Advanced Measurement & Documentation	6
BENV1382	Social Responsibility and Professional Ethics	3
	General Education	3
	Total	**24**
Session 2		
BLDG3102	Construction Technology 3B (Techniques)	6
BLDG3284	Construction Management 3B (Planning & Control)	6
BLDG3332	Construction Cost Estimating	6
BLDG3402	Research Skills	3
	General Education	3
	Total	**24**
Additional Requirement (completed before start of Year 4)		
BLDG9999	Building Industry Program	12
	or	
BLDG9998	Quantity Surveying Industry Program	12
Year 4		
Session 1		
BLDG4501	Thesis Foundation	6
	Electives	18
	Total	**24**
Session 2		
BLDG4502	Thesis	9
	Electives	15
	Total	**24**

Degree 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 fulfill 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.
- 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 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.

Faculty Regulations for the BBCM

Core Courses

The core courses prescribed for the program are all those named in Table 3331–1 Program Schedule.

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.

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.

Program Guidelines

Electives

Students' attention is drawn to the list of suggested electives given in Table 3331–2 BBCM Electives. These courses are offered specifically to meet the requirements for membership of professional bodies as defined earlier in this Handbook.

Table 3331–2 BBCM Electives

Session 1		**UOC**
BENV2815	Construction Management 4A (Project Management and Design Process)	6
BLDG4285	Professional Practice & Procedure	6
BENV2718	Construction Technology 4 (Industrialisation & Technological Change)	3
BLDG4305	Design Evaluation	6
BENV2813	Construction Marketing	3
BENV2814	Property Law	6
BENV2986	Property Management and Development	6
Session 2		
BLDG4315	Business & Financial Control	6
BENV2408	Building Information Systems	6
BENV2719	Housing Delivery Systems	3
BENV2816	Construction Organisational Behaviour	6
BENV2985	Land Economics & Valuation	6
BENV2986	Property Management & Development	6
BLDG4275	Dispute Avoidance and Resolution	3
BLDG4304	Forecasting, Bidding and Cost Control	6

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.

Industrial Design Program

Program Head: Steve Ward

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 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.

3385 Bachelor of Industrial Design

BIndDes

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. 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

Student Exchange

Students in the Industrial Design program can go on exchange any time from the middle of Year 3 (as indicated in the Program Schedule).

Registration/Professional Recognition

The degree of Bachelor of Industrial Design from UNSW is recognised by the Design Institute of Australia.

Table 3385–1 Program Schedule

Year 1		**UOC**
Session 1		
IDES1101	Industrial Design Fundamentals	6
IDES1161	Industrial Design Communication A	6
IDES1012	Safe Workshop Practices	3
BENV1141	Computers and Information Technology	3
MATH1011	General Mathematics 1B	6
	Total	**24**
Session 2		
IDES1031	Industrial Design Studio 1	6
IDES1162	Industrial Design Communication B	6
IDES1071	Materials and Technology Workshop A	6
IDES1121	History of Industrial Design	3
MATH2839	Statistics SM (or equivalent)	3
	Total	**24**

Year 2 Session 1		UOC
IDES2161	Industrial Design Studio 2A	6
IDES2163	Industrial Design Communication C	6
IDES2201	Ergonomics	6
IDES2072	Materials and Technology Workshop B	6
	Total	**24**
Session 2		
IDES2162	Industrial Design Studio 2B	6
IDES2171	Computer Applications in Industrial Design	6
MARK1012	Marketing Fundamentals	6
IDES2092	Industrial Design Theory and Process	6
	Total	**24**
Year 3 **Session 1**		
IDES3221	Industrial Design Studio 3A	6
IDES3073	Materials and Technology Workshop C	6
MARK2051	Consumer Behaviour	6
MARK2052	Marketing Research	6
	Total	**24**
Session 2		
IDES3222	Industrial Design Studio 3B	6
	Electives	12
	General Education	6
	Total	**24**
Year 4 **Session 1**		
IDES4291	Industrial Design Studio 4	6
IDES4301	Project Research	6
IDES4372	Industrial Design Management & Practice	6
	Electives	6
	Total	**24**
Session 2		
IDES4352	Industrial Design Project	12
	Electives	6
	General Education	6
	Total	**24**

Degree 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.

Faculty Regulations for the BIndDes

Core Courses

The core courses prescribed for the program are all those named in Table 3385–1 Program Schedule.

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.

Landscape Architecture Program

Program Head: Linda Corkery

Landscape architecture is a design discipline that is concerned with the environment as a whole; its design, development, planning and management. It aims to create and sustain habitats for people and other living things in ways which conserve and celebrate ecological relationships, cultural values and symbolic associations.

The principal focus of landscape architecture is the theory and practice of landscape design with a strong emphasis on landscape planning, cultural studies and conservation of the environment.

At UNSW, students are strongly encouraged to consider the study of landscape architecture as both a powerful way of thinking and as education for a specific vocation. On graduating from the program, students should have developed a critical awareness of social and environmental issues, a creative approach to landscape design and landscape planning, and a sound foundation in the technical and professional requirements of landscape architecture practice. In addition, the program aims to instill an ethical commitment to care of the environment and a strongly responsible attitude to the wider community.

3380 Bachelor of Landscape Architecture

BLArch

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.

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.

Registration/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.

Table 3380–1 Program Schedule

Year 1 Session 1		UOC
LAND1101	Design Fundamentals: Studio 1	9
BENV1141	Computers and Information Technology	3
LAND1121	Introduction to Landscape Architecture	3
LAND1151	Horticulture	3
GEOS1701	Environmental Systems and Analysis	6
	Total	**24**
Session 2		
LAND1152	Landscape Analysis	9
LAND1142	Design Communication	3
LAND1102	Landscape Design 2: Design Process	6
LAND1171	Landscape Technology 1	3
LAND1122	History of Landscape Architecture	3
	Total	**24**
Year 2 **Session 1**		
LAND1221	Environmental Sociology for Landscape Architects	3
LAND1201	Landscape Design 3: Site Planning	9
LAND1251	Advanced Horticulture	3
LAND1271	Landscape Technology 2	3
	General Education	6
	Total	**24**
Session 2		
LAND1202	Landscape Design 4: Landform and Planting Design	9

LAND1222	History and Theory Elective*	3
LAND1272	Landscape Technology 3	3
BENV1242	Computer-Aided Design	3
LAND1281	Professional Practice 1	3
	General Education	3
	Total	**24**

**see course description for LAND1222*

Additional Requirement (completed before start of Year 3)

LAND1381	Landscape Practice 1	12

Year 3
Session 1

LAND1301	Landscape Design 5: Design and Documentation	9
LAND1371	Landscape Engineering	3
LAND1351	Landscape Management	3
LAND1382	Professional Practice 2	3
	General Education	3
	Electives	3
	Total	**24**

Session 2

LAND1302	Landscape Design 6: Design with a Complex Program	9
LAND1321	Research Methods	3
	Electives	12
	Total	**24**

Additional Requirement (completed before start of Year 4)

LAND1481	Landscape Practice 2	12

Year 4
Session 1

LAND1421	Landscape Thesis	15
	or	
LAND1431	Advanced Research Project in Landscape Architecture	9
	and	
BENV2106	Landscape Design 9: Integrated Studio	6
	Electives	9
	Total	**24**

Session 2

LAND1401	Landscape Design 7: Urban Landscape Design	12
LAND1402	Landscape Design 8: Graduating Studio	12
	Total	**24**

Degree 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, LAND 1321 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 during 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.

Faculty Regulations for the BLArch

Core Courses

The core courses presented for the program are all those named in Table 3380 – 1 Program Schedule.

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.

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 the 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.

Planning and Urban Development Program

Program Head: Robert Freestone

Planners are interested in the design and conservation of the environment. They work with the processes that shape land-use patterns and development outcomes. Planners must be multidisciplinary in their approach, combining expert research skills, strategic vision and strong communication techniques with an understanding of policy formulation, land-use allocation, design and environmental context. Successful planners learn to write well, communicate clearly with clients, politicians and the general public, and apply strong analytical, design and decision-making skills in a variety of roles in the private and public sectors.

3360 Bachelor of Planning

BPlan

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 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.

Registration/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.

Table 3360–1 Program Schedule

Year 1		
Session 1		**UOC**
PLAN1241	Planning Theory and Practice	6
PLAN1101	Understanding Design	6
PLAN1011	Urban Society	3
GEOS1701	Environmental Systems and Process	6
BENV1141	Computers and Information Technology	3
	Total	**24**
Session 2		
PLAN1042	Local Planning	6
PLAN1122	Development Processes	6
PLAN1052	Quantitative Methods	6
GEOH2801	Geographical Information Systems for Built Environment	6
	Total	**24**
Year 2		
Session 1		
PLAN2041	Integrated Planning 1 – Communication in Planning	6
PLAN2032	Urban Design	6
PLAN2111	Economics of Planning and Development	6
	Electives	6
	Total	**24**
Session 2		
PLAN2152	Resources, Planning and the Natural Environment	6
PLAN2122	History, Heritage and the Built Environment	6
	Electives	6
	General Education	6
	Total	**24**
Year 3		
Session 1		
PLAN3031	Integrated Planning 2 – Strategic Planning	6
PLAN3041	Planning Law and Administration	6
PLAN3051	Development Assessment	6
GEOH3671	Transport, Land Use and Environment	6
	Total	**24**
Session 2		
PLAN0081	Work Experience	**24**
Year 4		
Session 1		
PLAN0082	Work Experience	**24**
Session 2		
PLAN3032	Integrated Planning 3 – Master Planning	6
PLAN3015	Social Planning	6
PLAN3052	Qualitative Methods	6
	Electives	6
	Total	**24**
Year 5		
Session 1		
PLAN4121	Spatial Policy	6
PLAN4031	Research Design	3
	Electives	9
	General Education	6
	Total	**24**
Session 2		
PLAN4132	Thesis Project	12
PLAN4142	Professionalism, Ethics and Politics	6
	Electives	6
	Total	**24**

Degree 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 fulfill 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 of 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.

Faculty Regulations for the BPlan

Core Courses

The core courses prescribed for the program are all those named in Table 3360–1 Program Schedule.

Honours

Honours are awarded in the Bachelor of Planning on the basis of quality of performance throughout the whole degree 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.

Work Experience

During the program, students must undertake 48 weeks of approved employment related to planning. 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 Schedule. 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 taken in the year sequence listed in Table 3360–1, except with the permission of the Head of the Planning and Urban Development Program.

Program Guidelines

Program Minor

Students are strongly encouraged to use the elective courses to develop a specialisation in addition to their core planning studies.

Combined Architecture and Arts Program

Program Head: Graham Bell

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.

3262 Bachelor of Architecture Bachelor of Arts

BArch BA

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.

Registration/Professional Recognition

Please refer to the BArch professional recognition section for complete details.

Table 3262–1 Program Schedule

Year 1
Session 1

		UOC
BENV1101	Design Fundamentals: Studio 1	8
ARCH1121	Architectural History and Theory 1	4
BENV1141	Computers and Information Technology	3
ARCH1171	Architectural Technologies 1	9
	Total	**24**

Session 2

ARCH1102	Architectural Design Workshop 1	8
ARCH1122	Architectural History and Theory 2	4
ARCH1142	Architectural Communications 1	4
ARCH1172	Architectural Technologies 2	8
	Total	**24**

Year 2
Session 1

ARCH1201	Architectural Design Workshop 2	8
ARCH1221	Architectural History and Theory 3	4
ARCH1241	Architectural Communications 2	3
ARCH1271	Architectural Technologies 3	6
	FBE Electives	3
	Total	**24**

Session 2

ARCH1202	Architectural Design Workshop 3	8
ARCH1222	Architectural History and Theory 4	3
BENV1242	ComputerAided Design	3
ARCH1272	Architectural Technologies 4	4
ARCH1282	Research Practice	3
	FBE Electives	3
	Total	**24**

Year 3
Session 1

ARCH1301	Architectural Design Studio 1	8
ARCH1321	Architectural History and Theory 5	3
BENV1341	Design Modelling and Visualisation	3
ARCH1371	Architectural Technologies 5	4
	BA Courses	6
	Total	**24**

Session 2

ARCH1302	Architectural Design Studio 2	9
ARCH1382	Practicum	3
	BA Courses	12
	Total	**24**

Opportunity for alternate off-campus exchange program with the approval of the Program Head.

Year 4
Session 1

ARCH1401	Architectural Design Studio 3	9
	BA Courses	12
	FBE Electives	3
	Total	**24**

Opportunity for alternate off-campus exchange program with the approval of the Program Head.

Session 2

		UOC
ARCH1402	Architectural Design Studio 4	9
ARCH1381	Professional Practice 1	3
ARCH1470	Building Services 1 & 2	6
	BA Courses	6
	Total	**24**

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

Year 5
Session 1

ARCH1501	Investigation Workshop	9
ARCH1582	Professional Practice 2	6
	BA Courses	6
	FBE Electives	3
	Total	**24**

Session 2

ARCH1502	Graduation Studio	9
	FBE Electives	3
	BA Courses	12
	Total	**24**

Year 6
Session 1

	BA Courses	24
	Total	**24**

Degree 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 programs. 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 fulfill 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 range of Arts majors in accordance with the Faculty of 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. Arts courses may not be taken until after the student has completed 96 units of credit from the BArch program.

5. To fulfill 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 Table 3262–1 Program Schedule.

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.

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 the University of New South Wales. Where appropriate, BArch(Honours) is conferred at graduation for the combined degree unless students carry out the additional BA Honours program.

Work Experience/Composite Courses/Progression Rules see BArch Regulations

Combined Architecture and Social Science Program

Program Head: Graham Bell

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 within 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.

3263 Bachelor of Architecture Bachelor of Social Science

BArch BSocSc

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 Sciences 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.

Registration/Professional Recognition

Please refer to the BArch professional recognition section for complete details.

Table 3263–1 Program Schedule

Year 1	Session 1	UOC
BENV1101	Design Fundamentals: Studio 1	8
ARCH1121	Architectural History and Theory 1	4
BENV1141	Computers and Information Technology	3
ARCH1171	Architectural Technologies 1	9
	Total	**24**
Session 2		
ARCH1102	Architectural Design Workshop 1	8
ARCH1122	Architectural History and Theory 2	4
ARCH1142	Architectural Communications 1	4
ARCH1172	Architectural Technologies 2	8
	Total	**24**
Year 2		
Session 1		**UOC**
ARCH1201	Architectural Design Workshop 2	8
ARCH1221	Architectural History and Theory 3	4
ARCH1241	Architectural Communications 2	3
ARCH1271	Architectural Technologies 3	6
	FBE Electives	3
	Total	**24**
Session 2		
ARCH1202	Architectural Design Workshop 3	8
ARCH1222	Architectural History and Theory 4	3
BENV1242	Computer-Aided Design	3
ARCH1272	Architectural Technologies 4	4
ARCH1282	Research Practice	3
	FBE Electives	3
	Total	**24**
Year 3		
Session 1		
ARCH1301	Architectural Design Studio 1	8
ARCH1321	Architectural History and Theory 5	3
BENV1341	Design Modelling and Visualisation	3
ARCH1371	Architectural Technologies 5	4
	BSocSc Courses	6
	Total	**24**
Session 2		
ARCH1302	Architectural Design Studio 2	9
ARCH1382	Practicum	3
	BSocSc Courses	12
	Total	**24**

Opportunity for alternate off-campus exchange program with the approval of the Program Head.

Year 4		
Session 1		
ARCH1401	Architectural Design Studio 3	9
	BSocSc Courses	12
	FBE Electives	3
	Total	**24**

Opportunity for alternate off-campus exchange program with the approval of the Program Head.

Session 2		
ARCH1402	Architectural Design Studio 4	9
ARCSH1381	Professional Practice 1	3
ARCH1470	Building Services 1 & 2	6
	BSocSc Courses	6
	Total	**24**

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

Year 5		
Session 1		
ARCH1501	Investigation Workshop	9
ARCH1582	Professional Practice 2	6
	BSocSc Courses	6
	FBE Electives	3
	Total	**24**
Session 2		
ARCH1502	Graduation Studio	9
	FBE Electives	3
	BSocSc Courses	12
	Total	**24**
Year 6		
Session 1		
	BSocSc Courses	24
	Total	**24**

Degree 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 fulfill 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 fulfill 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 BSocSc

Core Courses in Architecture

The core courses prescribed for the program are all those named in Table 3263–1 Program Schedule.

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.

Honours

Students may be awarded Honours in the BSocSc 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.

Work Experience/Composite Courses/Progression Rules – see BArch Regulations

Combined Architecture and Laws Program

Program Head: Graham Bell

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.

4705 Bachelor of Architecture Bachelor of Laws

BArch LLB

The BArch LLB course is administered by the Faculty of Law, however the final program and timetable is also subject to the approval of the Head of the Architecture Program in the Faculty of the Built Environment.

Students will need to refer to both the Faculty of Built Environment and Faculty of Law sections of this Handbook.

Registration/Professional Recognition

Please refer to the BArch and LLB professional recognition section for details.

Table 4701–1 Program Schedule

Year 1		
Session 1		**UOC**
BENV1101	Design Fundamentals: Studio 1	8
ARCH1121	Architectural History and Theory 1	4
BENV1141	Computers and Information Technology	3
ARCH1171	Architectural Technologies 1	9
	Total	**24**
Session 2		
ARCH1102	Architectural Design Workshop 1	8
ARCH1122	Architectural History and Theory 2	4
ARCH1142	Architectural Communications 1	4
ARCH1172	Architectural Technologies 2	8
	Total	**24**
Year 2		
Session 1		
ARCH1201	Architectural Design Workshop 2	8
ARCH1221	Architectural History and Theory 3	4
ARCH1271	Architectural Technologies 3	6
LAWS1052	Foundations of Law	6
	Total	**24**
Session 2		
ARCH1202	Architectural Design Workshop 3	8
ARCH1222	Architectural History and Theory 4	3
BENV1242	Computer-Aided Design	3
ARCH1272	Architectural Technologies 4	4
LAWS1061	Torts	6
	Total	**24**
Year 3		
Session 1		
ARCH1301	Architectural Design Studio 1	8
ARCH1321	Architectural History and Theory 5	3
BENV1341	Design Modelling and Visualisation	3
ARCH1371	Architectural Technologies 5	4
LAWS1071	Contracts 1	3
LAWS2140	Public Law	3
	Total	**24**
Session 2		
ARCH1302	Architectural Design Studio 2	9
ARCH1382	Practicum	3
LAWS1072	Contracts 2	6
LAWS2160	Administrative Law	6
	Total	**24**
Year 4		
Session 1		
ARCH1401	Architectural Design Studio 3	9
LAWS1001	Criminal Law 1	6
ARCH1241	Architectural Communications 2	3
LAWS6210	Law, Lawyers and Society	6
	Total	**24**
Session 2		
ARCH1402	Architectural Design Studio 4	9
ARCH1381	Professional Practice 1	3
ARCH1470	Building Services 1 & 2	6
LAWS1011	Criminal Law 2	6
	Total	**24**

		UOC
Additional Requirement (completed after Yr 1 and before Yr 5):		
ARCH1583	Work Experience	**24**
Year 5		
Session 1/2		
ARCH1501	Investigation Workshop	9
ARCH1581	Politics, Community and Practice	3
LAWS1081	Property and Equity and Trusts 1	6
LAWS8820	Law and Social Theory	
	or	
LAWS8320	Legal Theory	6
	Total	**24**
Session 2		
ARCH1502	Graduation Studio	9
ARCH1582	Professional Practice 2	3
LAWS1082	Property and Equity	6
LAWS2150	Federal Constitutional Law	6
	Total	**24**
Year 6		
Session 1		
LAWS2311	Litigation 1	6
LAWS4011	Business Associations	6
	Law Electives	12
	Total	**24**
Session 2		
LAWS2321	Litigation 2	6
LAWS7420	Advanced Legal Research	2
	Law Electives	16
	Total	**24**
Year 7		
Session 1		
	Law Electives	**24**

Degree Rules

1. 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.

2. 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.

3. 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.

4. 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.

5. Law units may not be taken until after the student has completed 48 units of credit of the BArch Program.

Faculty Regulations for the BArch LLB

Core Courses

The core courses prescribed for the Combined Program are all those named in Table 4705–1 Program Schedule.

Admission and Transfer Requirements

The course is open to all 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. Transfer after the second year may result in the student taking more than the minimum time to complete the combined degree. Transfer from the combined BArch LLB program into either the BArch or LLB programs may occur at the discretion of the respective Program Head. All applications for transfer must be lodged with the University Admissions Centre.

Those students wishing to gain advanced standing in the combined degree must apply to the Program Head in Architecture, Faculty of the Built Environment. (Generally, advanced standing for this combined degree will not be accepted from a completed BArch Degree or LLB Degree).

Honours

The Bachelor of Architecture 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 (264 units of credit, including Law courses), and in accordance with current Faculty regulations. 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.

Work Experience/Composite Courses/Progression Rules - see BArch Regulations

Combined Planning and Laws Program

Program Head: Robert Freestone

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.

4707 Bachelor of Planning Bachelor of Laws

BPlan LLB

The BPlan LLB course is administered by the Faculty of Law. However, students are required to obtain approval from the Head of the Planning and Urban Development Program in the Faculty of the Built Environment for the Planning components of their program.

Registration/Professional Recognition

Please refer to the BPlan professional recognition section for complete details.

Table 4707–1 Program Schedule

Year 1 **Session 1**		**UOC**
PLAN1241	Planning Theory and Practice	6
PLAN1101	Understanding Design	6
PLAN1011	Urban Society	3
GEOS1701	Environmental Systems and Process	6
BENV1141	Computers and Information Technology	3
	Total	**24**
Session 2		
PLAN1042	Local Planning	6
PLAN1122	Development Processes	6
PLAN1052	Quantitative Methods	6
GEOH2801	Geographical Information Systems for Built Environment	6
	Total	**24**
Year 2 **Session 1**		
PLAN2041	Integrated Planning 1 – Communication in Planning	6
PLAN2032	Urban Design	6
PLAN2111	Economics of Planning and Development	6
LAWS1052	Foundations of Law	6
	Total	**24**
Session 2		
PLAN2152	Resources, Planning and the Natural Environment	6
PLAN2122	History, Heritage and the Built Environment	6

LAWS1061	Torts	6
LAWS2160	Administrative Law	6
	Total	**24**

Year 3
Session 1

PLAN3031	Integrated Planning 2 – Strategic Planning	6
PLAN3041	Planning Law and Administration	6
PLAN3051	Development Assessment	6
LAWS1071	Contracts 1	3
LAWS2140	Public Law	3
	Total	**24**

Session 2

PLAN0081	Work Experience	**24**

Year 4
Session 1

PLAN0082	Work Experience	**24**

Session 2

PLAN3032	Integrated Planning 3 – Master Planning	6
PLAN3015	Social Planning	6
PLAN3052	Qualitative Methods	6
LAWS1072	Contracts 2	6
	Total	**24**

Year 5
Session 1

PLAN4221	Regional Policy	3
PLAN4031	Research Design	3
GEOH3671	Transport, Land Use and Environment	6
LAWS1001	Criminal Law 1	6
LAWS6210	Law, Lawyers and Society	6
	Total	**24**

Session 2

PLAN4132	Thesis Project	12
PLAN4142	Professionalism, Ethics and Politics	6
LAWS1011	Criminal Law 2	6
	Total	**24**

Year 6
Session 1

LAWS1081	Property and Equity and Trusts 1	6
LAWS8820	Law and Social Theory or	
LAWS8320	Legal Theory	6
LAWS2311	Litigation	6
LAWS2150	Federal Constitutional Law	6
	Total	**24**

Session 2

LAWS1082	Property and Equity 2	6
LAWS2321	Litigation 2	6
LAWS4010	Business Associations 1	6
LAWS7420	Advanced Legal Research	2
LAWS7420	*Law Elective*	4
	Total	**24**

Year 7
Session 1

	Law Electives	24
	Total	**24**

Session 2

	Law Electives	24
	Total	**24**

Degree Rules

1. The degrees of Bachelor of Planning and Bachelor of Laws are awarded at Pass level after successful completion of a minimum of 192 units of credit from the Planning program and 144 units of credit from the Laws program. The Bachelor of Planning may be awarded at Honours level in accordance with the faculty regulations for this program.

2. To fulfill these requirements, students must complete:

- 144 units 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.
- 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 semesters of required work experience

4. Law units may not be taken until after the student has successfully completed 48 units of credit of the Planning program.

Faculty Regulations for the BPlan LLB

Core Courses

The core courses prescribed for the combined program are all those named in Table 4707–1 Program Schedule.

Transfer Arrangements

Students may enter directly in Year 1 or may apply to transfer from the Planning 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.

Transfer from the combined BPlan LLB program into either the BPlan or LLB programs may occur at the discretion of the respective Head of Program. All applications for transfer must be lodged through the University Admissions Centre.

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 (being 240 units of credit including 144 units of prescribed core and the first 48 units of Law courses undertaken for the combined program), and in accordance with current faculty regulations. Honours are Class 1 or Class 2 Division 1 or Class 2 Division 2.

Work Experience

Students must undertake 48 units of work experience in a planning or planning related area (which could be with a professional practice specialising in environmental law). 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 Head of the Planning and Urban Development program), thereby reducing the overall length of the BPlan LLB Program.

Architecture and Master of Commerce

Program Head: Graham Bell

This program provides an opportunity to obtain two professional degrees. It allows students to fast-track to the Master of Commerce degree offered by the Faculty of Commerce and Economics, within the professionally accredited Bachelor of Architecture program offered by the Faculty of the Built Environment. Because the Architecture program contains a percentage of open electives which can be replaced by MCom courses, the fast-tracked program requires only two additional sessions of study to gain both qualifications. In general, this study is taken after completion of the BArch program and both can be completed in a minimum of twelve sessions.

Students may only enter this program by transferring from the BArch program after completing at least 144 units of credit with a weighted average mark of at least 65.

Students may only enter this program by transferring from the BArch program after completing at least 144 units of credit with a weighted average mark of at least 65.

3260 Bachelor of Architecture Master of Commerce – ARCHGI3260

BArch MCom

The BArch MCom program is administered by both the Faculty of Built Environment (Years 1-5) and the Faculty of Commerce and Economics (Year 6). The final program and timetable must be approved by the Head of the Architecture Program in the Faculty of the Built Environment.

Students will need to refer to both the Undergraduate and Postgraduate Handbooks.

Registration/Professional Recognition

Please refer to the BArch professional recognition section for complete details.

Table 3260–2 Program Schedule

Year 1		
Session 1		**UOC**
BENV1101	Design Fundamentals: Studio 1	8
ARCH1121	Architectural History and Theory 1	4
BENV1141	Computers and Information Technology	3
ARCH1171	Architectural Technologies 1	9
	Total	**24**
Session 2		
ARCH1102	Architectural Design Workshop 1	8
ARCH1122	Architectural History and Theory 2	4
ARCH1142	Architectural Communications 1	4
ARCH1172	Architectural Technologies 2	8
	Total	**24**
Year 2		
Session 1		
ARCH1201	Architectural Design Workshop 2	8
ARCH1221	Architectural History and Theory 3	4
ARCH1241	Architectural Communications 2	3
ARCH1271	Architectural Technologies 3	6
	General Education	3
	Total	**24**
Session 2		
ARCH1202	Architectural Design Workshop 3	8
ARCH1222	Architectural History and Theory 4	3
BENV1242	Computer-Aided Design	3
ARCH1272	Architectural Technologies 4	4
ARCH1282	Research Practice	3
	General Education	3
	Total	**24**
Year 3		
Session 1		
ARCH1301	Architectural Design Studio 1	8
ARCH1321	Architectural History and Theory 5	3
BENV1341	Design Modelling and Visualisation	3
ARCH1371	Architectural Technologies 5	4
	Elective	3
	General Education	3
	Total	**24**
Session 2		
ARCH1302	Architectural Design Studio 2	9
ARCH1382	Practicum	3
	Electives	9
	General Education	3
	Total	**24**
Year 4		
Session 1		
ARCH1401	Architectural Design Studio 3	9
ARCH1470	Building Services 1 & 2	6
	Electives or MCom courses	9
	Total	**24**
Session 2		
ARCH1402	Architectural Design Studio 4	9
ARCH1381	Professional Practice 1	3
	Electives or MCom courses	12
	Total	**24**

Additional Requirement (completed after Yr 1 and before Yr 5):

ARCH1583	Work Experience	**24**
Year 5		
Session 1/2		
ARCH1501	Investigation Workshop	9
ARCH1582	Professional Practice 2	6
	Electives or MCom courses	9
	Total	**24**
Session 2		
ARCH1502	Graduation Studio	9
	Electives or MCom courses	15
	Total	**24**
Year 6		
Session 1		
	MCom Electives	**24**
Session 2		
	MCom Electives	**24**

Degree Rules

1. The degree of Bachelor of Architecture will be awarded at either Pass or Honours level after the successful completion of a minimum of 264 units of credit including 24 units of credit from the MCom program. The degree of Master of Commerce will be awarded at Pass level after the successful completion of 72 units of credit from the MCom program, 24 of which are carried out during the five years of the BArch program.

2. To fulfill 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.
- 18 units of FBE elective courses, selected in accordance with the faculty regulations for this program.
- 15 units of open electives, selected in accordance with the faculty regulations for undergraduate study in the Faculty of the Built Environment.
- 24 units of core courses in Commerce and Economics, being all those prescribed in the faculty regulations for this program.
- 12 units of General Education in accordance with University requirements.
- 48 units of program electives in Commerce and Economics selected in accordance with the faculty regulations for the MCom program.

3. The standard duration of the program is 6.5 years consisting of 12 semesters of fulltime study (24 units of credit per semester) plus 1 semester of required work experience.

4. Commerce and Economics courses may not be taken until after the student has completed 144 units of credit of the BArch Program.

Faculty Regulations for the BArch MCom

Core Courses in Architecture

The core courses prescribed for the Architecture program are all those named in Table 3260–2 Program Schedule.

FBE Electives

FBE electives must be selected from those offered by the Faculty of the Built Environment.

Transfer Arrangements

Students may transfer to this program following the successful completion of at least 144 units of credit in the Bachelor of Architecture program provided they have achieved a weighted average mark across all graded courses of 65 or higher.

Students in the fast-track BArch/MCom program may transfer back to the BArch program. They will receive credit toward their BArch degree of up to 24 units of credit for MCom courses completed while undertaking the fast-track program. Students in the fast-track BArch/MCom program who do not complete the BArch degree including 24 units of credit of MCom courses cannot transfer directly to the MCom program, but may subsequently apply for admission to the MCom upon completion of the BArch and may request credit for MCom subjects completed while they were undertaking the fast-track program.

Course Selection Restrictions

During the final five semesters of the BArch program students must complete the three MCom core courses listed in Table 3260 - 3 below as well as one additional core elective course selected from those offered by the Faculty of Commerce and Economics.

Table 3260 - 3 MCom Core Courses

ACCT5901	Accounting: A User Perspective
ECON5103	Business Economics
ECON5203	Statistics for Business

Honours

The Bachelor of Architecture 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. The MCom courses taken as credit towards their BArch program are included in the Honours calculation for the BArch. 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.

Work Experience/Composite Courses/Progression Rules – please see BArch Regulations

Interior Architecture and Master of Commerce

Program Head: Judith O'Callaghan

This program provides an opportunity to obtain two professional degrees. It allows students to add the Masters in Commerce program to the professionally recognised Interior Architecture program offered by the Faculty of the Built Environment. Because the Interior Architecture program contains a percentage of open electives which can be replaced by MCom courses, the program requires only two additional sessions of study to gain both qualifications. In general, this study is taken concurrently with the BIA program and both can be completed in a minimum of ten sessions.

3255 Bachelor of Interior Architecture Master of Commerce – INTAGI3255

BIA MCom

The BIA program is administered by both the Faculty of Built Environment (Years 1 - 4) and the Faculty of Commerce and Economics (Year 5). The final program and timetable must be approved by the Head of the Interior Architecture Program in the Faculty of the Built Environment.

Registration/Professional Recognition

Please refer to the BIA professional recognition section for complete details.

Table 3255 - 2 Program Schedule

Year 1 **Session 1**		**UOC**
INTA2101	Design Studio 1	6
INTA2111	Theory 1	3
INTA2121	History 1	3
INTA2141	Communication 1	6
INTA2171	Technology 1	6
	Total	**24**
Session 2		
INTA2102	Design Studio 2	6
INTA2112	Theory 2	3
INTA2122	History 2	3
INTA2142	Communications 2	6
INTA2172	Technology 2	6
	Total	**24**
Year 2 **Session 1**		
INTA2201	Design Studio 3	6
INTA2211	Theory 3	3
INTA2221	History 3	3
INTA2241	Communications 3	3
INTA2271	Technology 3	3
	General Education/Open Electives	6
	Total	**24**
Session 2		**UOC**
INTA2202	Design Studio 4	6
INTA2212	Theory 4	3
INTA2222	History 4	3
BENV1242	Computer-Aided Design	3
INTA2272	Technology 4	3
	General Education/Open Electives	6
	Total	**24**
Year 3 **Session 1**		
INTA2301	Design Studio 5	6
BENV1341	Design Modelling and Visualisation	3
INTA2371	Technology 5	3
	General Education	6
	Open Electives	6
	Total	**24**
Session 2		
INTA2302	Design Studio 6	6
INTA2372	Technology 6	3
BENV2381	Professional Practice 1	3
	MCom Core or Core Elective	12
	Total	**24**
Year 4 **Session 1**		
INTA2401	Design Studio 7	6
INTA2441	Project Research	6
INTA2411	Dissertation	6
	MCom Core or Core Elective	6
	Total	**24**
Session 2		
INTA2402	Graduation Project	15
INTA2482	Professional Practice 2	3
	MCom Core or Core Elective	6
	Total	**24**
Year 5 **Session 1**		
	MCom Electives	**24**
Session 2		
	MCom Electives	**24**

Degree Rules

1. The degree of Bachelor of Interior Architecture is awarded at either Pass or Honours level after successful completion of a minimum of 192 units of credit from the Interior Architecture program including 24 units of credit from the MCom program. The MCom is awarded at Pass level after successful completion of 72 units of credit from the MCom Program, 24 of which are completed during the four years of the BIA.

2. To fulfill these requirements, students must complete:

- 144 units of core courses, being all those prescribed in the faculty regulations for this program.
- 12 units of FBE electives selected in accordance with the faculty regulations for this program.
- 24 units of core courses in Comerce and Economics being all those prescribed in the faculty regulations for this program.
- 12 units of General Education in accordance with University requirements.
- 48 units of program electives in Commerce and Economics selected in accordance with the faculty regulations for the MCom program.

3. The standard duration of the program is 5 years consisting of 10 Sessions of full-time study (24 units of credit per semester).

4. The student must complete up to the end of Session 1, Year 3 (120 units of credit) of the Interior Architecture program before attempting any courses from the MCom program.

Faculty Regulations for the BIA MCom

Core Courses in Interior Architecture

The core courses prescribed for the BIA program are all those named in Table 3255 - 2 Program Schedule up to and including the end of Year 4.

Transfer Arrangements

Students may transfer to this program following the successful completion of at least 120 units of credit in the Bachelor of Interior Architecture

program providing that they have achieved a weighted average mark across all courses of 65 or higher.

Students in the BIA MCom program may transfer back to the BIA program. They will receive credit toward their BIA degree of up to 24 units of credit for MCom courses completed while undertaking the program. Students in the BIA MCom program who do not complete the BIA degree including 24 units of credit of MCom courses cannot transfer directly to the MCom program, but may subsequently apply for admission to the MCom upon completion of the BIA and may request credit for MCom subjects completed while they were undertaking the joint program.

Course Selection Restrictions

During the final five semesters of the BIA program students must complete the three MCom core courses listed in Table 3255 - 3 below as well as one additional core elective course selected from those offered by the Faculty of Commerce and Economics.

Table 3255 – 3 MCom Core Courses

		UOC
ACCT5901	Accounting: A User Perspective	6
ECON5103	Business Economics	6
ECON5203	Statistics for Business	6

Honours

The Bachelor of Interior Architecture degree may be awarded with Honours based on the quality of performance in the class and in accordance with current Faculty regulations. Honours are Class 1 or Class 2 Division 1 or Class 2 division 2.

Industrial Design and Master of Commerce

Program Head: Steve Ward

This program provides an opportunity to obtain two professional degrees. It allows students to add the Masters in Commerce program to the Bachelor of Industrial Design program offered by the Faculty of the Built Environment. Because the Industrial Design program contains a percentage of parallel subjects that can replace MCom courses, the combined program requires only two additional sessions of study to gain both qualifications. In general, this study is taken concurrently with the BIndDes program and both can be completed in a minimum of ten sessions.

Bachelor of Industrial Design Master of Commerce – IDESGI3385

BIndDes MCom

The BIndDes MCom course is administered by both the Faculty of Built Environment (Years 1- 4) and the Faculty of Commerce and Economics (Year 5). The final program and timetable must be approved by the Head of the Industrial Design Program in the Faculty of the Built Environment.

Registration/Professional Recognition

Please refer to the BIndDes professional recognition section for complete details.

Table 3385–2 Program Schedule

Year 1		
Session 1		**UOC**
IDES1101	Industrial Design Fundamentals	6
IDES1161	Industrial Design Communication A	6
IDES1012	Safe Workshop Practices	3
BENV1141	Computers and Information Technology	3
MATH1011	General Mathematics 1B	6
	Total	**24**
Session 2		
IDES1031	Industrial Design Studio 1	6
IDES1162	Industrial Design Communication B	6
IDES1071	Materials and Technology Workshop A	6
IDES1121	History of Industrial Design	3
MATH2839	Statistics SM (or equivalent)	3
	Total	**24**
Year 2		
Session 1		
IDES2161	Design Studio 2A	6
IDES2163	Industrial Design Communication C	6
IDES2201	Ergonomics	6
IDES2072	Materials and Technology Workshop B	6
	Total	**24**
Session 2		**UOC**
IDES2162	Design Studio 2B	6
IDES2171	Computer Applications in Industrial Design	6
MARK1012	Marketing Fundamentals	6
IDES2092	Industrial Design Theory and Process	6
	Total	**24**
Year 3		
Session 1		
IDES3221	Design Studio 3A	6
IDES3073	Materials and Technology Workshop C	6
MARK2051	Consumer Behaviour	6
MARK2052	Marketing Research	6
	Total	**24**
Session 2		
IDES3222	Industrial Design Studio 3B	6
	Electives	6
	General Education	12
	Total	**24**
Year 4		
Session 1		
IDES4291	Industrial Design Studio 4	6
IDES4301	Project Research	6
IDES4372	Industrial Design Management & Practice	6
	MCom Core Elective	6
	Total	**24**
Session 2		
IDES4352	Industrial Design Project	12
	MCom Core Elective	12
	Total	**24**
Year 5		
Session 1		
	Master of Commerce Electives	**24**
Session 2		
	Master of Commerce Electives	**24**
	Total (BIndDes MCom)	**240**

Degree Rules

1. The degree of Bachelor of Industrial Design will be awarded at either Pass or Honours level after successful completion of a minimum of 192 units of credit including 24 units of credit of the Master of Commerce program. The degree of Master of Commerce will be awarded at Pass level after the successful completion of 72 units of credit from the MCom program, 24 of which are completed during the four years of the BIndDes program.

2. To fulfill these requirements, students must complete:

- 156 units of core courses in Industrial Design, being all those prescribed in the faculty regulations for this program.
- 24 units of core courses in Commerce and Economics, being all those prescribed in the faculty regulations for this program including 6 units transferred on successful completion of MARK1012 and MARK2051 - see note below.
- 12 units of General Education in accordance with University requirements.
- 48 units of program electives in Commerce and Economics selected in accordance with the faculty regulations for the MCom 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).

4. The student must complete 144 units of credit in the Bachelor of Industrial Design program before attempting any courses from the MCom program.

Faculty Regulations for the BIndDes MCom

Core Courses in Industrial Design

The core courses prescribed for the BIndDes program are those named in Table 3385–2 Program Schedule up to and including the end of Year 5.

Transfer Arrangements

Students may apply to transfer to this program following the successful completion of at least 144 units of study in the Bachelor of Industrial

Design program providing that they have achieved a weighted average mark across all courses of 65 or higher. Applications must be supported by a letter of recommendation from the Program Head, Industrial Design, and must be approved by the Faculty of Commerce and Economics.

Students in the BIndDes MCom program may transfer back to the BIndDes program. They will receive credit toward their BIndDes degree of up to 24 units of credit for MCom courses completed while undertaking the joint program. Students in the BIndDes MCom program who do not complete the BIndDes degree including 24 units of credit of MCom courses cannot transfer directly to the MCom program, but may subsequently apply for admission to the MCom upon completion of the BIndDes and may request credit for MCom courses completed while they were undertaking the joint program.

Course Selection Restrictions

During the final two semesters of the BIndDes program students must complete the three MCom core courses listed in Table 3385–3 below

Table 3385–3 MCom Courses

ACCT5901	Accounting: A User Perspective
ECON5103	Business Economics
ECON5203	Statistics for Business

Note that exemption is given for MARK5900 based on successful completion of MARK1012 and MARK2051

Honours

The Bachelor of Industrial Design degree may be awarded with Honours based on the quality of performance in the class and in accordance with current faculty regulations. Honours are Class 1 or Class 2 Division 1 or Class 2 Division 2.

Planning and Master of Commerce

Program Head: Robert Freestone

This program provides an opportunity to obtain two professional degrees. It allows students to add the Master of Commerce degree offered by the Faculty of Commerce and Economics to the professionally accredited Bachelor of Planning offered by the Faculty of the Built Environment. Because the BPlan contains a percentage of open electives which can be replaced by MCom 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.

Students may transfer to this program following three years of study in the Bachelor of Planning program having achieved a weighted average mark of 65 or higher in all graded courses undertaken.

3360 Bachelor of Planning Master of Commerce PLANGI3360

BPlan MCom

The BPlan MCom program is administered by both the Faculty of Built Environment (Years 1–5) and the Faculty of Commerce and Economics (Year 6). The final program must be approved by the Head of the Planning and Urban Development Program in the Faculty of the Built Environment.

Students will need to refer to both the Undergraduate and Postgraduate Handbooks.

Registration/Professional Recognition

Please refer to the BPlan professional recognition section.

Table 3360–2 Program Schedule

Year 1		
Session 1		**UOC**
PLAN1241	Planning Theory and Practice	6
PLAN1101	Understanding Design	6
PLAN1011	Urban Society	3
GEOS1701	Environmental Systems and Process	6
BENV1141	Computers and Information Technology	3
	Total	**24**
Session 2		
PLAN1042	Local Planning	6
PLAN1122	Development Processes	6
PLAN1052	Quantitative Methods	6
GEOH2801	Urban Geographical Information Systems	6
	Total	**24**
Year 2		
Session 1		**UOC**
PLAN2041	Integrated Planning 1 – Communication in Planning	6
PLAN2032	Urban Design	6
PLAN2111	Economics of Planning and Development	6
	Electives	6
	Total	**24**
Session 2		
PLAN2152	Resources, Planning and the Natural Environment	6
PLAN2122	History, Heritage and the Built Environment	6
	Electives	6
	General Education	6
	Total	**24**
Year 3		
Session 1		
PLAN3031	Integrated Planning 2 – Strategic Planning	6
PLAN3041	Planning Law and Administration	6
PLAN3051	Development Assessment	6
GEOH3671	Transport, Land Use and Environment	6
	Total	**24**
Session 2		
PLAN0081	Work Experience	**24**
Year 4		
Session 1		
PLAN0082	Work Experience	**24**
Session 2		
PLAN3032	Integrated Planning 3 – Master Planning	6
PLAN3015	Social Planning	6
PLAN3052	Qualitative Methods	6
	MCom Core or Core Elective	6
	Total	**24**
Year 5		
Session 1		
PLAN4221	Regional Policy	3
PLAN4031	Research Design	3
	General Education	6
	MCom Core or Core Elective	12
	Total	**24**
Session 2		
PLAN4132	Thesis Project	12
PLAN4142	Professionalism, Ethics and Politics	6
	MCom Core or Core Elective	6
	Total	**24**
Year 6		
Session 1		
	MCom Electives	**24**
Session 2		
	MCom Electives	**24**

Degree 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 MCom program. The degree of Master of Commerce will be awarded at Pass level after the successful completion of 72 units of credit from the MCom program, 24 of which are carried out during the five years of the BPlan program.

2. To fulfill requirements, students must complete:

- 144 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.
- 12 units of open electives selected in accordance with the faculty regulations for undergraduate study in the Faculty of the Built Environment.
- 24 units of core courses in Commerce and Economics, being all those prescribed in the Faculty regulations for this program.
- 12 units of General Education in accordance with University requirements.
- 48 units of program electives in Commerce and Economics selected in accordance with the faculty regulations for the MCom 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 2 semesters 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 MCom program.

Faculty Regulations for the BPlan MCom

Core Courses in Planning

The core courses prescribed for the BPlan program are all those named in Table 3360–2 Program Schedule.

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 MCom program may transfer back to the BPlan program. They will receive credit toward their BPlan degree of up to 24 units of credit for MCom courses completed while undertaking the joint program. Students in the BPlan MCom program who do not complete the BPlan degree including 24 units of credit of MCom courses cannot transfer directly to the MCom program, but may subsequently apply for admission to the MCom upon completion of the BPlan and may request credit for MCom subjects completed while they were undertaking the joint program.

Course Selection Restrictions

During the final three sessions of the BPlan program students must complete the three MCom core courses listed in Table 3360–3 below as well as one additional core elective course selected from those offered by the Faculty of Commerce and Economics.

Table 3360–3 MCom Core Courses

ACCT5901	Accounting: A User Perspective
ECON5103	Business Economics
ECON5203	Statistics for Business

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.

Planning and Master of Environmental Management

Program Head: Robert Freestone

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.

3360 Bachelor of Planning Master of Environmental Management – PLANG23360

BPLAN MEM

The BPlan MEM course is administered by both the Faculty of 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.

Table 3360–4 Program Schedule

Year 1		
Session 1		**UOC**
PLAN1241	Planning Theory and Practice	6
PLAN1101	Understanding Design	6
PLAN1011	Urban Society	3
GEOS1701	Environmental Systems and Process	6
BENV1141	Computers and Information Technology	3
	Total	**24**
Session 2		
PLAN1042	Local Planning	6
PLAN1122	Development Processes	6
PLAN1052	Quantitative Methods	6
GEOH2801	Geographical Information Systems for Built Environment	6
	Total	**24**
Year 2		
Session 1		
PLAN2041	Integrated Planning 1 – Communication in Planning	6
PLAN2032	Urban Design	6
PLAN2111	Economics of Planning and Development	6
	Electives	3
	General Education	3
	Total	**24**
Session 2		
PLAN2152	Resources, Planning and the Natural Environment	6
PLAN2122	History, Heritage and the Built Environment	6
	Electives	6
	General Education	6
	Total	**24**
Year 3		
Session 1		
PLAN3031	Integrated Planning 2 – Strategic Planning	6
PLAN3041	Planning Law and Administration	6
PLAN3051	Development Assessment	6
GEOH3671	Transport, Land Use and Environment	6
	Total	**24**
Session 2		
PLAN0081	Work Experience	**24**
Year 4		
Session 1		
PLAN0082	Work Experience	**24**
Session 2		
PLAN3032	Integrated Planning 3 – Master Planning	6
PLAN3015	Social Planning	6
PLAN3052	Qualitative Methods	6
IEST5001	Frameworks for Environmental Management	6
	Total	**24**
Year 5		
Session 1		
PLAN4121	Spatial Policy	6
PLAN4031	Research Design	3
CVEN9895	FKEM: Engineering	6
BIOS9001	FKEM: Ecology*	6
	General Education	3
	Total	**24**

Session 2		**UOC**
PLAN4132	Thesis Project	12
PLAN4142	Professionalism, Ethics and Politics	6
CHEM7300	FKEM: Physical Science	6
	Total	**24**
Year 6		
Session 1		
IEST5002	Tools for Environmental Management	6
ECON5125	FKEM: Economics	6
	*MEM Electives***	12
	Total	**24**
Session 2		
IEST5003	Addressing environmental issues	6
	*MEM Electives***	18
	Total	**24**

**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

Degree 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 Table 3360–4 Program Schedule up to and including the end of Year 5 and excluding the four courses named in Table 3360–5 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 Table 3360-5 below.

Table 3360–5 MEM Core Courses

IEST5001	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.

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-disciplinarity 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 art 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

Contents

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.

Some People Who Can Help You

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 9385 0684. Faculty timetables and official University forms are also available from the Student Centre.

The location of the College of Fine Arts is:

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: administration@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 College of Fine Arts
Web address: **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/artht**

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**

Course Descriptions

Course descriptions for 2004 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 also available in the Virtual Handbook at **www.student.unsw.edu.au/handbook**

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 HECS and student fees. Students who take more than the standard load for that year of a program will pay more HECS.

Prerequisite and Corequisite Requirements

A student enrolling in a course must satisfy the prerequisite and corequisite requirements for that course.

General Education Requirements

College of Fine Arts students are required to undertake their General Education in other faculties of the University. The objectives of General Education and details of the courses offered across the University are available at the front of this Handbook.

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

Applications for:

exemptions from General Education courses on the basis of prior studies,

or

approval to undertake "mainstream" courses offered in other degree programs as GE subjects (General Education section of the Handbook), should be made in writing to the Chair, Faculty Education Committee, c/- Administration, College of Fine Arts.

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 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 ARRNet2 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 **www.library.unsw.edu.au/~cofa**

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: Mon-Sat 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

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 at the 2nd Floor, East Wing Quadrangle Building. Telephone counseling 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 and Course Information

4800 Bachelor of Fine Arts (BFA)

The Program

The program aims:

- 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;
- 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;
- to encourage students to develop an increased self-motivation and commitment to their studies;
- 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 course:
  - 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;
  - an understanding of the historical and theoretical underpinning of contemporary fine art practice.
- to encourage students to realise their own intellectual and creative potential;
- to increase students' awareness of, and sensitivity to, their environment.

If students are unsure of their program structure and requirements they should contact the Student Centre in the Faculty Office.

Program Structure: 4800 Bachelor of Fine Arts

The Bachelor of Fine Arts is the equivalent of three years full-time study. It is intended to provide an introduction for those who wish to involve themselves as practitioners in the visual arts or related fields.

To qualify for the award of Bachelor of Fine Arts a student must accrue a total of 144 units of credit and successfully complete prescribed courses.

Selection of Major Studies

Following the completion of Introductory Studies in Session 1, placement of students in core study majors 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.

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. Further information can be found under 'Elective Courses for Undergraduate Programs' at the end of the College of Fine Arts section.

Honours

BFA Honours is a program of higher level study available to BFA students who wish to undertake research in fine arts, extending into an 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, a students must have achieved a distinction average in 40 units of credit of core courses from years two and three, typically with a failure free record in their major.

In the 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.

Program Rules

1. A student must complete 144 units of credit.

2. Students must complete the prescribed core courses including two of the three Introductory Studies in Session 1 and an approved sequence in a major of at least 56 units of credit selected from the major disciplines.

3. A student must complete at least 48 units of credit but no more than 60 units of credit of level 1 courses from the Faculty.

4. Students may not commence level 2 courses or General Education before 24 units of credit of level 1 courses have been completed.

5. Each student's program must include 12 units of credit of General Education.

6. For entry to Honours, a student must have achieved a Distinction average in 40 units of credit of core courses from years two and three, typically with a failure free record in their major.

Progression Requirements

Where a student wishes to change their major study at the end of Session 2 approval will be given provided that:

(a) The student would have otherwise been eligible under the criteria set for the allocation of students to major disciplines;

(b) There are places available in the discipline area nominated;

(c) The student has satisfactorily completed another unit one major and completes a studio elective course in the discipline area of the new choice**,** to be undertaken no later than Session 3.

Failures

Students who fail an Introductory Study in Session 1 will progress to Session 2 in the following manner:

(a) Where a core course is offered in only one session students who fail will be required to repeat that course in the first available session; or may apply to the Head of School to substitute a course in the following session.

(b) Students may take additional elective courses in the following session to maintain units of credit but will not be permitted to enrol in a major sequence where the student has outstanding prerequisites or outstanding substituted courses.

4812 Bachelor of Fine Arts Bachelor of Arts (BFA BA)

The Program

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.

	SESSION 1			SESSION 2			SESSION 3			SESSION 4			SESSION 5			SESSION 6		
	Course Number		UOC	Course Number		UOC	Course Number		UOC	Course Number		UOC	Course Number		UOC	Course Number		UOC
CORE COURSES		**Choose two from:**		SART 1311	Drawing/Painting 1 *or*		SART 2320	Drawing/Painting 2 *or*		SART 2330	Drawing/Painting 3 *or*		SART 3340	Drawing/Painting 4 *or*		SART 3350	Drawing/Painting 5 *or*	
		Introductory Studies:		1313	Printmaking 1 *or*		2322	Printmaking 2 *or*		2332	Printmaking 3 *or*		3342	Printmaking 4 *or*		3352	Printmaking 5 *or*	
	SART 1301	Drawing, Painting, Printmaking *or*		1314	Sculpture, Performance and Installation 1 *or*		2323	Sculpture, Performance and Installation 2 *or*		2333	Sculpture, Performance and Installation 3 *or*		3343	Sculpture, Performance and Installation 4 *or*		3353	Sculpture, Performance and Installation 5 *or*	
	SART 1302	Introductory Studies: Photomedia, Sculpture, Time Based Art *or*		SOMA 1312	Photomedia 1 *or*		SOMA 2321	Photomedia 2 *or*		SOM A 2331	Photomedia 3 *or*		SOMA 3341	Photomedia 4 *or*		SOMA 3351	Photomedia 5 *or*	
				1315	Time Based Art 1 *or*		2324	Time Based Art 2		2334	Time Based Art 3 *or*		3344	Time Based Art 4 *or*		3354	Time Based Art 5 *or*	
				SDES 1316	Ceramics 1 *or*		SDES 2325	Ceramics 2 *or*		SDES 2335	Ceramics 3 *or*		SDES 3345	Ceramics 4 *or*		SDES 3355	Ceramics 5 *or*	
		Introductory Studies:		1317	Jewellery 1 *or*		2326	Jewellery 2 *or*		2336	Jewellery 3 *or*		3346	Jewellery 4 *or*		3356	Jewellery 5 *or*	
	SDES 1303	Ceramics, Jewellery, Textiles 6HPW	16	1318	Textiles 1 6HPW	8	2327	Textiles 2 8HPW	8	2337	Textiles 3 8HPW	8	3347	Textiles 4 8HPW	8	3357	Textiles 5 8HPW	8
					Studio Workshop 3HPW	4		Studio Workshop 3HPW	4		Studio Workshop 3HPW	4		Studio Workshop 3HPW	4			
	SOMA 1810	Introduction to Computing 2HPW	4															
				SART 1319	Drawing 3HPW	4												
	SAHT 1101	Mapping the Modern 4HPW	4	SAHT 1102	Mapping the Postmodern 4HPW	4				SAHT 2103	Aesthetics for Contemporary Practice 2HPW	6	SAHT 3105	Art Since 1990 2HPW	6	SART 3800	Professional Practice 2HPW	4
ELECTIVES					Studio Elective 3HPW	4		Electives x 2	8		Elective	4		Elective	4		Electives x 2	8
GENERAL EDUCATION								General Education 2HPW	3		General Education 2HPW	3		General Education 2HPW	3		General Education 2HPW	3
Total Units of Credit 144			24			24			48						48			

HONOURS YEAR 4

Course Number		UOC	
SART 4030	Honours Paper	12	
SART 4044	Honours Studio Practice	36	Total Units of Credit 48

Participation in the Annual Exhibition is a requirement for students in the Honours degree.
Honours students are required to attend practical classes relevant to their discipline and the weekly Honours seminar

Program Structure: 4800 Bachelor of Fine Arts

	SESSION 1		SESSION 2		SESSION 3		SESSION 4		SESSION 5		SESSION 6		SESSION 7		SESSION 8			
	Course Number	UOC		UOC		UOC		UOC		UOC		UOC		UOC		UOC		
BFA CORE COURSES	Choose one course: SART 1301 Introductory Studies: Drawing, Painting, Printmaking *or* SART 1302 Introductory Studies: Photomedia, Sculpture, Time Based Art *or* SDES 1303 Introductory Studies: Textiles, Ceramics, Jewellery, 6HPW	8	**BFA MAJOR sequence of at least 64 UOC from one of the approved disciplines based on Session 1 choice** - Drawing/Painting - Photomedia - Printmaking - Sculpture, Performance and Installation - Time Based Art - Ceramics - Jewellery - Textiles	8		8		8		8		8						
			Studio Workshop 3HPW	4	Studio Workshop 3HPW	4	Studio Workshop 3HPW	4	Studio Workshop 3HPW	4							64	
BFA CORE ELECTIVES	SOMA 1810 Introduction to Computing 2HPW *or* SAHT 1101 Mapping the Modern 3HPW	4	SAHT 1102 Mapping the Postmodern 3HPW	4	**BFA ELECTIVES 26 UOC Minimum**												26	90
					OPEN ELECTIVES 24 UOC Maximum										0-24		24	
BA	BA Level 1	6	BA Level 1	6	**BA MAJOR Sequence 42 UOC**										42-54		42	
BA ELECTIVES	Level 1	6	Level 1	6	**BA ELECTIVES from Arts & Social Sciences 24 UOC Minimum** Level 1	6	Level 1 or 2	6		6		0/6		0/6	24-36	6	36	102
Total Units of Credit 192		24		28		24		24		24		20		24		24	192	192

HONOURS	Consult program rules for details

Program Structure: 4812 Bachelor of Fine Arts Bachelor of Arts

Program Structure: 4812 Bachelor of Fine Arts Bachelor of Arts

Students undertaking this combined degree program complete the core requirements of both the Bachelor of Fine Arts and the Bachelor of Arts, together with approved electives

Program 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 78 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) 24 units of credit may be in electives.

2. The BFA component degree must include:

(a) A major sequence (at least 64 units of credit) in approved disciplines.

(b) Of the 64 units in the major, 20 units shall be taken from level 1 courses.

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 school, department, unit or interdisciplinary program.

(b) No more than 54 units of credit in total may be from any one school, department, unit or interdisciplinary program;

(c) At least 12 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) 42 units of credit must be obtained in one of the following major sequences within the Faculty of Arts and Social Sciences;

CHIN	Chinese Studies
EDST	Education
ENGL	English
FREN	French
GERS	German Studies
GREK	Greek (Modern)
HIST	History
HPSC	History & Philosophy of Science
INDO	Indonesian Studies
JAPN	Japanese Studies
KORE	Korean Studies
LING	Linguistics
MUSI	Music
PHIL	Philosophy
POLS	Politics and International Relations
PORT	Portugese Studies
RUSS	Russian Studies
SLSP	Policy Studies
SOCA	Sociology & Anthropology
SPAN	Spanish and Latin American Studies
THFI/FILM/ THST/DANC/ PFST	Theatre, Film and Dance

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 BFA or the BA. For entry to the BFA Honours program a student must complete at least 40 units of credit in core courses in second and third year at Distinction level.

6. Students who satisfy the normal prerequisites for the BFA (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).

4801 Bachelor of Art Education (BArtEd)

4808 Bachelor of Design Bachelor of Art Education (BDes BArtEd)

The Programs

The Bachelor of Art Education is the equivalent of four years full-time study in art education and specialist fine arts studies. The Bachelor of Design/Bachelor of Art Education is a five year combined full-time degree in design and art education. Each of the art education programs incorporate flexibility in structure in order that students may develop their individual potential as future art educators in a variety of roles.

Professional experience placements are undertaken in primary and secondary schools, and other educational, community, cultural and industry based settings, including a full session Professional Experience Internship. Students studying a combined degree also complete a design industry placement.

4801 Bachelor of Art Education (BArtEd)

Secondary art teachers are required to fulfill 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: 4801 Bachelor of Art Education

The Bachelor of Art Education comprises an art education double major, courses in the fine arts, including art history and theory that may be taken as a major or minor, electives and General Education courses.

The Foundation Year

All students complete foundation courses in art education (including school field experiences), the 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.

Art Education Honours

The Bachelor of Art Education may be completed with Honours.

Fine Arts

Courses in fine arts include: ceramics, drawing, jewellery, painting, photomedia, printmaking, sculpture, performance, installation, textiles and time based art. Students may plan sequences of courses in the fine arts as a major (at least 32 units of credit) or a minor (at least 18 units of credit). In completing a fine arts major, students may choose courses offered as electives, workshops 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 are required to elect a further 4 units of credit in art history and theory courses.

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. Further information can be found under 'Elective Courses for Undergraduate Programs' at the end of the College of Fine Arts section.

Program Rules

1. A student must complete 192 units of credit:

72 units of credit in core studies in Art Education

32 units of credit in Fine Arts

30 units of credit Professional Experience in Art Education

12 units of credit in Art History Theory

30 units of credit in elective studies

4 units of credit in computer studies

12 units of credit in General Education.

Program Structure: 4801 Bachelor of Art Education (Fine Arts Major)#

	SESSION 1 Course Number	SESSION 1	UOC	SESSION 2 Course Number	SESSION 2	UOC	SESSION 3 Course Number	SESSION 3	UOC	SESSION 4 Course Number	SESSION 4	UOC
ART EDUCATION CORE	SAED 1401	Human Growth & Development 3HPW	4	SAED 1402	Teacher Development 1 + 10 days Professional Experience 3HPW	6	SAED 2402	Teacher Development 2 3HPW	6	SAED 2401	Educational Psychology 3HPW	6
	SAED 1403	Foundations of Art Education 3HPW	4	SAED 1404	Visual Arts Workshop 1 3HPW	6	SAED 2405	Special Education 2HPW	4	SAED 2406	Sociology of Education 3HPW	6
HONOURS												
FIELD EXPERIENCE - PRACTICUM							SAED 2491	10 Days Professional Experience	3			
COURSES IN VISUAL ARTS	SART 1401 SOMA 1810	Foundation Studies 1 6HPW Introduction to Computing 2HPW	8 4	SART 1402	Foundation Studies 2 6HPW	8	SART SDES SOMA	Drawing *or* Painting *or* Printmaking *or* Sculpture *or* Ceramics *or* Jewellery *or* Textiles *or* Photomedia *or* Time Based Art	4	SART SDES SOMA	Drawing *or* Painting *or* Printmaking *or* Sculpture *or* Ceramics *or* Jewellery *or* Textiles *or* Photomedia *or* Time Based Art	4
ELECTIVES								Fine Arts *&/or* Media Arts *&/or* Design *&/or* Art History and Theory *&/or* Art Education *&/or* Open	4		Fine Arts *&/or* Media Arts *&/or* Design *&/or* Art History and Theory *&/or* Art Education *&/or* Open	8
HISTORY THEORY CORE	SAHT 1101	Mapping the Modern 4HPW	4	SAHT 1102	Mapping the Postmodern 4HPW	4						
GENERAL EDUCATION								General Education 2HPW	3			
Total Units of Credit 192			24			24			24			24

	SESSION 5 Course Number	SESSION 5	UOC	SESSION 6 Course Number	SESSION 6	UOC	SESSION 7	SESSION 8 Course Number	SESSION 8	UOC
ART EDUCATION CORE	SAED 3407	Curriculum Studies in Art Education 3HPW	6	SAED 3402	Teacher Development 3 3HPW	6	SAED 4491	SAED 4403	Theory of Aesthetics in Art Education 3HPW	6
	SAED 3404	Theories & Practices of Art History in Art Education 3HPW	6					SAED 4406	Philosophical Issues* 3HPW	6
HONOURS								SAED 4055	Honours Research Project	8
				SAED 4051	Practices of Research in Art, Design & Education. (Honours only) 3HPW	6		SAED 4053	Curriculum in Art, Design and Education (Honours only) 3HPW	6
FIELD EXPERIENCE - PRACTICUM				SAED 3491	10 Days Professional Experience	3				
COURSES IN VISUAL ARTS	SART SDES SOMA	Drawing *or* Painting *or* Printmaking *or* Sculpture *or* Ceramics *or* Jewellery *or* Textiles *or* Photomedia *or* Time Based Art	4	SART SDES SOMA	Drawing *or* Painting *or* Printmaking *or* Sculpture *or* Ceramics *or* Jewellery *or* Textiles *or* Photomedia *or* Time Based Art	4	I N T E R N S H I P			
ELECTIVES		Fine Arts *&/or* Media Arts *&/or* Design *&/or* Art History and Theory *&/or* Art Education *&/or* Open	8		Fine Arts *&/or* Media Arts *&/or* Design *&/or* Art History and Theory *&/or* Art Education *&/or* Open	8			Fine Arts *&/or* Media Arts *&/or* Design *&/or* Art History and Theory *&/or* Art Education *&/or* Open	6
HISTORY THEORY CORE										
GENERAL EDUCATION					General Education 2HPW	3			2 x General Education 2HPW x 2	6
Total Units of Credit 192			24			24	24			24

The Bachelor of Art Education Structure should be read with the Program Rules.
* Students undertaking Honours substitute SAED4051, SAED4053 & SAED4055 for SAED4406 and 14 units of credit from Electives.

	SESSION 1	SESSION 2	SESSION 3	SESSION 4	SESSION 5	SESSION 6	SESSION 7	SESSION 8	SESSION 9	SESSION 10
ART EDUCATION CORE	SAED1403 4 Foundations of Art Education 2HPW	SAED1402 6 Teacher Development 1 & 1491 (10 days field experience practicum) 3HPW	SAED1404 6 Visual Arts Workshop 3HPW	SAED2402 6 Teacher Development 2 3HPW	SAED2405 4 Special Education 2HPW	SAED2406 6 Sociology of Education 3HPW	SAED3402 6 Teacher Development 3 3HPW	SAED3404 6 Theories & Practices of Art History in Education 3HPW	SAED 4491 24 Professional Experience Internship	SAED4403 6 Theory of Aesthetics in Art Education 3HPW
		SAED1401 4 Human Growth 3HPW	SAED2401 6 Educational Psychology 3HPW	SAED2491 3 10 days Professional Experience	4 Art Education Elective 2HPW	SAED3407 6 Curriculum Studies in Art Education 3HPW	SAED3491 3 10 days Professional Experience	SAED3403 6 Issues in Contemporary Design Education 3HPW		SAED4406 6 Philosophical Issues in Education 3HPW
DESIGN	SDES1101 6 Design Studio 1A 4HPW	SDES1102 6 Design Studio 1B 4HPW	4 Design Studio 2A 3HPW	4 Design Studio 2B 3HPW	4 Design Studio 3A 3HPW	4 Design Studio 3B 3HPW		SDES4102 8 Professional Experience Program		SDES4101 8 Design Studio Project 8HPW
	SDES1109 3 Measured Drawing 2HPW	SDES1333 4 Drawing 3HPW	4 Design Studio 2A 3HPW	4 Design Studio 2B 3HPW	4 Design Studio 3A 3HPW	4 Design Studio 3B 3HPW				
	SOMA1810 4 Introduction to Computers 2HPW	SDES1104 4 Interactive Systems 2HPW	SDES2107 4 Design & Computers 2A 4HPW	SDES2115 4 Design & Computers 2B 4HPW	SDES3107 4 Design & Computers 3 4HPW	SDES2116 4 Design Practice 2HPW				
	SDES 1108 3 Typography & Composition 2HPW									
	SAHT1301 4 Design HTR 1 2HPW				SAHT2301 4 Design HTR 2 2HPW		SAHT3301 4 Design HTR 3 2HPW	SAHT4301 4 Design HTR 4 2HPW		
							Elective 8			Elective 4
GENERAL EDUCATION				3 General Education 2HPW			3 General Education 2HPW			
	24	24	24	24	24	24	24	24	24	24

Honours: Replace SAED 3403 [6] and SAED 4406 [6] and 8 units of credit electives to total 20 UOC - as shaded on schema - with SAED 4051 [6] and any one of the following: SAED 4052, 4053 [6] and 4055 [8].

Program Structure: 4808 Bachelor of Design Bachelor of Art Education

2. For entry to Honours, students must have a distinction average in at least 40 units of credit in core studies in Art Education above level 1.

3. Students may complete no more than 60 units of credit at level 1.

4808 Bachelor of Design Bachelor of Art Education (BDes BArtEd)

The Program

Students are prepared as 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. Students are able 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: 4808 Bachelor of Design Bachelor of Art Education

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.

Bachelor of Design Bachelor of Art Education Honours

Design

Courses in design include: applied, ceramics, environments, graphics, jewellery and textiles. Students may plan sequences of courses in design as a major (at least 36 units of credit) or a minor (at least 18 units of credit). In completing a design major students may choose courses offered as design studios with related design and computer courses.

Design History, Theory and Aesthetics

Students complete 16 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 develop specific needs, interests and career aspirations. Students are required 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. Further information can be found under Elective Courses for Undergraduate Programs at the end of the College of Fine Arts section.

General Education

Students are required to complete 6 units of credit in General Education. General Education contributes to the broad educational objectives of university study, and courses are usually taken at the Kensington campus.

Honours

The Bachelor of Design Bachelor of Art Education may be completed with Honours. Students may apply for entry into the Honours program at the beginning of Session 5, though later year entry can be made under special circumstances.

Students must have a fail free record and a Distinction average in 40 units of credit in core studies in Art Education taken above level 1. Students in the Honours program substitute SAED4055, SAED4051 or SAED4053 for SAED4406, SAED3403 and 8 units of credit of electives.

Program Rules

1. A student must complete 240 units of credit:

78 units of credit in core studies in Art Education

4 units of credit in elective studies in Art Education

74 units of credit in Design

30 units of credit Professional Experience in Art Education

28 units of credit in elective studies

16 units of credit in Design History Theory and Aesthetics

4 units of credit in computer studies

6 units of credit in General Education.

2. Students may complete no more than 60 units of credit at level 1.

3. For entry to Honours, students must have a Distinction average in at least 40 units of credit in core studies in Art Education taken above level 1.

4802 Bachelor of Design (BDes)

The Program

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 (or 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, students' studio projects are designed to parallel professional practice while integrating theoretical design studies and a period of work experience leading into a graduation project/exhibition.

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 Structure: 4802 Bachelor of Design

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.

General Education

Students are required as part of their studies to complete 12 units of credit in General Education courses.

Elective Courses

Students are required to undertake 18 units of credit of elective courses in addition to core electives (refer to schema on Structure of the Bachelor of Design). These courses may be chosen from the selection listed under 'Elective Courses for Undergraduate Programs' at the end of the College of Fine Arts section, or from other faculties within the University.

Honours

The degree of Bachelor of Design is awarded as a degree with Honours where eligible students have completed the Honours pathway in the program.

Students wishing to undertake Honours:

1. Must have achieved a Distinction average in 40 units of core courses from years two and three.

2. Students wishing to undertake Honours may apply for entry into the Honours program at the end of Session 5, but no later than the end of Session 6.

	SESSION 1 and/or SESSION 2						SESSION 3			SESSION 4			SESSION 5			SESSION 6			SESSION 7 or SESSION 8 ****		
	Course Number		UOC	Course Number		UOC	Course Number		UOC	Course Number		UOC	Course Number		UOC	Course Number		UOC	Course Number		UOC
CORE COURSES	SDES 1101	Design Studio 1A Session 1 only 4HPW	6	SDES 1102	Design Studio 1B Session 2 only 4HPW	6	SDES 2101 *or* 2102 *or* 2103	Design Studio 2A – Applied / Environments / Graphics/Media 3HPW *	4	SDES 2108 *or* 2109 *or* 2110	Design Studio 2B – Applied / Environments / Graphics/Media 3HPW *	4	SDES 3101 *or* 3102 *or* 3103	Design Studio 3A – Applied / Environments / Graphics/Media 3HPW *	4	SDES 3108 *or* 3109 *or* 3110	Design Studio 3B – Applied / Environments / Graphics/Media 3HPW *	4	SDES 4101	Design Studio Project 4 8HPW	8
							SDES 2101 2102 2103 2104 2105 2106	Design Studio 2A – Applied *and/or* Environments *and/or* Graphics/Media *and/or* Ceramics *and/or* Jewellery *and/or* Textiles 3HPW **	8	SDES 2108 2109 2110 2111 2112 2113	Design Studio 2B – Applied *and/or* Environments *and/or* Graphics/Media *and/or* Ceramics *and/or* Jewellery *and/or* Textiles 3HPW **	8	SDES 3101 3102 3103 3104 3105 3106	Design Studio 3A – Applied *and/or* Environments *and/or* Graphics/Media *and/or* Ceramics *and/or* Jewellery *and/or* Textiles 3HPW **	8	SDES 3108 3109 3110 3111 3112 3113	Design Studio 3B – Applied *and/or* Environments *and/or* Graphics/Media *and/or* Ceramics *and/or* Jewellery *and/or* Textiles 3HPW **	8	SDES 4102	Professional Experience	8
	SOMA 1810	Introduction to Computing 2HPW	4																		
	SAHT 1301	Design History, Theory & Aesthetics 1 2HPW	4				SAHT 2301	Design History, Theory & Aesthetics 2 2HPW	4				SAHT 3301	Design History, Theory & Aesthetics 3 2HPW	4				SAHT 4301	Design History, Theory & Aesthetics 4 2HPW	4
	SDES 1103	Design and Human Functioning 2HPW	4	SDES 1104	Interactive Systems 2HPW	4	SDES 2114	Design and Social Theory 2HPW	4												
	SDES 1105	Presentation Techniques 2HPW	3	SDES 1110	Design and Computers 1B 3HPW	4	SDES 2107	Design and Computers 2A 4HPW	4	SDES 2115	Design and Computers 2B 4HPW	4	SDES 3107	Design and Computers 3 4HPW	4				SDES 4103	Design and Computers 4 4HPW	4
	SART 1333	Drawing: Object, Life and Landscape 2HPW	4	SDES 1109	Measured Drawing 2HPW	3							SDES 2116	Design Practice 2HPW	4						
	SDES 1107	Modelmaking – Communicating in 3D 2HPW	3	SDES 1108	Typography and Composition 2HPW	3															
ELECTIVES				Elective		4				Elective		8				Elective ***		6	Electives		10
																			History Theory Elective		4
HONOURS																			SDES 4104	Honours Project	6
GENERAL EDUCATION																2 x General Education		6	2 x General Education		6
Total Units of Credit: 192			28			24			24			24			24			24			44

* One of three design studio courses to be chosen.
** Two of six design studio courses to be chosen.
*** Students wishing to do Honours must undertake SAED4051 Practices of Research in Art and Design Education.

Program Structure: 4802 Bachelor of Design

3. Honours Pathway:

SDES4104 Honours Project full-time and SAED4051 Practices of Research in Art & Design Education are required courses for the Honours program. Theses two courses are taken in lieu of 12 units of credit of electives. SAED4051 is normally undertaken before SDES4104.

Program Rules

1. A student must complete 192 units of credit.

2. Each student's program must include 12 units of General Education.

3. Students must complete the prescribed core courses including a sequence of 16 units of credit in one of the strands selected from Applied/ Object, Graphics/Media or Environments/Spatial.

4. Students must complete 32 units of credit from the core elective strand in at least two disciplines other than that chosen in the core sequence.

5. Students may not commence level 2 courses or General Education before 24 units of credit of level 1 courses have been completed.

6. A student must complete at least 48 units but no more than 60 units of level 1 courses from the Faculty.

7. For entry to Honours, a student must have achieved a Distinction average in 40 units of core courses from Years 2 and 3.

4803 Bachelor of Art Theory (BArtTh)

4803 Bachelor of Art Theory/Master of Art Administration (Fast-track Program)

4806 Bachelor of Art Theory Bachelor of Arts (BArtTh BA)

4807 Bachelor of Art Theory Bachelor of Social Science (BArtTh BSocSc)

4703 Bachelor of Art Theory Bachelor of Laws (BArtTh LLB)

The Programs

The Bachelor of Art Theory offers an intensive study of the visual arts, design and culture. 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, design management, curatorship, art and design criticism and writing, public programming and policy formation, and project officers.

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 will have benefited from the opportunity to combine theoretical and historical studies with studio-based subjects in art, craft and design and to draw on a wide range of electives offered within the University. They will have gained an understanding of and experience in the arts and design industries.

The combined programs recognise the needs of some students to develop their particular interests and/or career aspirations, by providing the opportunity to combine studies in visual arts and culture with the ranges of offerings in the Bachelor of Arts, Bachelor of Social Sciences and Bachelor of Laws.

Program Structure: 4803 Bachelor of Art Theory

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 and the program totals 144 units of credit. The duration of the program is three years full-time.

Theory Major

Students take courses in the Art and Design Theory major to gain an understanding of the methodological tools and concerns in Art and Design History. These courses provide a framework for other studies in the program.

Co-majors

In addition, students take a co-major, normally a sequence of study in Art, Art Education and/or Design contexts. Students may take a different co-major, subject to the approval of the course authority.

	SESSION 1			SESSION 2			SESSION 3 and 4			SESSION 5 and 6		
	Course Number		UOC	Course Number		UOC	Course Number		UOC	Course Number		UOC
THEORY MAJOR	SAHT 1101	Mapping the Modern 4HPW	4	SAHT 1102	Mapping the Postmodern 4HPW	4		Upper Level Theory courses (Session 1 or 2) See List A	12		Upper Level Theory courses (Session 1 or 2) See List A	18
	SAHT 1211	Theories of the Image 3HPW	6	SAHT 1214	Methods of Research and Writing on Art 3HPW	6		Art/Design Theory courses (Session 1 or 2)	12			
		Level 1 Theory courses See List A (Session 1 or 2)	12									
CO-MAJOR		Co-Major Level 1 courses (Session 1 or 2) See List B	12					Co-Major Upper Level Courses (Session 1 or 2)			Co-Major Upper Level Courses (Session 1 or 2)	
	SOMA1810	Introduction to Computing 2HPW	4					See List B	6		See List B	12
OPEN ELECTIVES								Electives	12		Electives	12
GENERAL EDUCATION								General Education (Session 1 or 2)	6		General Education (Session 1 or 2)	6
Total Units of Credit 144			**48**						**48**			**48**

	SESSION 1			SESSION 2		
	Course Number		UOC	Course Number		UOC
HONOURS YEAR 4 COURSE WORK		Elective	6			
	SAHT 4212	Specialist Studies 3HPW	6			
THESIS	SAHT 4211	Thesis	12	SAHT 4211	Thesis	24
Total Units of Credit			**48**			

Program Structure: 4803 Bachelor of Art Theory

	SESSION 1			SESSION 2			SESSION 3			SESSION 4			SESSION 5				SESSION 6	
	Course Number		UOC	Course Number		UOC	Course Number		UOC	Course Number		UOC	Course Number		UOC	Course Number		UOC
THEORY MAJOR	SAHT 1101	Mapping the Modern 4HPW	4	SAHT 1102	Mapping the Postmodern 4HPW	4	SAHT 2211	Grand Narratives of Western Art 3HPW	6	SAHT 2212	Art and Cultural Difference 3HPW	6	SAHT 3211	Theories of Meaning/Meaning of Theories 3HPW	6	SAHT 3212	Art and the Culture of Everyday Life 3HPW	6
	SAHT 1211	Theories of the Image 3HPW	6	SAHT 1214	Methods of Research and Writing on Art 3HPW	6		Art/Design Theory courses				12				SAHT 3213	Museum Studies: Exhibitions Collections, and Material Culture 3HPW	6
	SAHT 1213	Approaches to Australian Art 3HPW	6	SAHT 1212	Theories of Art History & Culture 3HPW	6												
CO-MAJOR	SAHT 1221	Audiences for Art 3HPW	6	SAHT 1222	The Production of Art 3HPW	6	SAHT 2221	Genres of Art Writing 3HPW	6				SAHT 3221	Contexts, Professions & Practices 3HPW	6	SAHT 3222	Industry Placement	6
	SOMA 1810	Introduction to Computing 2HPW	4															
OPEN ELECTIVES								Electives				12		Electives				12
GENERAL EDUCATION								General Education Session 1 or 2				6		General Education Session 1 or 2				6
Total Units of Credit 144			**48**						**48**									**48**

HONOURS YEAR 4	SESSION 1			SESSION 2		
	Course Number		UOC	Course Number		UOC
COURSE WORK		Elective	6			
	SAHT 4212	Specialist Studies 3HPW	6			
THESIS	SAHT 4211	Thesis	12	SAHT 4211	Thesis	24
Total Units of Credit			**48**			

Sample Program: 4803 Bachelor of Art Theory

Art 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, curating, and the avenues for funding**.**

Design Contexts includes practical courses, such as Design Studio, Design and Computers, and Design Management as well as courses which explore the workings of the design industry and provide 'hands-on' experience in writing and publishing.

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.

Program Rules

1. Students must complete a program of study of 144 units of credit, this comprises of:

(a) 48 units of credit in level 1 courses, to a maximum of 60 level 1 units; with at least 24 units of credit of level1 courses being successfully completed before commencement of level 2 courses;

(b) 12 units of credit in approved General Education courses;

(c) a major in Art and Design Theory, made up of 74 units of credit;

(d) a co-major in Art and Design Contexts, made up of 34 units of credit, and

(e) up to 24 units of credit in electives.

2. The Major in Art and Design Theory shall consist of :

(a) 32 units of credit from approved level 1 courses [see List A], which must include SAHT1101 Mapping the Modern, SAHT1102 Mapping the Postmodern, SAHT1211 Theories of the Image and SAHT1214 Methods of Research and Writing on Art; and

(b) 42 units of credit from approved upper level courses [see List A], with up to 12 units of credit able to be taken from Art and Design History and Theory electives;

3. The Co-Major in Art Education and Design contexts shall consist of :

(a) 16 units of credit from approved level 1 courses, which shall include SOMA1810 Introduction to Computing, and

(b) 18 units of credit from approved upper level courses.

4. For entry to Honours, a student must complete the Theory major and have achieved an average of 70% across Theory major courses in Session 4, 5 and 6. Students with a 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 or the equivalent of those prerequisites.

Honours Level

To be eligible for the award of BArtTh(Hons) students 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. The additional Honours study consists of:

1. SAHT4211 Thesis A and SAHT4213 Thesis B

2. SAHT4212 Specialist Studies [which may be substituted by an upper level or postgraduate course, subject to approval by the Program Authority]

3. 6 units of credit from an upper level or postgraduate course, subject to approval by the program authority.

The grade of Honours awarded shall be determined on the following weightings: thesis 70%, specialist studies 15%, elective course 15%.

List A: Approved courses for the Major in Art Education and Design Theory

Level 1

SAHT1101	Art History and Theory 1A: Mapping the Modern
SAHT1102	Art History and Theory 1B: Mapping the Postmodern
SAHT1211	Theories of the Image
SAHT1212	Theories of Art History and Culture

Level 1 courses for which there are no pre-requisites, subject to approval by program authority.

Upper Level

SAHT2211	Grand Narratives of Western Art
SAHT2212	Art and Cultural Difference
SAHT2213	Memory and Self
SAHT2214	Approaches to Australian Art
SAHT2301	Design History, Theory & Aesth 2
SAHT3211	Theories of Meaning/Meaning of Theory
SAHT3212	Art and the Culture of Everyday Life
SAHT3213	Museum Studies
SAHT3301	Design History, Theory & Aesth 3
SAHT3614	Screen Culture
SAHT4301	Design History, Theory & Aesth 4
SAHT3613	Digital Theory and Aesthetics
SAHT3502	Digital Media History and Theory 2: Digital Theory and Aesthetics
SDES2114	Design and Social Theory: Exhibitions, Collections and Material Culture

Upper level courses subject to approval by program authority.

List B: Approved courses for the Co-Major in Art, Design and Art Education Contexts

Level 1

SAHT1221	Contexts for Art
SAHT1222	The Production of Art
SOMA1810	Introduction to Computing
SDES1101	Design Studio 1A
SDES1102	Design Studio 1B
SDES1103	Design and Human Functioning
SDES1104	Interactive Systems
SDES1106	Design and Computers 1

Upper Level

SAHT2221	Writing on Art and Design
SAHT3221	Contexts, Professions and Practices
SAHT3222	Industry Placement
SDES2107	Design and Computers 2A
SDES2115	Design and Computer 2B
SDES2171	Design Management
SDES2116	Design Practice

Program Structure: 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 (BArtTh) 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.

Program 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.

The undergraduate component of the degree must include:

3. a major comprising 72 units of credit in Art and Design Education Theory, including 12 units of credit of MArtAdmin core courses other than SAHT9115 and SAHT9116;

4. a co-major comprising 36 units of credit in Art and Design Contexts. The co-major shall not include SAHT3222 Industry Placement including 6 units of credit of MArtAdmin core options;

5. 36 units of credit of electives, including 6 units of credit of MArtAdmin courses;

6. 12 units of credit in General Education.

The postgraduate component of the degree must include:

7. 36 units of credit of core courses from the Master of Art Administration, including SAHT9115 Internship and SAHT9116 Research Paper. Students

	SESSION 1			SESSION 2			SESSION 3 and 4			SESSION 5			SESSION 6		
	Course Number		UOC	Course Number		UOC	Course Number		UOC	Course Number		UOC	Course Number		UOC
THEORY MAJOR & ART ADMIN CORE & ELECTIVES	SAHT 1101	Mapping the Modern 4HPW	4	SAHT 1102	Mapping the Postmodern 4HPW	4		Upper Level Theory courses (Session 1 or 2) See List A	12		Upper Level Theory course See List A	6		Upper Level Theory course See List A	6
	SAHT 1211	Theories of the Image 3HPW	6	SAHT 1214	Methods of Research and Writing on Art 3HPW	6		Art/Design Theory courses (Session 1 or 2)	12		ArtAdmin Core Course 3HPW	6	SAHT 9113	ArtAdmin Core Course 3HPW	6
		Level 1 Theory courses See List A (Session 1 or 2)				12					ArtAdmin Core Option	6		ArtAdmin Core Option	6
CO-MAJOR		Co-Major Level 1 courses (Session 1 or 2) See List B				12		Co-Major Upper Level Courses (Session 1 or 2)			Co-Major Upper Level Course				
	SOMA1810	Introduction to Computing 2HPW	4					See List B	6		3HPW	6			
OPEN ELECTIVES								Electives	12						
GENERAL EDUCATION								General Education (Session 1 or 2)	6					General Education	6
Total Units of Credit 192			**48**						**48**			**24**			**24**

	SESSION 7			SESSION 8		
	Course Number		UOC	Course Number		UOC
ART ADMIN CORE	SAHT 9115	Internship	6	SAHT 9116	Research Paper	6
ART ADMIN CORE OPTIONS		ArtAdmin Core Option	6		ArtAdmin Core Option	6
		ArtAdmin Core Option	6		ArtAdmin Core Option	6
		ArtAdmin Core Option	6		ArtAdmin Core Option	6
Total Units of Credit 192			**48**			

Program Structure: 4803 Bachelor of Art Theory/9302 Master of Art Administration Fast Track Program

who have completed SAHT2221Genres of Art Writing are excluded from SAHT9112 Writing for Different Cultures and Audiences;

8. 36 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.

9. For entry to BArtTh Honours a student must complete the Theory major and have achieved an average of 70% across Theory major courses in Session 4, 5 and 6. Students would normally complete an Honours year at the completion of the Fast Track Program.

9.1 Where a student does not go on to complete the fast track final year, he or she may graduate with a BArtTh provided normal program rules are met. Up to 24 units of credit of postgraduate courses completed may be credited towards the BArtTh.

Bachelor of Art Theory and Graduate Diploma

9.2 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
SAHT9112	Writing for Different Cultures and Audiences
SAHT9113	Cultural Property, Ethics and the Law
SAHT9114	Exhibition Management and Curatorial Studies

Plus 4 postgraduate core option courses from the Master of Art Administration.

Honours

Program Rules for Bachelor of Art Theory (Honours) apply to the Honours program for the BArtTh/MArtAdmin Fast Track program.

Combined Programs

Program Structure:
4806 Bachelor of Art Theory Bachelor of Arts

The Program

The BArtTh 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 BArtTh. The co-major in Art and Design Contexts in the BArtTh 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 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 78 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) 24 units of credit may be in electives.

2. The BArtTh component of the combined degree must include:

(a) a major (at least 60 units of credit) in approved Art & Design Theory courses,

(b) of the 60 units in the major, 24 units shall be taken from level 1 courses and 36 units from upper level courses.

(c) a co-major (at least 30 units of credit) in approved Art & Design Contexts courses.

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 school, department, unit or interdisciplinary program;

(b) no more than 54 units of credit in total may be from any one school, department, unit or interdisciplinary program;

(c) at least 12 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) 42 units of credit must be obtained in one of the following major sequences within the Faculty of Arts and Social Sciences:

CHIN	Chinese Studies
EDST	Education
ENGL	English
FREN	French
GERS	German Studies
GREK	Greek (Modern)
HIST	History
HPSC	History & Philosophy of Science
INDO	Indonesian Studies
JAPN	Japanese Studies
KORE	Korean Studies
LING	Linguistics
MUSI	Music
PHIL	Philosophy
POLS	Politics and International Relations
PORT	Portugese Studies
RUSS	Russian Studies
SLSP	Policy Studies
SOCA	Sociology & Anthropology
SPAN	Spanish and Latin American Studies
THFI/FILM/ THST/DANC/ PFST	Theatre, Film and Dance

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 BArtTh or the BA. For entry to the BArtTh Honours program a student must complete at least 24 units of credit at level 3 in the relevant theory major and co-major, and have the permission of the Head of School.

6. 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).

Program Structure:
4807 Bachelor of Art Theory Bachelor of Social Science

The Program

The BArtTh BSocSc degree is the equivalent of four years full-time study. It 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 and General Education courses.

Program Rules

1. Students must complete a program of study carrying 192 units of credit of which

(a) at least 88 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 (58 units of credit) in Art & Design Theory;

(b) a co-major (42 units of credit), or a minor (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 Mgt
SLSP2000	Economy and Society
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

and

(b) a major sequence in one of the following areas:

ECON	Economics/Economic History
GEOH/S	Geography
HIST	History
HPSC	History and Philosophy of Science
IBUS	International Business
IROB	Industrial Relations/Human Resource Management
PHIL	Philosophy
POLS	Politics and International Relations
PSYC	Psychology
SCTS	Science and Technology
HPST	History and Philosophy of Science
SOCA	Sociology and Anthropology
SPAN	Spanish and Latin American Studies (History Stream)
THFI/FILM/ THST/PFST	Theatre, Film and Dance

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).

Program Structure: 4703 Bachelor of Art Theory Bachelor of Laws

The Program

1. 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).

2. The first three years of the course include Law subjects totalling 60 units of credit studied alongside COFA courses which will lead to the completion of the BArtTh degree. The final two years of the degree consists of law courses.

The program authority for this combined program is the Faculty of Law

Program Rules – Art Theory

1. The BArtTh component of the combined degree must include:

(a) A major (at least 48 units of credit) in Art & Design Theory, and a

(b) A co-major (24 units of credit) and 12 units of credit elected from the College of Fine Arts

(c) Approved COFA courses should total 84 units of credit

2. There are no general faculty prerequisites to courses offered by the Faculty of Law, but students must study law courses in a sequence approved by the Faculty of Law.

3. Honours: Students who wish to take the B ArtTh degree program at Honours level must consult with the Head of School of Art History Theory at the end of Stage 1.

4. A student who does not wish to proceed to the combined degree BArtTh LLB may apply to transfer to the BArtTh program with credit for all courses completed. The transferring student will need to complete the General Education requirements of the BArtTh.

5. In limited circumstances, students may apply to graduate with the BArtTh degree prior to the completion of their law program. This may require the completion of additional courses to fully meet course requirements.

Program Rules – Law

1. Students will complete 92 units of credit in the following core law courses:

		UOC
LAWS1051	Legal System	3
LAWS2160	Administrative Law	6
LAWS1061	Torts	6
LAWS6210	Law, Lawyers and Society	6
LAWS7410	Legal Research and Writing	3
LAWS1081	Property and Equity 1	6
LAWS1071	Contracts 1	3
LAWS1082	Property and Equity 2	6
LAWS1072	Contracts 2	6
LAWS2311	Litigation 1	6
LAWS2140	Public Law	3
LAWS2321	Litigation 2 (6 UOC) (incorporating Advanced Legal Research 2 UOC)	8
LAWS1001	Criminal Law 1	6
LAWS8320	Legal Theory, *or*	
LAWS8820	Law and Social Theory	6
LAWS1011	Criminal Law 2	6
LAWS2150	Federal Constitutional Law	6
LAWS4010	Business Associations 1	6

2. Students will complete 56 units of credit in non-core LAWS courses.

3. Students may choose to complete 8 units of credit in non-core courses chosen from elective courses offered within the law or non-law program.

4810 Bachelor of Digital Media (BDM)

The Program

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 design, 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.

This program gives students who are interested in the pursuit of careers in the arts, digital media and entertainment industries the opportunity to combine specialist knowledge and practice drawn from digital technology, theory, art and design.

The degree offers a fourth year Honours program for students who excel and wish to pursue research careers.

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: 4810 Bachelor of Digital Media

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.

Honours

BDM Honours is a program of higher level study available to BDM students who wish to undertake research in Digital Media, extending into a fourth Honours year. BDM 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 40 units of credit of core courses from years two and three, typically with a failure free record in their major, and have completed or be enrolled in SAED4051 Practices of Research.

In the 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.

Program Rules

1. A student must complete 144 units of credit.

2. Each student's program must include 12 units of General Education.

3. Students must complete the prescribed core courses.

4. Students may not commence level 2 courses or General Education before appropriate level 1 courses have been completed.

5. Students must complete at least 48 units but no more than 60 units of level 1 courses from the faculty.

6. For entry to Honours, a student must have achieved a Distinction average in 40 units of credit of core courses from years two and three, typically with a failure free record in their major.

Program Structure and Schema: 4810 Bachelor of Digital Media

FIRST YEAR		SECOND YEAR		THIRD YEAR		HONOURS YEAR
Session 1	Session 2	Session 3	Session 4	Session 5	Session 6	Session 7 & 8
SOMA1604 INTRODUCTION TO DIGITAL MEDIA 4 UOC 3HPW	SOMA1602 WEB AUTHORING 4 UOC 3HPW	SOMA2610 WRITING FOR DIGITAL MEDIA 4 UOC 2HPW	SOMA3603 VIDEO 2 4 UOC 3HPW		SOMA3612 PROFESSIONAL PORTFOLIO 4 UOC 4HPW	
SOMA1600 THE LANGUAGE OF DIGITAL MEDIA 4 UOC 2HPW	SOMA1605 LIGHTING 4 UOC 3HPW	SOMA1603 DIGITAL VIDEO 1 4 UOC 3HPW	SOMA2606 MULTIMEDIA AUTHORING2 4 UOC 3HPW	SOMA3616 PROFESSIONAL PRACTICE 4 UOC 2HPW		
SOMA1810 COMPUTING 4 UOC 3HPW	SOMA2602 SOUND MEDIA 1 4 UOC 3HPW	SOMA2607 MULTIMEDIA AUTHORING1 4 UOC 3HPW				HONOURS 48 UOC
SART1606 DRAWING FOR MEDIA 4 UOC 3HPW	SOMA1608 DIGITAL COMP 1 4 UOC 3HPW	SOMA2608 DIGITAL COMP 2 4 UOC 3HPW			SOMA3611 INDUSTRY PLACEMENT 4 UOC	
SDES1601 COLOUR, COMPOSITION & TYPOGRAPHY 4 UOC 3HPW		SOMA2609 3D-1 GRAPHICS & MODELLING 4 UOC 3HPW	SOMA3609 3D-2 GRAPHICS & MODELLING 4 UOC 3HPW	SOMA3610 DIGITAL STUDIO 6 UOC 3HPW		
SAHT1101 MAPPING THE MODERN 4 UOC 4HPW	SAHT1102 MAPPING THE POSTMODERN 4 UOC 4HPW	SAHT3614 HT1 SCREEN CULTURE 4 UOC 2HPW		SAHT3613 HT2 DIGITAL THEORY & AESTHETICS 4 UOC 2HPW		
	DRAWING ELECTIVE 4 UOC Recommended SART 2831 or SART 2832*		ELECTIVE 6 UOC	ELECTIVE 4 UOC	ELECTIVES 16 UOC	
			General Education 3 UOC	General Education 3 UOC		
			General Education 3 UOC	General Education 3 UOC		
UOC 24	24	24	24	24	24	144

* School of Media Arts recommends that students enrol in SART 2831 Spatial Construction Drawing. Also possible SART 2832 Life Drawing.

Digital Media Electives.

NOTE: Pre-requisites apply.

SOMA3615	Sound Media 2	4 UOC	3HPW
SOMA2858	Narrative & Gameplay	4 UOC	3HPW
SOMA3608	Digital Composite 3	4 UOC	3HPW

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. Course descriptions of electives offered in 2004 appear at the end of this Handbook.

Elective studies will deal in-depth with issues of a theoretical nature concerning the craft arts in historical, contemporary and future-oriented social perspectives and in the application of theory to practice. Studio-oriented electives will include a theoretical examination of the nature of practice and critical inquiry that will extend knowledge, skill and understanding.

History and Theory Electives

The Western Tradition

SAHT1211 Theories of the Image
SAHT1212 Theories of Art History & Culture
SAHT2211 Grand Narratives of Western Art
SAHT2601 The Art of Ancient Cultures
SAHT2606 The Painting of Modern Life
SAHT3211 Theories of Meaning/Meaning of Theories
SAHT2612 Art and Its Others: Tendencies in International Contemporary Art

Australian Art History

SAHT2214 Approaches to Australian Art

Art and Asia-Pacific

SAHT2212 Art and Cultural Difference
SAHT2633 Peripheral Visions: Perspectives of Colonial & Post Colonial Art

Critical and Cultural Theory

SAHT2213 Memory and Self
SAHT2476 Art as Therapy
SAHT2641 Introduction to Modern Aesthetics
SAHT2642 Art, Gender, Sexuality and the Body
SAHT2643 Pornography, Art and Politics
SAHT2644 Psychoanalysis and Art
SAHT2653 Dance-Party Culture
SAHT3212 Art & Everyday Life
SAHT3213 Museum Studies

Media Studies

SAHT2649 Creative Writing for Artists
SAHT2661 Experimental Film and Video since the 1960s
SAHT2663 A History of Avant-Garde Cinema
SAHT2667 After Modern Sculpture: Installation, Structures & Space
SAHT2668 Photography: Historical Perspectives
SAHT2677 Net Cultures: Time-Based Art
SAHT3669 Critical Theories of Photography

Special themes and projects

For further information, see Head of School, Art History and Theory

SAHT3690 Special Project

Studio Workshops in Visual Arts

These courses are available as single units or can be built into a sequence of two or three courses. They are intended to introduce students to the theoretical and practical basis of the discipline and provide an extensive introduction to contemporary practice.

Students will be encouraged to broaden their knowledge and skills in order to extend and diversify their development of studio practice. Through an increased understanding of materials, processes and technologies, students will be equipped to resolve ideas at an increasingly professional standard.

School of Art Electives

Studio Electives in Visual Arts

COFA7000 Creative Village Interdisciplinary Studio

SART1502, SART2502, SART3502 Drawing Elective 1 to 3
SART1361, SART2361, SART3361 Etching Elective 1 to 3
SART1461, SART2461, SART3461 Lithography Elective 1 to 3
SART1501, SART2501, SART3501 Painting Elective 1 to 3
SART1561, SART2561, SART3561 Relief Printing Elective 1 to 3
SART1581, SART2581, SART3581 Screen Printing Elective 1 to 3
SART1591, SART2591, SART3591 Printmaking Elective 1 to 3
SART1601, SART2601, SART3601 Sculpture Elective 1 to 3
SART1621, SART2621, SART3621 Installation Elective 1 to 3
SOMA1661, SOMA2661, SOMA3661 Performance Elective 1 to 3
SOMA1521, SOMA2521, SOMA3521 Photomedia Elective 1 to 3
SOMA1421, SOMA2421, SOMA3421 Film Elective 1 to 3
SOMA1641, SOMA2641, SOMA3641 Video Elective 1 to 3
SOMA1651, SOMA2651, SOMA3651 Animation Elective 1 to 3
SOMA1681, SOMA2681, SOMA3681 Multimedia Computing Elective 1 to 3

These courses are available as single units or can be built into a sequence of two or three courses. They are intended to introduce students to the theoretical and practical basis of the discipline and provide an extensive introduction to contemporary practice.

Studio Workshops in Visual Arts

These courses involve basic workshop technologies and basic skill development to permit students to experiment with materials, approaches and technologies across the range of disciplines provided in the College.

Students will be encouraged to broaden their skills base in order to underpin the individual development of studio practice. Through an increased understanding of materials, processes and technologies, students will be equipped to resolve ideas at an increasingly professional standard.

Sculpture, Installation, Performance

SART2821 Metal Joining Techniques Workshop
SART2826 3D Fabrication Workshop
SART2827 Alternative Sculptural Processes Workshop
SART2841 Electronics Workshop
SART2842 Metal Casting Workshop
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SART3862 Advanced Metal Casting Workshop
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SART2819 Photo Techniques for Printmaking Workshop
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SOMA2858 Narrative and Gameplay

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SOMA2816 Photomedia: Analogue Workshop
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SAED2475 Multicultural Contexts
SAHT2476 Art as Therapy
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 Curriculum
SAED4471 Visual Arts Workshop

Politics, Practices and Education

SAED2471 Histories of Australian Education
SAED2472 Creativity in Art, Design and Education
SAED2473 Seminar Art Education
SAED4472 Independent Study in Art Education
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SDES2140 Ceramic Technology Workshop
SDES2141 Moulding and Casting in Clay Workshop
SDES2142 Drawing, Photographic and Print Techniques on Clay Workshop
SDES2143 Low Impact and Alternative Ceramic Processes Workshop
SDES2187 Ceramics: The Contemporary Vessel
SDES2188 Ceramics: Multiples and Meanings
SDES3162 Ceramics 3 Elective: Non –functional, Three Dimensional Ceramics

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SDES1144 Textiles Workshop
SDES2167 Textiles for Fashion
SDES2168 Textiles: Commercial Design and Industry
SDES2184 Textiles: Woven Forms
SDES2185 Textiles: Fabric Manipulation
SDES3169 Textiles: New Technologies
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SDES2147 Jewellery Materials and Technologies Workshop
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SDES2149 Metal Forming Workshop
SDES2150 Jewellery Workshop/Processes for Multiple Production
SDES2151 Jewellery Workshop/Surface
SDES2152 Jewellery Workshop in Colour
SDES2153 Jewellery Workshop in Emerging Technologies
SDES2163 Jewellery Elective 1 Contemporary Wearables
SDES2164 Jewellery Elective 2 3D Jewellery and Small Scale Objects
SDES3165 Jewellery Elective 3: The Replicated Object - Jewellery Multiples
SDES3166 Jewellery Design for Fashion

Professional Practice

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SDES2180 Professional Presentation

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SDES3172 Digital Design - Interactive Media
SDES3173 Computer Technology 2
SDES3174 Web Design and Screen Interface
SDES3176 Digital Design Pre-press
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Performance/Theatre

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SDES2176 The Contemporary Mask
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Independent Study

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A Message from the Dean

Welcome to the Faculty of Commerce and Economics at the University of New South Wales – one of Australia's great universities.

After fifty years of dynamic growth, UNSW has a reputation for excellence, sustained innovation, scholarship, research and practical application. 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 nine 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 relationship 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 our students throughout the learning experience. We have a wide range of support services, including an Academic Advisor, 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

Faculty of Commerce and Economics

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Faculty Information and Assistance

Some People Who Can Help You

This section of the Handbook is designed as a detailed source of information in all matters related to the Faculty of Commerce and Economics.

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. The Student Centre is staffed during teaching weeks between 9am and 6.15pm from Monday to Thursday and between 9am and 5pm on Fridays. During non-teaching weeks the Student Centre is staffed Monday to Friday between 9am and 5pm.

For information and advice about course content and requirements, contact the appropriate schools/teaching units.

Academic Advisor

The Academic Advisor for the Faculty is Ms Judith Watson, G17, Goodsell Building, telephone (02) 9385 3285, fax (02) 9385 2947, email j.watson@unsw.edu.au

The Academic Advisor provides assistance to: students on probation or referral under the University's Academic Standing rules; AusAID scholarship holders; other students experiencing difficulties or seeking advice on academic matters.

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 2004 can be found in alphabetical order by the course code at the back of this Handbook or in the Virtual Handbook at **www.student.unsw.edu.au/handbook**

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:

- Orientation programs – Offered for both undergraduate and postgraduate programs, orientation provides an opportunity to familiarise students with teaching and learning approaches, learning expectations and strategies for successful study in the Faculty.
- 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 – Run throughout each session, these workshops cover topics such as: essay writing, report writing, case analysis, presentation skills, critical thinking and reading, listening and note-taking, exam preparation.
- Resources and handouts – available both in print and online, resources include handouts on academic skills topics and a range of other resources.
- Consultations – A limited number of individual or small group consultations are available for students with learning needs.

Students are welcome to visit the EDU and talk to staff about their learning and language needs, collect appropriate support materials, register for workshops or make appointments for consultations. For further information and a current list of programs being offered, you are welcome to visit the EDU website at **http://education.fce.unsw.edu.au**, drop in at Rm 2039, level 2, South Wing, Quadrangle Building or telephone (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 students are emailed information with regards to enrolment appointments to enable them to enrol online using *New South Student Online.*

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.

Information on Schools and Disciplines

The Faculty of Commerce and Economics includes the Schools of Accounting, Actuarial Studies, Banking and Finance, Business Law and Taxation, Economics, Industrial Relations and Organisational Behaviour, Information Systems, Technology and Management, International Business, 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 two subjects 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. Students select these two Part III subjects from the five practice areas of Investment Management, Life Insurance, General Insurance, Superannuation and Finance.

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 Officers: Clarissa Niland 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. It is also concerned with investment decisions (for example portfolio selection), 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.

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 the 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. 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, 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, merchant 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.

School of Business Law and Taxation

Head of School: Professor Andrew Terry
Administrative Assistant: Bibi Moore

Law and commerce are inextricably intertwined. The whole 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 Denzil Fiebig
Administrative Officers: Catriona Reid and Nadine Caisley

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 Head of School.

School of Industrial Relations and Organisational Behaviour

Head of School: Associate Professor Lucy Taksa
Administrative Officer: Terry O'Callaghan

The School of Industrial Relations and Organisational Behaviour offers students the opportunity to undertake coursework and advanced research covering all aspects of employment relations, from industrial relations to human resource management and the management of work organisations. In the undergraduate programs, the School offers two distinct disciplinary streams to Honours level: Human Resource Management and Industrial Relations. In conjunction with the School of International Business, 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.

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.

School of Information Systems, Technology and Management

Head of School: Professor Graham Low
Administrative Officer: Katy Wilson

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 of 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. 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, at the school's discretion, are possible to/from the Co-op scholarship program (ISM) as defined below.

2. Bachelor of Science in Information Systems/Information Technology. 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, at the school's discretion, are possible to/from the Co-op scholarship program (ISM) 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. 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. 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: **http://co-op.web.unsw.edu.au/**

School of International Business

Acting Head of School: Dr Chung-Sok Suh
Administrative Assistants: Sue Richardson and Grace Setiawan

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. Business is becoming increasingly international and the most effective business 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. 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. International Business offers students an exciting and challenging opportunity to enhance their knowledge and skills in courses highly relevant to the business challenges of the 21st century. International Business can be studied as a single major and co-major in the BCom program and as a co-major in the BEc program.

Languages such as Chinese, French, German, Greek, Japanese, Korean, Russian, and Spanish are also offered as co-majors in collaboration with the School of Modern Languages. The combination of language studies with International Business provides a very attractive option to students with an interest in developing their language skills in the international business context.

Management is also offered as a major in collaboration with the School of Industrial Relations and Organisational Behaviour. 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.

School of Marketing

Head of School: Professor Mark Uncles
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, 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 management, customer services, 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 Market Research Society of Australia. There are also affiliations with professional organisations such as the Advertising Federation of Australia, the Australian Marketing Institute, the Radio Marketing Bureau 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, mathematics 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 Marketing, Tourism and Hospitality Management: A specialist four year undergraduate degree program in Marketing, Tourism and Hospitality Management is available within the School. This program adds tourism and hospitality management courses to the full range of marketing courses. These additional courses include tourism policy and planning, human resource management, tourism and hospitality law, together with hospitality management for hotels, resorts and restaurants. Students receive practical training at an approved training college and are required to complete at least 750 hours of industry work experience as part of the program, adding to the richness of the degree. Graduates will find careers in major hotels, resorts, airlines and tourism, both in general management as well as in marketing.

The Centre for Applied Marketing: 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 Centre for Tourism Policy Studies: The focus of this Centre is on tourism, economics, policy and marketing. The Centre has strong links with Federal and State Government organisations, and the tourism industry. The Centre coordinates UNSW membership of the national Cooperative Research Centre for Sustainable Tourism (CRCST) which is a source of funding for tourism related research.

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 as non-award.

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 the inclusion of auditing, Australian business law, Australian company law and Australian income taxation, *or* a coherent group or sequence of courses in one of the following disciplines:

- finance
- management accounting
- information technology or
- other approved combination.

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 following courses offered in the Bachelor of Commerce cover the syllabus of the Part I examinations of the Institute of Actuaries of Australia (Institute subjects in brackets):

ECON1102 Macroeconomics 1 *or*
ECON1101 Microeconomics 1 (Subject 107 Economics)
ACTL2001 Financial Mathematics (Subject 102 Financial Mathematics)
ACTL2002 Probability and Statistics for Actuaries (Subject 101 Statistical Modelling)
ACTL2003 Stochastic Models for Actuarial Applications (Subject 103 Stochastic Modelling)
ECON2101 Microeconomics 2 *or*
ECON2102 Macroeconomics 2 (Subject 107 Economics)
FINS1613 Business Finance (Subject 108 Finance and Financial Reporting)
ACCT2542 Corporate Financial Reporting and Analysis (Subject 108 Finance and Financial Reporting)
ACTL3001 Actuarial Statistics (Subject 104 Survival Models)
ACTL3002 Life Insurance and Superannuation Models (Subject 105 Actuarial Mathematics 1)
ACTL3003 Insurance Risk Models (Subject 106 Actuarial Mathematics 2)
ACTL3004 Financial Economics for Insurance and Superannuation (Subject 109 Financial Economics)

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 1

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 2

ACCT1511 Accounting and Financial Management 1B
ECON1102 Macroeconomics 1
MATH1251 Mathematics for Actuarial Studies & Finance 1B
ACTL1001 Actuarial Studies and Commerce

Year 2

Session 1

ACTL2001 Financial Mathematics
ACTL2002 Probability and Statistics for Actuaries
ECON2101 Microeconomics 2
Option

Session 2

ACTL2003 Stochastic Models for Actuarial Applications
FINS1613 Business Finance
ACCT2542 Corporate Financial Reporting and Analysis
Option

Year 3

Session 1

ACTL3001 Actuarial Statistics
ACTL3002 Life Insurance and Superannuation Models
Option
Option

Session 2

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. Students select these two subjects from the five practice area subjects of Investment Management, Life Insurance, General Insurance, Superannuation and 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.

The Institute of Chartered Accountants in Australia (ICAA)

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, provided they have 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
or
ACCT2532 Management Accounting: Process Improvement and Innovation (Honours)
ACCT2542 Corporate Financial Reporting and Analysis
or
ACCT2552 Corporate Financial Reporting and Analysis (Honours)
ACCT3563 Issues in Financial Reporting and Analysis
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
LEGT3741 Business Entities
LEGT3751 Business Taxation

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
LAWS2140 Public Law
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**

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 subjects which, if completed, count towards the academic requirements of both professional associations. During the course of their studies, students are encouraged to become CSA Student Members.

For details of accredited subjects 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**

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**

The Australian Institute of Banking and Finance (AIBF)

The educational requirements for Senior Associateship will be satisfied if:

1. graduates awarded either a Bachelor of Commerce or Bachelor of Economics degree have included in their studies LEGT2761 Law of Banking and Finance, MARK1012 Marketing Fundamentals and IROB1712 Management of Organisations; *and*

2. a further sequence of at least three coherent courses in banking or finance.

Students should note that Senior Associate also requires a minimum of two years employment in the banking and finance industry.

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**

Market Research Society of Australia (MRSA)

Undergraduate marketing students at UNSW are able to obtain the Diploma of Market Research if they have successfully completed a number of approved courses. The Diploma of the MRSA is widely recognised by government and industry as a measure of competence in market research.

To qualify for the Diploma, undergraduate students must complete and pass the following courses:

MARK1012 Marketing Fundamentals
MARK2051 Consumer Behaviour
MARK2052 Marketing Research
MARK2054 Market Analysis

Plus one from:

MARK3071 International & Global Marketing
MARK3072 Advanced Consumer Behaviour
MARK3092 Brand Management

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 Market Research Society of Australia Ltd, telephone (02) 9571 5966, fax (02) 9571 5944 email mrsa@mrsa.com.au, website **www.mrsa.com.au** Further information is also available from the Professional Associations section in the Marketing Careers website: **www.marketing.unsw.edu.au**

Program and Course Information

Rules Governing the Award of the Degrees of Bachelor of Commerce and Bachelor of Economics

For rules relating to programs which are no longer offered to new students, please refer to earlier Faculty Handbooks. Copies of these rules are also available from the Faculty of Commerce and Economics Student Centre.

Rule 1 – Pass and Honours Degrees

The degrees of Bachelor of Commerce or 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

Students not completing the requirements of two majors in the Bachelor of Commerce degree must choose options so that they complete a 'disciplinary minor' in a discipline other than their major. 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 may seek to transfer between programs and decisions will be made by the Faculty Admissions Committee.

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 programs leading to the award of the degrees of Bachelor of Commerce or Bachelor of Economics normally consist 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 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

Bachelor of Commerce 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 and Financial Management 1A
ACCT1511 Accounting and 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 and Bachelor of Economics fulfill 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 count mainstream courses offered by other faculties as substitutes for General Education courses towards more than 6 units of 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 in addition 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.

Bachelor of Economics 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 and Financial Management 1A
ACCT1511	Accounting and Financial Management 1B
ECON1101	Microeconomics 1
ECON1102	Macroeconomics 1
ECON1202	Quantitative Methods A
ECON1203	Quantitative Methods B

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 Commerce and Bachelor of Economics fulfill 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.

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);

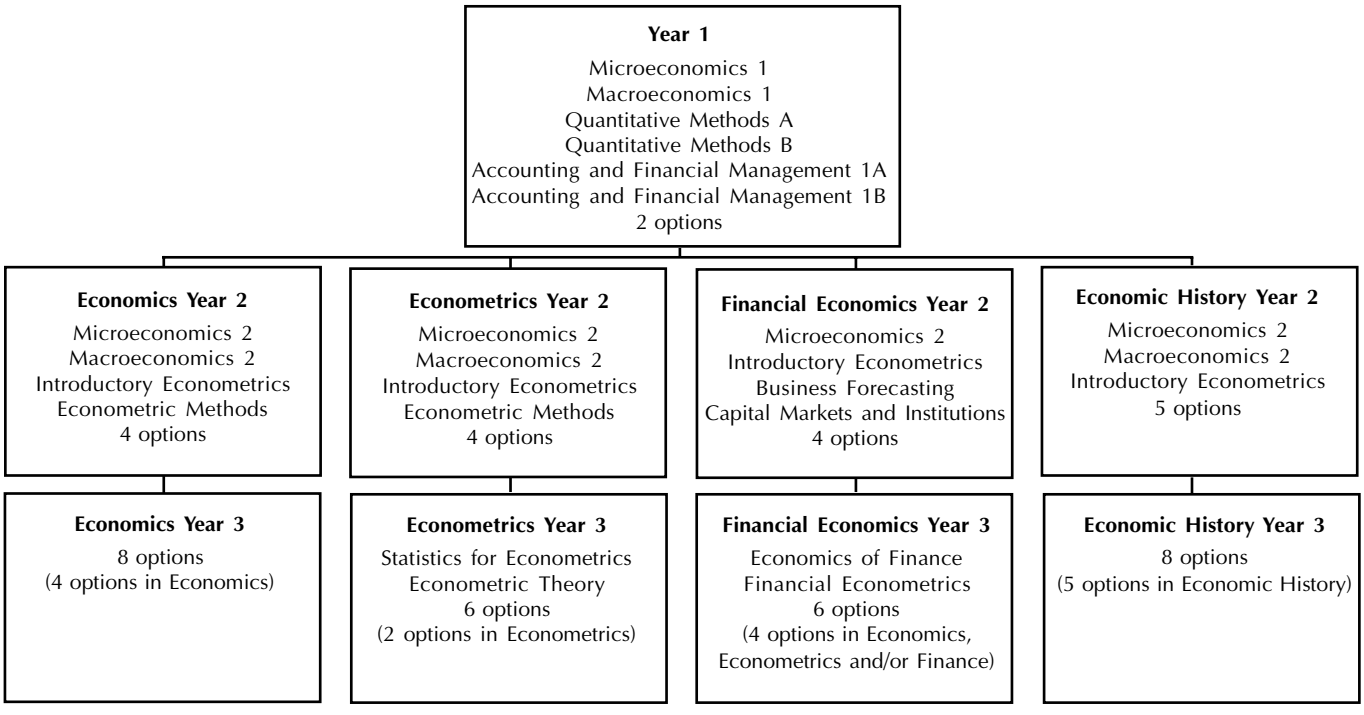
5.2 or a double major of 90 units, with at least 48 units in one of the Economics, Econometrics, Financial Economics or Economic History disciplinary streams, and at least 42 units in another approved disciplinary stream.

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

Program Structure: Bachelor of Economics Program



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
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 Commerce or Bachelor of Economics has been conferred shall not be admitted to candidature for the Honours degree of Bachelor of Commerce or 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 options from any approved course taught in the University. The approval for courses (other than General Education electives) to count as options is given by the program authority. Heads of the Schools may, in exceptional circumstances, vary courses in prescribed programs. Apart from service courses for other faculties, all courses offered by the Faculty of Commerce and Economics will be automatically approved as options save that no course can be counted both as an option and as a prescribed course.

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.

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.

Program Structure: Actuarial Studies Co-op Program

Year	Session 1	UOC	Session 2	UOC
1	ACCT1501 ECON1101 MATH1151 Option	6 6 6 6	ACCT1511 ECON1102 MATH1251 ACTL1001	6 6 6 6
	Total	**24**		**24**
2	ACTL2100 IT1** ACTL2001 ACTL2002 Professional Subject Required*	6 6 6 6	ACTL2003 Professional Subject Required* Electives Professional Subject Required*	6 6 6 6
	Total	**24**		**24**
3	ACTL3001 ACTL3002 Electives	6 6 12	ACTL3100 IT2 Electives General Education	15 6 3
	Total	**24**		**24**
4	ACTL4100 IT3 Electives General Education	15 6 3	ACTL3003 ACTL3004 Electives General Education	6 6 6 6
	Total	**24**		**24**

** Professional Requirements – These must include the following courses ACCT2542, ECON2101/ECON2102 and FINS1613*

*** Completed in 12 weeks during Summer Session, Year 2*

Rule 3 – Entry and Continuation Conditions

3.1 Entry to the program is conditional upon:

a. meeting the entry requirements for the Bachelor of Commerce

b. 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.

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.

Program Structure: Information Systems and Management Co-op Program

Year	Session 1	UOC	Session 2	UOC
1	ACCT1501 Accounting & Financial Mgnt 1A (core) ECON1101 Microeconomics 1 (core) ECON1202 Quantitative Methods A (core) INFS1602 Computer Information Systems (core)	6 6 6 6	ACCT1511 Accounting & Financial Mgnt 1B (core) ECON1102 Macroeconomics 1 (core) ECON1203 Quantitative Methods B (core) INFS1603 Business Data Mgnt (core)	6 6 6 6
	Total	**24**		**24**
2	INFS2603 Systems Analysis & Design (core) INFS2791 Industrial Training A General Education Elective 1	6 6 6 6	INFS2607 Business Data Networks (core) Elective 2 Elective 3 General Education	6 6 6 6
	Total	**24**		**24**
3	INFS4886 Research Topics in Information Systems 1 Elective 4 Elective 5 Elective 6	6 6 6 6	INFS3792 Industrial Training B Honours Option INFS4887 Research Topics in Information Systems 2	12 6 6
	Total	**24**		**24**
4	INFS4793 Industrial Training C INFS4795 Thesis Part A (Info Sys) Honours Option	12 6 6	INFS3604 Information Technology Mgnt (core) INFS4796 Thesis Part B	6 18
	Total	**24**		**24**

Note: Two of the electives must be INFS level 2 or 3 for a double major or 3 of the electives must be INFS level 2 or 3 for a single major.

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

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 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:

a. meeting the entry requirements for the Bachelor of Commerce

b. 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 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.

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:

a. meeting the entry requirements for the Bachelor of Commerce

b. 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 (Marketing Co-op) comprises 192 units of credit to be complete 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 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.

Rules Governing the Award of the Degree of Bachelor of Commerce in Marketing, Tourism and Hospitality Management

To complete the requirements for the award of the degree of Bachelor of Commerce in Marketing, Tourism and Hospitality Management:

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 approved General Education courses offered by faculties other than the Faculty of Commerce and Economics;

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;

1.4 6 units of Economics of Tourism;

1.5 12 units of approved Commerce and Economics options;

1.6 12 units of approved tourism and hospitality operational training;

1.7 18 units of approved industry training, based on a minimum of 750 hours of employment.

Program Structure: Marketing Co-op Program

Year	Session 1	UOC	Session 2	UOC
1	ACCT1501 Accounting & Financial Mgnt 1A (core)	6	ACCT1511 Accounting & Financial Mgnt 1B (core)	6
	ECON1101 Microeconomics 1 (core)	6	ECON1102 Macroeconomics 1 (core)	6
	ECON1202 Quantitative Methods A (core)	6	ECON1203 Quantitative Methods B (core)	6
	MARK1012 Marketing Fundamentals (core)	6	Elective 1	6
	Total	**24**		**24**
2	MARK2999 Industrial Training 1 (core)	12	MARK2053 Marketing Communications & Promotions Mgnt (core)	6
	MARK2051 Consumer Behaviour (core)	6	MARK2054 Market Analysis (core)	6
	MARK2052 Market Research (core)	6	Elective 2	6
			General Education 1	6
	Total	**24**		**24**
3	MARK3081 Distribution Strategy & Retail Channels (core)	6	MARK3999 Industrial Training 2 (core)	18
	Elective 3	6	Elective 6	6
	Elective 4	6		
	Elective 5	6		
	Total	**24**		**24**
4	MARK4999 Industrial Training 3 (core)	18	MARK3082 Strategic Marketing Mgnt (core)	6
	General Education 2	6	Elective 7	6
			Elective 8	6
			Elective 9	6
	Total	**24**		**24**

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 they have attempted 36 units of mainstream courses;

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)

Tourism and Hospitality Management
Marketing

Approved Disciplinary Streams (Honours)

Marketing

Program Structure for Marketing, Tourism and Hospitality Management (Pass)

Stage 1

Session 1	**Session 2**
ACCT1501	ECON1102
ECON1101	ECON1203
ECON1202	MARK1012
TAHM1666	TAHM1777

Stage 2

Session 1	**Session 2**
ACCT1511	MARK2053
MARK2051	TAHM2002
TAHM 2001	TAHM2888
ECON2117	OPTION

Stage 3

Session 1	**Session 2**
MARK2052	MARK2054
TAHM3001	TAHM3003
TAHM3002	TAHM3004
OPTION	TAHM3888

Stage 4

Session 1	**Session 2**
MARK3081	MARK3082
TAHM4001	TAHM4003
TAHM4002	TAHM4888
OPTION	OPTION

Note: The above courses are all 6 units of credit each. 12 units of credit from the Options in Stage 2 (Session 2) and Stage 3 (Session 1) should be approved General Education courses.

Rules Governing the Award of Combined Degree Programs:

Bachelor of Commerce Bachelor of Arts *and* Bachelor of Economics Bachelor of Arts

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 and the Bachelor of Economics Bachelor of Arts.

These are five year programs combining the strengths and flexibility of each single degree program. It is expected that these combined degree programs 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 or Bachelor of Economics degree.

Students graduating with a Bachelor of Commerce and a Bachelor of Arts degree or Bachelor of Economics and Bachelor of Arts degree are likely to be employed wherever employers seek Commerce or Economics graduates with, for example, additional language skills in languages offered by the Faculty of Arts and Social Sciences or with a perspective of the world not restricted to business disciplines only.

Rules Relating to the Bachelor of Commerce Bachelor of Arts Program and Bachelor of Economics Bachelor of Arts Program

Rules relating to the award of the degree of Bachelor of Commerce and Bachelor of Economics shall apply wherever relevant to students enrolled in the combined Bachelor of Commerce Bachelor of Arts or Bachelor of Economics Bachelor of Arts.

These are five year (240 units of credit) degree programs. Both the Bachelor of Commerce Bachelor of Arts and Bachelor of Economics Bachelor of Arts programs consist 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.

3525 Bachelor of Commerce Bachelor of Arts

BCom BA

Year 1 (48 units of credit)

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
2 Level 1 Arts and Social Sciences courses (12 units of credit)

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.

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*

**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 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

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:

Chinese Studies
Education
English
French
German Studies
Greek, Modern
History
History and Philosophy of Science
Indonesian Studies
Italian
Japanese Studies
Korean Studies
Linguistics
Music
Philosophy
Policy Studies
Politics and International Relations
Portuguese
Russian Studies
Sociology
Spanish and Latin American Studies
Theatre, Film and Dance

3526 Bachelor of Economics Bachelor of Arts

BEc BA

Year 1 (48 units of credit)

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
2 Level 1 Arts and Social Sciences courses (12 units of credit)

Years 2–5

In Years 2, 3, 4 and 5 students take a total of 4 Commerce and Economics courses (24 units of credit) and 4 Arts and Social Sciences courses (24 units of credit).

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):

To the end of sixth year:
Economics
Econometrics
Economics/Econometrics
Economic History

For **Rules Relating to the Bachelor of Arts Component** (see program 3525 Bachelor of Commerce Bachelor of Arts)

Rules Governing the Award of Combined Degree Programs:

Bachelor of Commerce Bachelor of Social Science *and* Bachelor of Economics Bachelor of Social Science

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 and the Bachelor of Economics Bachelor of Social Science.

These are five year programs 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, Bachelor of Economics or Bachelor of Social Science degree.

Students graduating with a combined Bachelor of Commerce Bachelor of Social Science degree or Bachelor of Economics Bachelor of Social Science degree are likely to be employed wherever employers seek Commerce or Economics graduates with additional skills in applied policy analysis, or with a perspective of the world not restricted to business disciplines only.

Rules Relating to the Bachelor of Commerce Bachelor of Social Science program and Bachelor of Economics Bachelor of Social Science program

Rules relating to the award of the degree of Bachelor of Commerce and Bachelor of Economics, shall apply wherever relevant to candidates for the course of Bachelor of Commerce Bachelor of Social Science and Bachelor of Economics Bachelor of Social Science.

These are five year degree programs (240 units of credit). Both the Bachelor of Commerce Bachelor of Social Science and Bachelor of Economics Bachelor of Social Science degrees consist 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.

3527 Bachelor of Commerce Bachelor of Social Science

BCom BSocSc

Year 1 (48 units of credit)

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
SLSP1000	Introduction to Social Science and Policy *or*
SLSP1002	Introduction to Policy Analysis
SLSP1001	Introduction to Research and Information Management

Years 2–5

In Years 2, 3, 4 and 5 students take a total of 4 Commerce and Economics courses (24 units of credit), 24 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.

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*

**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 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

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.

3528 Bachelor of Economics Bachelor of Social Science

BEc BSocSc

Year 1 (48 units of credit)

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
SLSP1000	Introduction to Social Science and Policy OR
SLSP1002	Introduction to Policy Analysis
SLSP1001	Introduction to Research and Information Management

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) including at least 6 (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.

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.

Rules Governing the Award of the Combined Degree Program: Bachelor of Commerce Bachelor of Science

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.

3529 Bachelor of Commerce Bachelor of Science

BCom BSc

Rules Relating to the Bachelor of Commerce Bachelor of Science Program

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 and Bachelor of Commerce/ Bachelor of Science programs. Students may apply to transfer between these Programs through UAC.

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.

Core courses

All students must complete the following courses:

		UOC
ACCT1501	Accounting and Financial Management 1A	6
ECON1101	Microeconomics I	6
ACCT1511	Accounting and Financial Management 1B	6
ECON1102	Macroeconomics I	6

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 courses selected from:

ACTL2002, ECON1203, MATH1041, MATH2801, MATH2901, MATH2841, BIOS2041, PSYC2001 or alternative 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.

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.

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.

Rules Governing the Award of the Degree of Bachelor of Science in Information Systems (3979)

Information Systems is concerned with information systems analysis and design, data management, computer processing, EDP audit, management information systems and applied expert systems within business and government organisations. There is a growing maturity in the discipline as the underlying theory and associated principles become better understood and as advanced information processing techniques emerge. In many respects the development of the knowledge base, which forms the discipline, parallels developments in computing technology as new opportunities become apparent for the solution of information processing problems. Hence, information systems is concerned with the way in which computer systems are used within organisations – mainly business and government. 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 year, well-qualified students may specialise in advanced information systems and data management topics.

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.

Program Structure: Bachelor of Science in Information Systems 3979

Year	Courses
1	INFS1602 Computer Information Systems INFS1603 Business Data Management ACCT1501 Accounting and Financial Management 1A ACCT1511 Accounting and Financial Management 1B COMP1011 Computing 1A COMP1021 Computing 1B S1: MATH1131 Mathematics 1A or MATH1141 Higher Mathematics 1A S2: MATH1231 Mathematics 1B or MATH1241 Higher Mathematics 1B
2	INFS2603 Systems Analysis and Design INFS2607 Business Data Networks INFS2609 Software Implementation MATH2841 Statistics SS or MATH2801 ELECTIVES Courses totalling 12 units of credit General Education course(s) totalling 6 units of credit 1 Commerce Elective course totalling 6 units of credit from one of the following: ECON1101, LEGT2771, IROB2721, ACTL1001, MGMT1002
3	INFS3605 Software Engineering INFS3606 Telecommunications for Electronic Commerce INFS3608 Advanced Database Systems ELECTIVE level II/III INFS course(s) totalling 6 units of credit from Tables 1 and 2 ELECTIVE level III INFS course(s) totalling 6 units of credit from Table 2 ELECTIVE courses totalling 12 units of credit from the Faculty of Science section of the Handbook General Education course(s) totalling 6 units of credit
Honours (optional) 4	INFS4886 Research Topics in Information Systems 1 INFS4887 Research Topics in Information Systems 2 INFS4795 Thesis A INFS4796 Thesis B HONS OPTIONS totalling 12 units of credit from Table 3

Table 1 Level 2 Electives:

INFS2611	Requirements Elicitation (3 UOC)

Table 2 Level 3 Electives:

INFS3603	Business Intelligence Systems
INFS3604	Information Technology Management
INFS3611	Design Workshop
INFS3621	Alternative System Design Methodologies (3 UOC)
INFS3622	Distributed Application Design and Implementation (3 UOC)
INFS3623	Multimedia Systems Design (3 UOC)
INFS3685	Electronic Commerce Management

Table 3 Honours Options:

INFS4774	Information Systems Security
INFS4805	Information Systems Auditing
INFS4810	Advanced Data Management
INFS4811	Knowledge Management Systems and Technology
INFS4812	Software Engineering Management
INFS4848	Information Systems Project Management
INFS4853	Information Systems Management
INFS4857	Information and Decision Technology
INFS4891	Decision Support Systems

Program Structure: Bachelor of Science in Business Information Technology 3971

Year	Courses
1	INFS1602 Computer Information Systems INFS1603 Business Data Management ACCT1501 Accounting and Financial Management 1A ACCT1511 Accounting and Financial Management 1B COMP1011 Computing 1A COMP1021 Computing 1B S1: MATH1131 Mathematics 1A or MATH1141 Higher Mathematics 1A S2: MATH1231 Mathematics 1B or MATH1241 Higher Mathematics 1B
2	INFS2603 Systems Analysis and Design INFS2607 Business Data Networks INFS2691 Industrial Training 1 MATH2841 Statistics 1 General Education elective totalling 6 units of credit 1 Commerce Elective course totalling 6 units of credit from one of the following: ECON1101, LEGT2771, IROB2721, ACTL1001, MGMT1002 1 Elective course totalling 6 units of credit
3	INFS3605 Software Engineering INFS3608 Advanced Database Systems INFS3692 Industrial Training 2 INFS4886 Research Topics in Information Systems 1 1 Elective from Table 2 totalling 6 units of credit 1 General Education elective totalling 6 units of credit
4	IINFS3606 Telecommunications for Electronic Commerce INFS4795 Thesis A INFS4796 Thesis B INFS4693 Industrial Training 3 INFS4887 Research Topics in Information Systems 2

Table 1 INFS Electives:

INFS2611	Requirements Elicitation (3 UOC)
INFS3603	Business Intelligence Systems
INFS3604	Information Technology Management
INFS3611	Design Workshop
INFS3621	Alternative System Design Methodologies (3 UOC)
INFS3622	Distributed Application Design and Implementation (3 UOC)
INFS3623	Multimedia Systems Design (3 UOC)
INFS3685	Electronic Commerce Management

Table 2 Level 4 Options:

INFS4774	Information Systems Security
INFS4805	Information Systems Auditing
INFS4810	Advanced Data Management
INFS4811	Knowledge Management Systems and Technology
INFS4812	Software Engineering Management
INFS4848	Information Systems Project Management
INFS4853	Information Systems Management
INFS4857	Information and Decision Technology
INFS4891	Decision Support Systems

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.*

Rules Governing the Award of the Degree of Bachelor of Science in Business Information Technology (3971)

This is a four year full-time degree program for which Honours may be granted. It is an industry linked education course leading to the award of the qualification Bachelor of Science in Business Information Technology. The course draws on three core disciplinary areas: Information Systems, Accounting, and Computer Science.

The course has been designed in conjunction with the information systems industry to provide for the needs of Australian businesses. The course combines the normal requirements for the award of the degree with coordinated industrial experience in the sponsoring organisations. A scholarship is payable from a fund donated by the sponsoring organisations. Entry to this course is limited to students awarded a scholarship through the BIT selection procedure.

Consideration for entry to the course may proceed only on the basis of an application directly to Co-op Program Office at UNSW and application through UAC.

Students who are academically acceptable for the 3971 course but who are not offered a scholarship should consider registering for entry into the 3979 program. If scholarships become available at the end of Year 1, students undertaking the 3979 program may be offered transfer to the 3971 course.

Objectives of the Program

This four year program 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 Years 2 and 4, and July of Year 3 of the program. Please see above table for the structure of the program.

Rules Relating to Honours Degree: Undergraduate Thesis

Students enrolled for a degree at Honours level in the Faculty must present a thesis in their final year of study. The thesis is to be on a topic selected by the student and approved by the Head of the Teaching Unit concerned. The thesis must be written under the supervision of a member of staff nominated by the appropriate Head of Teaching Unit.

The length of the thesis for the Honours degree should not exceed 10,000 words.

For the Honours courses, the topic selected must normally be submitted for approval no later than the end of the second session in the second last year of the course.

The thesis for any course leading to the award of a degree at Honours level must be presented not later than 30 November of the year in which the thesis is to be presented.

In writing theses, students are expected to pay particular attention to matters of presentation. The thesis must include a bibliography and an acknowledgment of all source material and it must be accompanied by an abstract of approximately 200 words. Two copies of the thesis must be submitted in double-spaced typescript on paper size A4 with a 30 mm margin and suitably bound or stapled.

In exceptional circumstances the Head of the Teaching Unit may grant an extension of time for compliance with the requirements of the three immediately preceding paragraphs.

Disciplinary Streams

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 details of session availability and prerequisites.

Accounting

Course ID	Course Name
ACCT1501	Accounting & Financial Management 1A
ACCT1511	Accounting & Financial Management 1B
ACCT2522	Management Accounting: Process Improvement and Innovation
ACCT2532	Management Accounting: Process Improvement and Innovation (Honours)
ACCT2542	Corporate Financial Reporting and Analysis
ACCT2552	Corporate Financial Reporting and Analysis (Honours)
ACCT3563	Issues in Financial Reporting and Analysis
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)
ACCT4818	Advanced Assurance and Auditing
ACCT4820	Management Accounting Issues and International Best Practice
ACCT4832	Public Sector Accounting and Financial Reporting
FINS3626	International Corporate Governance

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

ACCT2532	Management Accounting: Process Improvement and Innovation (Honours)
ACCT2552	Corporate Financial Reporting and Analysis (Honours)
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
ACCT2532	Management Accounting: Process Improvement and Innovation (Honours)
ACCT2542	Corporate Financial Reporting and Analysis
ACCT2552	Corporate Financial Reporting and Analysis (Honours)
ACCT3563	Issues in Financial Reporting and Analysis
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)
ACCT4818	Advanced Assurance and Auditing
ACCT4820	Management Accounting Issues and International Best Practice
ACCT4832	Public Sector Accounting and Financial Reporting
FINS3626	International Corporate Governance

Actuarial Studies

Required

ACTL1001	Actuarial Studies and Commerce
ACTL2001	Financial Mathematics
ACTL2002	Probability and Statistics for Actuaries
ACTL2003	Stochastic Models for Actuarial Applications

Options

To satisfy minimum requirements for an actuarial studies minor, all courses from the required list must be completed.

To satisfy minimum requirements for an actuarial studies single major, at least three options must be chosen from List A and at most one option from List B. To obtain maximum professional actuarial course exemptions, the first four ACTL options in List A should be completed and ACCT2542, ECON2101/ECON2102 and FINS1613 from List B.

List A

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
FINS3631	Risk and Insurance
FINS3651	International Financial Services
ACTL4001	Actuarial Theory and Practice A
ACTL4002	Actuarial Theory and Practice B

List B

ACCT2542	Corporate Financial Reporting and Analysis
ECON2101	Microeconomics 2
ECON2102	Macroeconomics 2
ECON3202	Mathematical Economics
ECON3203	Econometric Theory
ECON3213	Comparative Forecasting Techniques
FINS1612	Capital Markets and Institutions
FINS1613	Business Finance
FINS3625	Applied Corporate Finance
FINS3630	Bank Financial Management
FINS3635	Options, Futures and Risk Management
FINS3636	Interest Rate Risk Management
MATH1141	Higher Mathematics 1A
MATH1241	Higher Mathematics 1B
MATH1151	Mathematics for Actuarial
MATH1251	Mathematics for Actuarial

Actuarial Studies Honours

Required

Year 4

ACTL4000 Thesis (Actuarial Studies)
ACTL4001 Actuarial Theory and Practice A
ACTL4002 Actuarial Theory and Practice B
ACTL4003 Research Topics in Actuarial Science

Plus one other course from Options list

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
ECON3202 Mathematical Economics
ECON3203 Econometric Theory
FINS3631 Risk and Insurance
FINS3635 Options, Futures and Risk Management
FINS3636 Interest Rate Risk Management
MATH5965 Mathematics of Security Markets 1

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

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
ECON2319 Economic and Social Policy in Australia since Federation
ECON2321 Growth and Development of International Business
ECON2322 European Integration

List B

ECON2207 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
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
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
LEGT3741 Business Entities

Options:

Four courses from the following list:

LEGT2791 International Business Law
LEGT2712 Business, Ethics and the Law
LEGT2731 Marketing and Distribution Law
LEGT1732 Franchising
LEGT3751 Business Taxation
LEGT2761 Law of Banking and Finance
LEGT2771 Information Technology Law
LEGT2781 Regulation of Government Agencies
LEGT3756 International Business Taxation
LEGT3757 Corporate Law, Tax and Strategy
LEGT3744 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

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
ECON2321 Growth and Development of International Business
ECON3101 Markets and Public Choice
ECON3105 Economic Analysis of Productivity
ECON3106 Public Finance
ACCT2522 Management Accounting: Process Improvement and Innovation
ACCT2532 Management Accounting: Process Improvement and Innovation (Honours)
IBUS2101 International Business and Multinational Enterprises
IBUS3101 International Business Strategy
INFS3603 Business Intelligence Systems
INFS3685 Electronic Commerce Management
IROB3724 Strategic Human Resource 1 Management
MARK3071 International and Global Marketing
MARK3082 Strategic Marketing 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

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.

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

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
ECON2319 Economic and Social Policy in Australia since Federation
ECON2321 Growth and Development of International Business
ECON2322 Business and the New Europe
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
ECON3105 Economic Analysis of Productivity
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
ECON3205 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
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

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

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 and 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

ECON4323 Approaches to Economic and Social History
ECON4324 Aspects of Australian Economic Development
ECON4325 Seminar in Research Methods
ECON4326 Comparative Issues in Economic History
ECON4327 Thesis

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
FINS3623 Small Business Finance
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
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 1

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
FINS4778 Recent Developments in Banking Research
FINS4781 Special Topics in Finance

Session 2

FINS4795 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

IROB1701 Industrial Relations
IROB1712 Management of Organisations
IROB2718 Human Resource Management

Options

List A

IROB3702 International Human Resource Management Practice
IROB3724 Strategic Human Resource Management
IROB3728 Managing Pay and Performance
IROB3729 Managing Workplace Training

List B

IROB1702 Labour Organisation
IROB2702 Industrial Law
IROB2703 International Employment Relations
IROB2704 Social Organisation of Work
IROB2715 Labour History
IROB2724 Health and Safety at Work
IROB3704 Analysing Work and Organisations
IROB3705 Management and Employment Relations
IROB3706 Industrial Relations Policies and Processes
IROB3721 Negotiation, Bargaining and Advocacy

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

IROB1701 Industrial Relations
IROB1712 Management of Organisations
IROB2718 Human Resource Management
IROB3708 Philosophy and Research Methods in Employment and Management*

**IROB3708 is a prerequisite for Year 4 Honours and should normally be taken in the session preceding the Honours year.*

Year 4

Required

IROB4731 Case Studies A
IROB4732 Case Studies B
IROB4733 Honours Seminar
IROB4738 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

IROB1701 Industrial Relations
IROB1702 Labour Organisation
IROB2702 Industrial Law

Options

List A

IROB2704 Social Organisation of Work
IROB2715 Labour History
IROB3705 Management and Employment Relations
IROB3706 Industrial Relations Policies and Processes

List B

IROB1712 Management of Organisations
IROB2703 International Employment Relations
IROB2718 Human Resource Management
IROB2724 Health and Safety at Work
IROB3702 International Human Resource Management Practice
IROB3704 Analysing Work and Organisations
IROB3707 History and Philosophy of Industrial Relations Research
IROB3721 Negotiation, Bargaining and Advocacy
IROB3724 Strategic Human Resource Management
IROB3728 Managing Pay & Performance
IROB3729 Managing Workplace Training

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

IROB1701 Industrial Relations
IROB1702 Labour Organisation
IROB2702 Industrial Law
IROB3708 Philosophy and Research Methods in Employment and Management*

**IROB3708 is a prerequisite for Year 4 Honours and should normally be taken in the session preceding the Honours year.*

Year 4

Required

IROB4731 Case Studies A
IROB4732 Case Studies B
IROB4733 Honours Seminar
IROB4734 Thesis (Industrial Relations)

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
INFS3621 Alternative System Design Methodologies
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
INFS4812 Software Engineering Management
INFS4848 Information Systems Project Management
INFS4853 Information Systems Management
INFS4857 Information and Decision Technology
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
INFS3621 Alternative System Design Methodologies
INFS3622 Distributed Application Design and Implementation
INFS3623 Multimedia Systems Design
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
INFS4812 Software Engineering Management
INFS4848 Information Systems Project Management
INFS4853 Information Systems Management
INFS4857 Information and Decision Technology
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.*

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 IBUS1101 & IBUS1102 plus 2 IBUS Options (excluding language options).

Required

IBUS1101 Global Business Environment
IBUS1102 Managing Across Cultures
IBUS2101 International Business and Multinational Operations
IBUS3101 International Business Strategy
IBUS3102 Asia-Pacific Business

Options

At least one option must be chosen from List A

List A

IBUS2103 Comparative Management Systems in East Asia
IBUS2104 International Business Negotiation and Alliance Management
IBUS2105 Chinese Business Enterprise

List B

IBUS1001 Communicating in Business
ECON2105 Economics of Corporations
ECON2111 Globalisation
ECON2321 Growth and Development of International Business
ECON2322 European Integration
FINS1612 Capital Markets and Institutions
FINS2622 Emerging Capital Markets
LEGT1732 Franchising
LEGT2791 International Business Law
IROB2703 International Employment Relations
JAPN1000 Japanese Communication 1A†

Note: 1. Other modern languages may be taken as List B options: please see Modern Languages stream.

†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.

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

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
IBUS1102 Managing Across Cultures
IROB2703 International Employment Relations
IROB2718 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
LEGT1730 Business, Ethics & the Law

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
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 1

ACCT1501 Accounting and Financial Management 1A (core)
ECON1101 Microeconomics (core)
ECON1202 Quantitative Methods A (core)
MARK1012 Marketing Fundamentals (core)

Session 2

ACCT1511 Accounting and Financial Management 1B (core)
ECON1102 Macroeconomics (core)
ECON1203 Quantitative Methods B (core)
ELECTIVE 1

Year 2

Session 1

MARK2999 Industrial Training 1 (core)
MARK2051 Consumer Behaviour (core)
MARK2052 Market Research (core)

Session 2

MARK2953 Marketing Communications & Promotions Management (core)
MARK2054 Market Analysis (core)
ELECTIVE 2
6 UOC of General Education

Year 3

Session 1

MARK3081 Distribution Strategy & Retail Channels (core)
ELECTIVE 3
ELECTIVE 4
ELECTIVE 5

Session 2

MARK3999 Industrial Training 2 (core)
ELECTIVE 6

Year 4

Session 1

MARK4999 Industrial Training 3 (core)
6 UOC of General Education

Session 2

MARK3082 Strategic Marketing Management (core)
ELECTIVE 7
ELECTIVE 8
ELECTIVE 9

Taxation

This program is not available as a single major, but as a co-major only. This program is not available with the co-major in Business Law.

Required Course

LEGT1711 Legal Environment of Commerce
LEGT2721 Business Transactions
LEGT3741 Business Entities
LEGT3751 Business Taxation

Options

Three courses from the following list:

LEGT3755	Taxation of Business Entities
LEGT3752	Capital Gains Tax
LEGT3753	Goods and Services Tax
LEGT3754	Tax Policy and Administration
LEGT3756	International Business Taxation
LEGT3757	Corporate Law, Tax and Strategy
LEGT4722	Special Topic in Taxation

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.

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.

Tourism and Hospitality Management (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 Marketing, Tourism and Hospitality Management degree (program code 3571).

Required

TAHM1666	Tourism & Hospitality 1 Operational Studies
TAHM1777	Tourism & Hospitality 2 Operational Studies
TAHM2001	Tourism Policy & Planning 1
TAHM2002	Tourism Marketing
TAHM2888	Applied Tourism & Hospitality Management
TAHM3001	Legal Aspects of Tourism
TAHM3002	Tourism & Hospitality Operations Management
TAHM3003	Tourism Policy & Planning 2
TAHM3004	Managing People in the Tourism & Hospitality Industry
TAHM3888	Applied Tourism & Hospitality Management 2
TAHM4001	Customer Experience Management
TAHM4002	Project Report in Tourism & Hospitality
TAHM4003	Strategic Management in Tourism & Hospitality
TAHM4888	Applied Tourism & Hospitality Management 3

During the first two sessions candidates will undertake a Diploma in Hospitality and Tourism Operations at Kenvale College, usually one day per week for each session. A course fee is payable.

Sample program for Marketing, Tourism and Hospitality Management students:

Program Structure*

Stage 1

Session 1	**Session 2**
ACCT1501	ECON1102
ECON1101	ECON1203
ECON1202	MARK1012
TAHM1666	TAHM1777

Stage 2

Session 1	**Session 2**
ACCT1511	MARK2053
MARK2051	TAHM2002
TAHM 2001	TAHM2888
ECON2117	OPTION

Stage 3

Session 1	**Session 2**
MARK2052	MARK2054
TAHM3001	TAHM3003
TAHM3002	TAHM3004
OPTION	TAHM3888

Stage 4

Session 1	**Session 2**
MARK3081	MARK3082
TAHM4001	TAHM4003
THAM4002	TAHM4888
OPTION	OPTION

12 units from the Options in Stage 2 (Session 2) and Stage 3 (Session 1) should be approved General Education courses

**Available only as a co-major integrated program with Marketing*

A Message from the Dean

This Handbook provides descriptions of the undergraduate programs offered by the Faculty of Engineering at UNSW.

The Faculty comprises the Schools of Chemical Engineering and Industrial Chemistry, Civil and Environmental Engineering, Computer Science and Engineering, Electrical Engineering and Telecommunications, Mechanical and Manufacturing Engineering, Mining Engineering, Petroleum Engineering, Surveying and Spatial Information Systems, the Centre for Photovoltaic Engineering and the Graduate School of Biomedical Engineering. The Faculty has several research centres and is actively engaged with nine Cooperative Research Centres (CRCs) and with the new National Centre of Excellence in Information, Communication and Technology.

The Faculty of Engineering is dedicated to scholarship, teaching and research in technology and its application for the benefit of the community. The Schools of the Faculty offer undergraduate programs leading to the award of the Bachelor of Engineering (BE). There are also numerous combined programs leading to the award of the BE in combination with the BSc, BA and LLB degrees and concurrent programs for the BE and the Master of Biomedical Engineering as well as 'fast-track' programs leading to the Master of Engineering Science following an Engineering undergraduate program.

Engineering education at UNSW is directed at producing true professionals who can tackle major problems and work in all countries of the world. Creative, managerial, communication and personal skills are developed alongside studies in mathematics, science and the technical disciplines.

Students are able to take part in major student-led projects and are strongly encouraged to play an active part in all that the University has to offer.

Brendon Parker
Dean
Faculty of Engineering

Faculty of Engineering

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School of Computer Science and Engineering

Program Outlines

School of Electrical Engineering and Telecommunications

Program Outlines

School of Mechanical and Manufacturing Engineering (incorporating Aerospace Engineering, Mechatronic Engineering and Naval Architecture)

Program Outlines

School of Mining Engineering

Program Outlines

School of Petroleum Engineering

Program Outlines

School of Surveying and Spatial Information Systems

Program Outlines

Graduate School of Biomedical Engineering

Concurrent Degree Programs

Centre for Photovoltaic Engineering

Program Outlines

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 book**,** which includes session/s offered, 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 Virtual Handbook at **www.student.unsw.edu.au/handbook** or visit the Faculty website and refer to the relevant school.

Some People Who Can Help You

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 Cindy Fuller, School Office, Electrical Engineering Building
Tel: (02) 9385 4000

School of Mechanical and Manufacturing Engineering
Dr John Challen, Room 107, Mechanical and Manufacturing Engineering Building
Tel: (02) 9385 4154

School of Mining Engineering
Dr P 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 Surveying and Spatial Information Systems
Mr Leon Daras, School Office, Room 426, Electrical Engineering Building
Tel: (02) 9385 4182

Graduate School of Biomedical Engineering
Ms Dorothy Wilmshurst, 5th Floor, Samuels Building
Tel: (02) 9385 3917

Centre for Photovoltaic Engineering
Ms Lisa Cahill, Room 128, Electrical Engineering Building
Tel: (02) 9385 6155

Important: As changes may be made to information provided in this Handbook, students should frequently consult the noticeboards of the schools and the official noticeboards of the University.

The Faculty of Engineering Website

Please refer to the Faculty website for further information: **www.eng.unsw.edu.au**

Entrance Requirements

Students 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.

General Education Requirements

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.

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.

Re-enrolment Procedures

All current students are able to re-enrol via the web using *NewSouth Student Online*. 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 2004 using the *New South Student Online* will be carried on the enrolled students' web page: **www.student.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

Centre for Excellence in Advanced Silicon Photovoltaics and Photonics

Director: Scientia Professor Stuart Wenham

In 2003 the Centre for 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. 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 (02) 8923 7100, website **www.ieaust.org.au**

2. The Institution of Surveyors, 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 body which represents them: the Institution of Surveyors, Australia. The aims of the Institution 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 Institution, *The Australian Surveyor* 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 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, website **www.isaust.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**

Program and Course Information
Summary of Programs

Full-time Programs

The Faculty of Engineering offers the following full-time undergraduate programs:

Bachelor of Engineering BE

in:	
Aerospace Engineering	3710
Bioinformatics Engineering	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

Bachelor of Science (Technology) BSc(Tech)

Chemical Engineering	3050
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
Photovoltaics and Solar Energy	3655
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 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 Engineering Master of Engineering or Master of Science

Bachelor of Science Bachelor of Science BSc BSc

(4 years duration) in:	
Computer Science	3983

Admission Guidelines: An applicant for the BE ME or BE MSc program should, at the time of application, be enrolled in the 4.5 years 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 years (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.

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
Environmental Engineering	3625
Electrical Engineering	3640
Industrial Chemistry	3100
Manufacturing Engineering & Management	3710
Mechanical Engineering	3710
Mechatronic Engineering	3710
Mining Engineering	3140
Photovoltaics and Solar Energy	3642
Surveying and Spatial Information Systems	3741
Telecommunications	3643
Software Engineering	3648

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 this program. 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

(5 years duration) in:

Chemical Engineering	3048
Computer Engineering	3728
Electrical Engineering	3727
Materials Science	3138
Mechanical Engineering	3683
Mechatronic Engineering	3688
Telecommunications	3723
Software Engineering	3749

Other Engineering Programs at UNSW

For further information please refer to the Faculty of Science section of this Handbook.

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 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 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).

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 combined 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 HECS/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 Information 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 each program revision students are assessed on the basis of the new program but retain credit for any course already completed and are not liable for the increased requirements if progression is normal.

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 provides a Bachelor of Engineering in Chemical Engineering and a Bachelor of Engineering in Industrial Chemistry. Both degrees are four year full-time programs degrees accredited by the Institution of Engineers Australia; the BE in Chemical Engineering is also accredited by the Institution of Chemical Engineers (UK).

Combined degrees are also available for suitably qualified students. The BE BSc (Computer Science) provides accredited degrees in Chemical Engineering and Industrial Chemistry plus professional skills in computing. Combined programs Chemical Engineering/ Bachelor of Arts (3043) and Industrial Chemistry/ Bachelor of Arts (3103) are also available and allow students to combine their professionally accredited Chemical Engineering or Industrial Chemistry degree with their choice of an Arts major. 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. The concurrent degree program BE MBiomedE allows advanced standing in the Masters of Biomedical Engineering.

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 are applied scientists, some of whom are engaged in solving problems in forefront research areas, while others are responsible for the successful operations of Australia's chemical industry. Industrial chemists analyse raw materials, apply computers to the simulation and control of chemical plant and verify the quality of the product. A particularly important activity is the control and management of the environment of industrial processes. Industrial chemists are capable of fulfilling a multiplicity of roles as research scientists, development chemists, technical representatives and as plant/company managers.

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. 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.

Program Outlines

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 J H Perry (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 completed 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.

3040 Chemical Engineering – Full-time Program

Bachelor of Engineering BE

This program extends over four years and students study full-time during the day for 28 weeks of each year (excluding examination and recess periods).

Successful completion of the BE 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.

The Director of Teaching and Learning may approve various program patterns involving full-time or part-time study.

This program can form part of combined degrees with BE (Chem Eng) BSc (Comp Sci), BE (Chem Eng) MBiomedE, BE (Chem Eng) BA and also BE MEngSc. See below for more details or contact Director, Teaching and Learning.

		HPW		UOC
Stage1		**S1**	**S2**	
CEIC1010	Introduction to the Chemical Industry	3	-	3
CEIC1020	Introduction to Chemical Engineering	-	6	6
CHEM1011	Fundamentals of Chemistry 1A	6	-	6
CHEM1021	Fundamentals of Chemistry 1B	-	6	6
MATH1131	Mathematics 1A	6	-	6
MATH1231	Mathematics 1B	-	6	6
MECH0130	Engineering Drawing and Solid Modelling	3	-	3
PHYS1169	Engineering Physics 1 *or*			
PHYS1111	Fundamentals of Physics*	6	-	6
CEIC1030	Communications and Business Skills *or*			
PHYS1229	Concepts in Engineering Physics	-	6	6
**If when required PHYS1111 is taken, PHYS1229 MUST be taken in S2*				
Total	**HPW Session 1**	**24**		
	HPW Session 2		**24**	
	Units of credit			**48**
Stage 2				
CEIC2011	Instrumental Analysis – Theory	3	-	3
CEIC2012	Instrumental Analysis – Practical	-	3	3
CEIC2020	Introduction to Numeric Methods	3	-	3
CEIC2110	Material and Energy Balances	3	-	3
CEIC2120	Fluid Flow	3	-	3
CEIC2130	Heat Transfer	-	3	3
CHEN2050	Chemical Engineering Practice 1	-	3	3
CHEN2061	Introduction to Process Chemistry 1	6	-	6
CHEN2062	Introduction to Process Chemistry 2	-	3	3
CHEN2140	Mass Transfer	-	3	3
ELEC0809	Electrical Engineering1C	2	-	3
MATH2020	Mathematics 2A	2	-	3
MATH2030	Mathematics 2B	-	2	3
MATH2899	Applied Statistics CE	-	3	3
	General Education	-	2	3
Total	**HPW Session 1**	**22**		
	HPW Session 2		**22**	
	Units of credit			**48**

		HPW		UOC
Stage 3		**S1**	**S2**	
BIOT3100	Fermentation Processes	-	2	3
CEIC3070	Process Control	-	4	4
CEIC3010	Reaction Engineering	-	3	4
CEIC3110	Thermodynamics	3	-	3
CHEN3021	Systems Modelling and Analysis	2	-	3
CHEN3022	Process Modelling and Optimisation	-	3	3
CHEN3031	Advanced Transport Phenomena	-	3	3
CHEN3062	Unit Ops & Pressure Vessels	6	-	6
CHEN3065	Plant & Equipment Design	-	4	4
CHEN3067	Process Design & Economics	3	-	3
CHEN3068	Process Design & Safety	-	3	3
CHEN3080	Chemical Engineering Practice 2	3	-	3
	General Education course/s	4	-	6
Total	**HPW Session 1**	**21**		
	HPW Session 2		**22**	
	Units of credit			**48**
Stage 4				
CEIC4070	Automation Science	3	-	4
CEIC4101	Professional Electives Advanced	-	3	3
CEIC4102	Professional Electives Extended	3	-	3
CEIC4106	Professional Elective – Extended	-	3	3
CEIC4120	Management and Plant Operation	-	5	6
CHEN4031	Environmental Management 1	3	-	3
CHEN4081	Design Project	6	-	8
CHEN4091	Research Project Theory	3	-	3
CHEN4092	Research Project Practice	-	10	12
	General Education course/s	2	-	3
Total	**HPW Session 1**	**20**		
	HPW Session 2		**21**	
	Units of credit			**48**

3042 Chemical Engineering/Bachelor of Science (Computer Science)

Bachelor of Engineering Bachelor of Science in Computer Science BE BSc

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. 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.

		HPW		UOC
Stage 1		**S1**	**S2**	
CEIC1020	Introduction to Chemical Engineering	-	6	6
CHEM1011	Fundamentals of Chemistry 1A	6	-	6
CHEM1021	Fundamentals of Chemistry 1B	-	6	6
COMP1011	Computing 1A	6	-	6
COMP1021	Computing 1B	-	6	6
MATH1131	Mathematics 1A	6	-	6
MATH1231	Mathematics 1B	-	6	6
PHYS1169	Physics 1 (Chem & Mech Eng) *or*			
PHYS1111	Fundamentals of Physics	6	-	6
Total	**HPW Session 1**	**24**		
	HPW Session 2		**24**	
	Units of credit			**48**
Stage 2				
CEIC2011	Instrumental Analysis – Theory	3	-	3
CEIC2110	Material and Energy Balances	3	-	3
CEIC2120	Fluid Flow	3	-	3
CEIC2130	Heat Transfer	-	3	3
CHEN2050	Chemical Engineering Practice 1	-	3	3
CHEN2061	Introduction to Process Chemistry 1	6	-	6
CHEN2062	Introduction to Process Chemistry 2	-	3	3
CHEN2140	Mass Transfer	-	3	3
COMP2011	Data Organisation	5	-	6
MATH2020	Mathematics 2A	2	-	3
MATH2030	Mathematics 2B	-	2	3
MATH1081	Discrete Maths	-	6	6
MATH2899	Applied Statistics CE	-	3	3
Total	**HPW Session 1**	**22**		
	HPW Session 2		**23**	
	Units of credit			**48**

		HPW		UOC
Stage 3		**S1**	**S2**	
CEIC3070	Process Control	-	4	4
CEIC3010	Reaction Engineering	-	3	4
CEIC3110	Thermodynamics	3	-	3
CEIC4103	Professional Elective	3	-	3
CHEN3021	Systems Modelling and Analysis	2	-	3
CHEN3022	Process Modelling and Optimisation	-	3	3
CHEN3031	Advanced Transport Phenomena	-	3	3
CHEN3062	Unit Ops & Pressure Vessels	6	-	6
CHEN3065	Plant & Equipment Design	-	4	4
CHEN3080	Chemical Engineering Practice 2	3	-	3
COMP2021	Digital Systems Structures	5	-	6
COMP2041	Software Construction: Techniques and Tools	-	5	6
Total	**HPW Session 1**	**22**		
	HPW Session 2		**22**	
	Units of credit			**48**
Stage 4				
CEIC2012	Instrumental Analysis-Practical	-	3	3
CEIC4104	Professional Elective Extended	3	-	3
CHEN3067	Process Design & Economics	3	-	3
CHEN3068	Process Design & Safety	-	3	3
COMP	Computing Elective	5	-	6
COMP	2 x Computing Electives	5	5	12
COMP	2 x Computing Electives	5	5	12
	Elective Course#	-	6	6
Total	**HPW Session 1**	**21**		
	HPW Session 2		**22**	
	Units of credit			**48**
Stage 5				
CEIC4070	Automation Science	3	-	4
CEIC4101	Professional Electives Advanced	3	-	3
CEIC4102	Professional Electives Extended	-	3	3
CEIC4106	Professional Elective Extended	-	3	3
CEIC4120	Management and Plant Operation	-	5	6
CHEN4031	Environmental Management 1	3	-	3
CHEN4081	Design Project	6	-	8
CHEN4091	Research Project Theory	3	-	3
CHEN4092	Research Project Practice	-	10	12
	Elective Course#	2	-	3
#Either Computer Science or Chemical Engineering/Industrial Chemistry				
Total	**HPW Session 1**	**20**		
	HPW Session 2		**21**	
	Units of credit			**48**

3048 Chemical Engineering/Master of Biomedical Engineering – Full-time Program

Bachelor of Engineering Master of Biomedical Engineering
BE MBiomedE

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.

		HPW		UOC
Stage 1		**S1**	**S2**	
BIOM1001	Professional Biomedical Studies	2	-	3
BIOM9010	Biomedical Engineering Practice	-	2	3
CEIC1020	Introduction to Chemical Engineering	-	6	6
CHEM1011	Fundamentals of Chemistry 1A	6	-	6
CHEM1021	Fundamentals of Chemistry 1B	-	6	6
MATH1131	Mathematics 1A	6	-	6
MATH1231	Mathematics 1B	-	6	6
MECH1030	Engineering Drawing and Solid Modelling	3	-	3
PHYS1169	Physics for Engineering	6	-	6
	General Education	-	2	3
Total	**HPW Session 1**	**23**		
	HPW Session 2		**22**	
	Units of credit			**48**
Stage 2				
BIOM9XXX	Biomed Eng Elective	-	3	6
CEIC2011	Instrumental Analysis – Theory	3	-	3
CEIC2012	Instrumental Analysis – Practical	-	3	3
CEIC2020	Introduction to Numeric Methods	3	-	3
CEIC2110	Material and Energy Balances	3	-	3
CEIC2120	Fluid Flow	3	-	3
CEIC2130	Heat Transfer	-	3	3
CHEN2050	Chemical Engineering Practice 1	-	3	3
CHEN2061	Introduction to Process Chemistry 1	6	-	6
CHEN2062	Introduction to Process Chemistry 2	-	3	3
CHEN2140	Mass Transfer	-	3	3
ELEC0809	Electrical Engineering 1C	2	-	3
MATH2020	Engineering Mathematics 2A	2	-	3
MATH2030	Engineering Mathematics 2B	-	2	3
Total	**HPW Session 1**	**22**		
	HPW Session 2		**21**	
	Units of credit			**48**
Stage 3				
BIOM9420	Clinical Laboratory Science	3	-	6
BIOT3100	Fermentation Processes	-	3	3
CEIC3070	Process Control	-	4	4
CEIC3010	Reaction Engineering	-	3	4
CEIC3110	Thermodynamics	3	-	3
CHEN3021	Systems Modelling and Analysis	2	-	3
CHEN3022	Process Modelling and Optimisation	-	3	3
CHEN3031	Advanced Transport Phenomena	-	3	3
CHEN3062	Unit Ops & Pressure Vessels	6	-	6
CHEN3065	Plant Equipment & Design	-	4	4
CHEN3080	Chemical Engineering Practice 2	3	-	3
MATH2899	Applied Statistics CE	-	3	3
	General Education	2	-	3
Total	**HPW Session 1**	**19**		
	HPW Session 2		**23**	
	Units of credit			**48**
Stage 4				
BIOM5930	Research Project A	-	3	6
BIOM9XXX	Biomedical Engineering Elective	-	3	6
BIOM9XXX	Biomedical Engineering Elective	3	-	6
BIOM9XXX	Biomedical Engineering Elective	3	-	6
CEIC4130	Plant Operation	-	3	3
CHEN3067	Process Design & Economics	3	-	3
CHEN3068	Process Design & Safety	-	3	3
CEIC4104	Professional Elective Extended	3	-	3
PHPH2101	Physiology 1A	6	-	6
PHPH2201	Physiology 1B	-	6	6
Total	**HPW Session 1**	**18**		
	HPW Session 2		**18**	
	Units of credit			**48**
Stage 5				
BIOM5002	Research Project B	4	-	9
BIOM9913	Masters Thesis *or* 2 Biomedical Electives	-	6	12
BIOM9XXX	Biomedical Engineering Elective	-	3	6
BIOM9410	Regulatory Requirements for Biomedical Technology	-	3	6
CEIC4070	Automation Science	3	-	4
CHEN4031	Environmental Management	3	-	3
CHEN4081	Design Project	6	-	8
Total	**HPW Session 1**	**16**		
	HPW Session 2		**12**	
	Units of credit			**48**
Biomedical Electives				
Preferred electives				
BIOM9311	Mass Transfer in Medicine	-	3	6
BIOM9321	Physiological Fluid Mechanics	-	3	6
BIOM9332	Biocompatibility	-	3	6
BIOM9613	Medical Instrumentation	3	-	6
BIOM9440	Biomedical Practical Measurement	-	3	6
Other electives				
BIOM9027	Medical Imaging	-	3	6
BIOM9060	Biomedical Systems Analysis	3	-	6

		HPW S1	HPW S2	UOC
BIOM9450	Clinical Information Systems	-	3	6
BIOM9601	Biomed Applic of Microcomputers 1	3	-	6
BIOM9602	Biomed Applic of Microcomputers 2	-	3	6
BIOM9541	Mechanics of the Human Body	3	-	6
BIOM9621	Biological Signal Analysis	3	-	6
BIOM9551	Biomechanics of Physical Rehabilitation	3	-	6
BIOM9701	Dynamics of Cardiovascular System	3	-	6
ANAT2511	Fundamentals of Anatomy	-	6	6

3040 Chemical Engineering/Master of Engineering Science – Full-time Program – Plan CEICLI3040

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 24 each stage

Stage 4		HPW S1	HPW S2	UOC
CEIC4070	Automation Science	3	-	4
	Selected Postgraduate Course	3	-	6
	Selected Postgraduate Course	-	3	6
CEIC4120	Management and Plant Operation	-	5	6
CHEN4031	Environmental Management 1	3	-	3
CHEN4081	Design Project	6	-	8
CHEN4091	Research Project Theory	3	-	3
CEIC4095	Special Research Project Practice	-	9	9
	General Education	-	2	3
Total	**HPW Session 1**	**18**		
	HPW Session 2		**19**	
	Units of credit			**48**
Stage 5 (Summer Semester)				
CEIC8320	Graduate Thesis	6	-	12
Stage 5 (Session 1)				
	Selected Postgraduate Course	3	-	6
	Selected Postgraduate Course	3	-	6
	Selected Postgraduate Course	3	-	6
	Selected Postgraduate Course	3	-	6
Total	**HPW Summer Semester**	**6**		
	HPW Session 1		**12**	
	Units of credit (Summer Semester)			**12**
	Units of credit (Session 1)			**24**

3100 Industrial Chemistry – Full-time Program

Bachelor of Engineering BE

Industrial Chemistry is a four-year professional (prescribed) 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 the combined degree programs BE (Ind Chem) / BSc (Comp Sci), BE (Ind Chem) / BA. See below for more details or contact the Director, Teaching and Learning.

Stage 1		HPW S1	HPW S2	UOC
CEIC1010	Introduction to the Chemical Industry	3	-	3
CEIC1020	Introduction to Chemical Engineering	-	6	6
CHEM1011	Fundamentals of Chemistry 1A	6	-	6
CHEM1021	Fundamentals of Chemistry 1B	-	6	6
MATH1131	Mathematics 1A	6	-	6
MATH1231	Mathematics 1B	-	6	6
MECH0130	Engineering Drawing and Solid Modelling	3	-	3
PHYS1169	Engineering Physics* *or*			
PHYS1111	Fundamentals of Physics	6	-	6
CEIC1030	Communications and Business Skills *or*			
PHYS1229	Concepts in Engineering Physics	-	6	6

**If when required PHYS1111 is taken, PHYS1229 must be taken in S2*

Total	**HPW Session 1**	**24**		
	HPW Session 2		**24**	
	Units of credit			**48**
Stage 2				
CEIC2011	Instrumental Analysis – Theory	3	-	3
CEIC2012	Instrumental Analysis – Practical	-	3	3
CEIC2020	Introduction to Numeric Methods	3	-	3
CEIC2110	Material and Energy Balances	3	-	3
CEIC2120	Fluid Flow	3	-	3
CEIC2130	Heat Transfer	-	3	3
CHEM2021	Organic Chemistry	-	6	6
CHEM2839	Inorganic Chemistry	-	6	6
INDC2040	Physical Process Chemistry	6	-	6
MATH2020	Mathematics 2A	2	-	3
MATH2030	Mathematics 2B	-	2	3
MATH2899	Applied Statistics CE	-	3	3
	General Education	2	-	3
Total	**HPW Session 1**	**22**		
	HPW Session 2		**23**	
	Units of credit			**48**
Stage 3				
BIOT3100	Fermentation Processes	-	2	3
CEIC3070	Process Control	-	4	4
CEIC3010	Reaction Engineering	-	3	4
CEIC3110	Thermodynamics	3	-	3
CHEM3829	Organic Chemistry	6	-	6
INDC3051	Process Chemistry and Operations	-	4	4
INDC3110	Industrial & Environmental Chemistry	6	-	6
INDC3120	Industrial Chemistry Practice	-	6	6
POLY3011	Polymer Science – Theory	3	-	3
POLY3012	Polymer Science – Practice	-	3	3
	General Education course/s	4	-	6
Total	**HPW Session 1**	**22**		
	HPW Session 2		**22**	
	Units of credit			**48**
Stage 4				
CEIC4070	Automation Science	3	-	4
CEIC4105	Professional Electives Extended	-	3	3
CEIC4120	Management and Plant Operation	-	5	6
INDC4061	Process Design A	4	-	4
INDC4062	Process Design B	4	-	4
INDC4091	Research Project Theory	11	-	12
INDC4092	Research Project Practice	-	12	12
	General Studies	-	2	3
Total	**HPW Session 1**	**22**		
	HPW Session 2		**22**	
	Units of credit			**48**

3102 Industrial Chemistry/Bachelor of Science (Computer Science) – Full-time Program

Bachelor of Engineering Bachelor of Science in Computer Science

BE BSc

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 BSc in Computer 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 Institute of Engineers, Australia and the Royal Australian Chemical Institute as sufficient academic qualification for corporate membership.

		HPW		UOC
Stage 1		**S1**	**S2**	
CEIC1020	Introduction to Chemical Engineering	-	6	6
COMP1011	Computing 1A	6	-	6
COMP1021	Computing 1B	-	6	6
CHEM1011	Fundamentals of Chemistry 1A	6	-	6
CHEM1021	Fundamentals of Chemistry 1B	-	6	6
MATH1131	Mathematics 1A	6	-	6
MATH1231	Mathematics 1B	-	6	6
PHYS1169	Physics 1 (Chem & Mech Eng) *or*			
PHYS1111	Fundamentals of Physics	6	-	6
Total	**HPW Session 1**	**24**		
	HPW Session 2		**24**	
	Units of credit			**48**
Stage 2				
CEIC2011	Instrumental Analysis – Theory	3	-	3
CEIC2012	Instrumental Analysis – Practical	-	3	3
CEIC2110	Material and Energy Balances	3	-	3
CEIC2120	Fluid Flow	3	-	3
CEIC2130	Heat Transfer	-	3	3
CHEM2021	Organic Chemistry	-	6	6
COMP2011	Data Organisation	5	-	6
INDC2040	Physical Process Chemistry	6	-	6
MATH2020	Mathematics 2A	2	-	3
MATH2030	Mathematics 2B	-	2	3
MATH1081	Discrete Maths	-	6	6
MATH2899	Applied Statistics CE	-	3	3
Total	**HPW Session 1**	**22**		
	HPW Session 2		**23**	
	Units of credit			**48**
Stage 3				
CEIC3070	Process Control	-	4	4
CEIC3010	Reaction Engineering	-	3	4
CEIC3110	Thermodynamics	3	-	3
CEIC4103	Professional Electives Extended	2	-	3
CHEM2031	Inorganic Chemistry and Structure	6	-	6
COMP2021	Digital Systems Structures	5	-	6
COMP2041	Software Construction: Techniques and Tools	-	5	6
INDC3051	Process Chemistry and Operations	-	4	4
INDC3110	Industrial & Environmental Chemistry	6	-	6
INDC3120	Industrial Chemistry Practice	-	6	6
Total	**HPW Session 1**	**22**		
	HPW Session 2		**22**	
	Units of credit			**48**
Stage 4				
CEIC4101	Professional Electives Advanced	-	3	3
CEIC4102	Professional Electives Extended	3	-	3
COMP	Computing Elective	5	-	6
COMP	2 x Computing Electives	5	5	12
COMP	2 x Computing Electives	5	5	12
POLY3011	Polymer Science – Theory	3	-	3
POLY3012	Polymer Science – Practice	-	3	3
	Elective Course#	-	6	6
#Either Computer Science or Chemical Engineering/Industrial Chemistry				
Total	**HPW Session 1**	**21**		
	HPW Session 2		**22**	
	Units of credit			**48**
Stage 5				
CEIC4070	Automation Science	3	-	4
CEIC4105	Professional Elective Extended	-	3	3
INDC4061	Process Design A	4	-	4
INDC4062	Process Design B	4	-	4
INDC4091	Research Project Theory	11	-	12
INDC4092	Research Project Practice	-	12	12
	Elective Course#	2	3	
#Either Computer Science or Chemical Engineering/Industrial Chemistry				
Total	**HPW Session 1**	**22**		
	HPW Session 2		**22**	
	Units of credit			**48**

3100 Industrial Chemistry/Master of Engineering Science – Full-time Program – Plan CEICL131001

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 24 each stage

		HPW		UOC
Stage 1		**S1**	**S2**	
CEIC4070	Automation Science	3	-	4
CEIC8XXX	Postgraduate Course	3	-	6
CEIC8XXX	Postgraduate Course	-	3	6
CEIC4120	Management and Plant Operation	-	5	6
INDC4061	Process Design A	4	-	4
INDC4062	Process Design B	4	-	4
CEIC4096	Research Project Theory Extended	6	-	6
CEIC4095	Special Research Project Practice	-	9	9
	General Education	-	2	3
Total	**HPW Session 1**	**20**		
	HPW Session 2		**19**	
	Units of credit			**48**
Stage 5 (Summer Semester)				
CEIC8320	Graduate Thesis	6	-	12
Stage 5 (Semester 1)				
CEIC8XXX	Postgraduate Course	3	-	6
CEIC8XXX	Postgraduate Course	3	-	6
CEIC8XXX	Postgraduate Course	3	-	6
CEIC8XXX	Postgraduate Course	3	-	6
Total	**HPW Summer Semester**	**6**		
	HPW Semester 1	**12**		
	Units of credit Summer Semester			**12**
	Units of credit Semester 1			**24**

3043 Chemical Engineering/Bachelor of Arts – Full-time Program

Bachelor of Engineering Bachelor of Arts BE BA

3103 Industrial Chemistry/Bachelor of Arts – Full-time Program

Bachelor of Engineering Bachelor of Arts BE BA

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 Chemical Engineering or Industrial Chemistry 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 Chemical Engineering/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 permission from the Head of School.

The BE BA programs are administered by the School of Chemical Engineering and 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 Chemical Engineering and Industrial Chemistry 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:

Chinese Studies
Education
English
Environmental Studies*
French
German Studies
Modern Greek
History
History and Philosophy of Science
Indonesian Studies
Japanese Studies
Korean Studies
Linguistics
Music
Philosophy
Policy Studies
Politics and International Relations
Portugese Studies
Russian Studies
Science & Technology Studies
Sociology & Anthropology
Spanish & Latin American Studies
Theatre, Film and Dance

** 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 3040 BE or 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 x 48 = 240.

Part-time programs

3050 Chemical Engineering – Part-time Program

Bachelor of Science (Technology) BSc(Tech)

3110 Industrial Chemistry – Part-time Program

Bachelor of Science (Technology) BSc(Tech)

Six year part-time programs leading to the award of the degree of Bachelor of Science (Technology) in Chemical Engineering and in Industrial Chemistry are 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.

School of Civil and Environmental Engineering

Head of School: Professor RI Gilbert
Senior Administrative Officer: Ms KM Irvine
Executive Assistant: Associate Professor B Uy

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 daytime. 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).
- 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

Industrial training is assigned a nominal value of 4 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.

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/**

Program Outlines

3620 Civil Engineering – Full-time Program – Plan CVENA13620

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.

Bachelor of Engineering BE

		HPW S1	HPW S2	UOC
Year 1				
CHEM1011	Fundamentals of Chemistry A or			
CHEM1031	Higher Chemistry C	6	-	6
CVEN1021	Civil Engineering Practice 1A	2	-	4
CVEN1022	Civil Engineering Practice 1B	-	4	6
CVEN1023	Statics	3	-	4
CVEN1024	Dynamics	-	3	4
CVEN1025	Computing	3	-	4
CVEN1026	Engineering Materials 1	-	3	4
MATH1131	Mathematics 1A or			
MATH1141	Higher Mathematics 1A	6	-	6
MATH1231	Mathematics 1B or			
MATH1241	Higher Mathematics 1B	-	6	6
PHYS1279	Physics 1CE	-	4	4
Total	**HPW Session 1**	**20**		
	HPW Session 2		**20**	
	Units of credit			**48**
Year 2				
CVEN2022	Civil Engineering Practice 2	-	2	3
CVEN2023	Mechanics of Solids	3	-	3
CVEN2025	Engineering Computations 1	3	-	3
CVEN2026	Engineering Materials 2	3	-	3
CVEN2125	Systems Engineering	-	2	3
CVEN2126	Engineering Construction 1	3	-	3
CVEN2222	Geotechnical Engineering 1	3	-	3
CVEN2322	Structural Engineering 1	-	6	6
CVEN2525	Introduction to Water Engineering	-	3	3
GMAT0442	Surveying for Civil Engineers	3	-	3
GMAT0491	Survey Camp	-	-	3
MATH2019	Engineering Mathematics 2CE	-	5	6
	General Education	2	2	6
Total	**HPW Session**	**20**		
	HPW Session 2		**20**	
	Units of credit			**48**
Year 3				
CVEN3023	Civil Engineering Practice 3A	2	-	3
CVEN3024	Civil Engineering Practice 3B	-	2	3
CVEN3025	Engineering Computations 2	3	-	3
CVEN3125	Engineering Construction 2	-	3	3
CVEN3126	Engineering Management 1	-	3	3
CVEN3222	Geotechnical Engineering 2	3	-	3
CVEN3223	Geotechnical Engineering 3	-	3	3
CVEN3322	Structural Engineering 2	6	-	6
CVEN3324	Structural Engineering 3	-	3	3
CVEN3438	Transport Planning & Environment	3	-	3
CVEN3448	Transport Engineering	-	3	3
CVEN3526	Water Resources Engineering	3	-	3
CVEN3527	Water Engineering	-	3	3
	General Education	2	2	6
Total	**HPW Session 1**	**22**		
	HPW Session 2		**22**	
	Units of credit			**48**

Year 4 – Session 1

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).

		HPW S1	UOC
CVEN4126	Engineering Management 2	3	3
CVEN4225	Geotechnical Engineering 4	3	3
CVEN4323	Structural Engineering 4	3	3
CVEN4526	Water & Wastewater Treatment	3	3
Plus two of the following three electives			
CVEN4000	Honours Thesis – Part A	4	6
CVEN4027	Civil Engineering Practice 4A	4	6
CVEN4028	Civil Engineering Practice 4B	4	6
CVEN4029	Civil Engineering Practice 4C	4	6
Total	**HPW Session 1**	**20**	
	Units of credit		**24**

Year 4 – Session 2

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.

		HPW	UOC
		S2	
CVEN4001	Honours Thesis – Part B	3	4
Construction and Management Major			
CVEN4139	Advanced Construction & Project Mgmt	3	4
CVEN4149	Professional Level Project Management Tools & Skills	3	4
CVEN4159	Advanced Construction Technology	3	4
Geotechnical Engineering Major			
CVEN4279	Rock and Slope Engineering	3	4
CVEN4289	Site Investigation and Dam Engineering	3	4
CVEN4299	Advanced Topics in Geotechnical Eng	3	4
Structural Engineering Major			
CVEN4339	Design of Bridges	3	4
CVEN4349	Special Topics in Concrete Steel & Composite Structures	3	4
CVEN4359	Structural Analysis & Finite Elements	3	4
Transport Engineering Major			
CVEN4439	Transport Operations & Systems Design	3	4
CVEN4449	Traffic Management & Control	3	4
CVEN4459	Transport & Environment	3	4
Water Engineering Major			
CVEN4539	Advanced Water Quality & Treatment -	3	4
CVEN4549	Advanced Catchment & Coastal Processes -	3	4
CVEN4559	Advanced Water Engineering -	3	4
Total	**HPW Session 1**	**18**	
	Units of credit		**24**

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 subjects 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.

CVENJS 3620 Civil and Structural Engineering Plan

Year 2

replace CVEN2022 with CVEN2032 Civil/Structural Engg Practice 2

Year 3

replace CVEN3023 withCVEN3032 Civil/Structural Engg Practice3A

replace CVEN3024 with CVEN3033 Civil/Structural Engg Practice 3B

Year 4

replace CVEN4526 with CVEN4324 Structural Engineering Case Study

CVEN4339, CVEN4349 and CVEN4359 are compulsory

CVENKS 3620 Civil and Geotechnical Engineering Plan

Year 2

replace CVEN2022 with CVEN2062 Civil/Geotechnical Engg Practice 2

Year 3

replace CVEN3023 with CVEN3062 Civil/Geotechnical Engg Practice 3A

replace CVEN3024 with CVEN3063 Civil/Geotechnical Engg Practice 3B

Year 4

replace CVEN4526 with CVEN4226 Engineering Geology and Geotechnical Models

CVEN4279, CVEN4289 and CVEN4289 are compulsory

CVENLS 3620 Civil Engineering and Project Management Plan

Year 2

same as CVENA1 3620

Year 3

replace CVEN3023 with CVEN3012 Civil Engg and Project Management Practice 3A

replace CVEN3024 with CVEN3013 Civil Engg 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

CVENMS 3620 Civil and Transport Engineering Plan

Year 2

same as CVENA1 3620

Year 3

replace CVEN3023 with CVEN3042 Civil/Transport Engg Practice 3A

replace CVEN3024 with CVEN3043 Civil/Transport Engg Practice 3B

Year 4

replace CVEN4526 with CVEN4421 Transport Engineering 2

CVEN4439, CVEN4449 and CVEN4459 are compulsory

CVENNS 3620 Civil, Water and Coastal Engineering Plan

Year 2

replace CVEN2022 with CVEN2052 Civil/Water Engg 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

3625 Environmental Engineering – Full-time Program – Plan CVENB13625

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.

Bachelor of Engineering BE

		HPW		UOC
Year 1		**S1**	**S2**	
CHEM1011	Fundamentals of Chemistry A *or*			
CHEM1031	Higher Chemistry C	6	-	6
CVEN1023	Statics	3	-	4
CVEN1024	Dynamics	-	3	4
CVEN1025	Computing	3	-	4
CVEN1026	Engineering Materials 1	-	3	4
CVEN1531	Intro to Water & Atmospheric Chemistry	-	4	4
CVEN1721	Environmental Engineering Practice 1A	2	-	4
CVEN1722	Environmental Engineering Practice 1B	-	4	6
MATH1131	Mathematics 1A *or*			
MATH1141	Higher Mathematics 1A	6	-	6
MATH1231	Mathematics 1B *or*			
MATH1241	Higher Mathematics 1B	-	6	6
Total	**HPW Session 1**	**20**		
	HPW Session 2		**20**	
	Units of credit			**48**
Year 2				
BIOS1101	Evolutionary & Functional Biology	-	5	6
CEIC0010	Mass Transfer & Materials Balance	3	-	3
CVEN2023	Mechanics of Solids	3	-	3
CVEN2025	Engineering Computations 1	3	-	3
CVEN2125	Systems Engineering	-	2	3
CVEN2222	Geotechnical Engineering 1	3	-	3
CVEN2525	Introduction to Water Engineering	-	3	3
CVEN2722	Environmental Engineering Practice 2	-	2	3
GEOS1711	Planet Earth: Environment in Crisis	3	-	3
GMAT0753	Introduction to Spatial Info Systems	2	-	3
INDC4120	Chemistry of the Industrial Environment	3	-	3
MATH2019	Engineering Mathematics 2CE	-	5	6
	General Education	2	2	6
Total	**HPW Session**	**22**		
	HPW Session 2		**19**	
	Units of credit			**48**

		HPW		UOC
Year 3		**S1**	**S2**	
BIOS3301	Population and Community Ecology for Environmental Engineers	-	3	3
CEIC0050	Atmospheric Process Chemistry	3	-	3
CVEN3025	Engineering Computations 2	3	-	3
CVEN3126	Engineering Management 1	-	3	3
CVEN3222	Geotechnical Engineering 2	3	-	3
CVEN3223	Geotechnical Engineering 3	-	3	3
CVEN3438	Transport Planning & the Environment	3	-	3
CVEN3526	Water Resources Engineering	3	-	3
CVEN3527	Water Engineering	-	3	3
CVEN3531	Principles & Applns of Aquatic Chemistry	-	3	3
CVEN3723	Environmental Engineering Practice 3A	2	-	3
CVEN3724	Environmental Engineering Practice 3B	-	2	3
CVEN3725	Waste Management	3	-	3
CVEN3726	Environmental Policy, Law & Economics	-	3	3
	General Education	2	2	6
Total	**HPW Session 1**	**22**		
	HPW Session 2		**22**	
	Units of credit			**48**

Year 4 – Session 1

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).

		HPW	UOC
		S1	
CVEN4126	Engineering Management 2	3	3
CVEN4225	Geotechnical Engineering 4	3	3
CVEN4526	Water & Wastewater Treatment	3	3
CVEN4533	Transport & Fate of Pollutants	3	3
Plus two of the following three electives			
CVEN4000	Honours Thesis – Part A	4	6
CVEN4727	Environmental Engineering Practice 4A	4	6
CVEN4728	Environmental Engineering Practice 4B	4	6
CVEN4729	Environmental Engineering Practice 4C	4	6
Total	**HPW Session 1**	**20**	
	Units of credit		**24**

Year 4 – Session 2

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.

		HPW	UOC
		S2	
CVEN4001	Honours Thesis Part B	3	4
Geotechnical Engineering Major			
CVEN4269	Environmental Geotechnics	3	4
CVEN4289	Site Investigation and Dam Engg	3	4
Plus one of the following two electives			
CVEN4279	Rock and Slope Engineering	3	4
CVEN4299	Advanced Topics in Geotechnical Engg	3	4
Transport Engineering Major			
CVEN4439	Transport Operations & Systems Design	3	4
CVEN4449	Traffic Management & Control	3	4
CVEN4459	Transport & Environment	3	4
Water Engineering Major			
CVEN4539	Advanced Water Quality & Treatment	3	4
CVEN4549	Adv'd Catchment & Coastal Processes	3	4
CVEN4569	Advanced Environmental Systems	3	4
Chemical Engineering Major			
CEIC3070	Process Control	4	4
CEIC3010	Reaction Engineering	3	4
CHEN2062	Process Chemistry	3	4
Geography Major			
Any two of the following three subjects			
GEOS3731	Catchment and Coastal Geomorphology	4	6
GEOS3761	Environmental Change	4	6
GEOH3921	Coastal Resource Management	4	6
Total	**HPW Session 1**	**18**	
	Units of credit		**24**

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 CVENBS 3625 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 subjects in Years 1 to 3 of the BE program) are ineligible to continue in the plan must transfer into and complete the standard Year 4 of the academic plan CVENB1 3625.

CVENPS 3625 Environmental and Geotechnical Engineering Plan

Year 2

replace CVEN2722 with CVEN2732 Environmental/Geotechnical Engg Practice 2

Year 3

replace CVEN3438 with CVEN3225 Geotechnical Mapping and Logging

replace CVEN3723 with CVEN3733 Environmental/Geotechnical Engg Practice 3A

replace CVEN3724 with CVEN3734 Environmental/Geotechnical Engg Practice 3B

Year 4

replace CVEN4126 with CVEN4226 Engineering Geology and Geotechnical Models

CVEN4269, CVEN4279 and CVEN4289 are compulsory

CVENQS 3625 Environmental and Transport Engineering Plan

Year 2

same as CVENB1 3625

Year 3

replace CVEN3531 with CVEN3448 Transport Engineering

replace CVEN3723 with CVEN3743 Environmental/Transport Engg Practice 3A

replace CVEN3724 with CVEN3744 Environmental/Transport Engg Practice 3B

Year 4

replace CVEN4126 with CVEN4421 Transport Engineering 2

CVEN4439, CVEN4449 and CVEN4459 are compulsory

CVENRS 3625 Environmental, Water and Waste Engineering Plan

Year 2

replace CVEN2722 with CVEN2752 Environmental/Water Engg Practice 2

Year 3

replace CEIC0050 with CVEN3528 Sustainable Catchment and Coastal Systems

replace CVEN3723 with CVEN3753 Environmental/Water Engg Practice 3A

replace CVEN3724 with CVEN3754 Environmental/Water Engg Practice 3B

Year 4

replace CVEN4126 with CVEN4528 Surf, Water and Groundwater Environments

CVEN4539, CVEN4549 and CVEN4569 are compulsory

Combined Programs

3621 Civil Engineering/Bachelor of Arts – Full-time Program – CVENA13621 and Arts Plan

Bachelor of Engineering Bachelor of Arts BE BA

3626 Environmental Engineering/Bachelor of Arts – Full-time Program – CVENB13626 and Arts Plan

Bachelor of Engineering Bachelor of Arts BE BA

With these combined degree programs, students can add their choice of an Arts program to the standard, professionally accredited Civil Engineering (3621) or Environmental Engineering (3626) programs offered by the School of Civil and Environmental Engineering. They provide flexibility in the choice of courses within the full Arts program and enable students to gain a broad education in Arts and Social Sciences, as well as specialised studies in Civil Engineering or Environmental Engineering.

Because engineering and arts programs can have a common content, such as mathematics and physics, two additional sessions of study are 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 either the Civil Engineering (3620) or 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 or the permission of the Head of School. 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.

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. 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:

Chinese Studies
Education
English
French
German Studies
Modern Greek
History
History and Philosophy of Science
Indonesian Studies
Japanese Studies
Korean Studies
Linguistics
Music
Philosophy
Policy Studies
Politics and International Relations
Portuguese Studies
Russian Studies
Sociology and Anthropology
Spanish & Latin American Studies
Theatre, Film and Dance

3. Except for courses completed as part of the Environmental Studies or 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 or 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 5 x 48 = 240.

3730 Civil Engineering/Bachelor of Science – Full-time Program – CVENA13730 and Science Plan

Bachelor of Engineering Bachelor of Science BE BSc

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 or the permission of the Head of the School of Civil and Environmental Engineering.

Course credits can accrue simultaneously for both component degrees where there is an overlap of courses from the Civil Engineering program and Science program.

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 (3970) 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 the 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 course 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 in regard to choice of courses.

14. A typical structure of a combined Engineering/Science program is set out below. Subject to timetable restrictions, the full range of Science programs is available to Civil Engineering students.

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 of CVEN4027, CVEN4028 or CVEN4029 and Science courses to total at least 12 units of credit in S2 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.

15. The total units of credit in the program is 5 x 48 = 240

3735 Environmental Engineering/Bachelor of Science – Full-time Program – CVENB13735 and Science Plan

Bachelor of Engineering Bachelor of Science BE BSc

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. 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 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 or the permission of the Head of School of Civil and Environmental Engineering.

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.

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 (3970) 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), GEOG1711 (GEOG1721), 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 below. Subject to timetable restrictions, the full range of Science programs is available to Environmental Engineering students.

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.

15. The total units of credit in the program is 5 x 48 = 240.

3631 Civil Engineering/Environmental Engineering – Full-time Program – Plans CVENAD3631 and CVENBD3631

Bachelor of Engineering Bachelor of Engineering BE BE

This program provides students with professional qualifications in areas of great importance to the community and will be 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.

Rules

1. Students must satisfy the normal program and course prerequisites for Environmental Engineering and Civil Engineering.

2. Program Outline

Year 1

Standard Year 1 of Program 3620

Year 2		**UOC**
CHEM1021	Fundamentals of Chemistry B	6
CVEN2023	Mechanics of Solids	3
CVEN2025	Engineering Computations 1	3
CVEN2026	Engineering Materials 2	3
CVEN2126	Engineering Construction 1	3
CVEN2322	Structural Engineering 1	6
CVEN2525	Introduction to Water Engineering	3
GMAT0442	Surveying for Civil Engineers	3
GMAT0491	Surveying Camp	3
GEOG1711	Planet Earth: Environment in Crisis	3
MATH2019	Engineering Mathematics 2CE	6
	General Education	6
Total units of credit		**48**

Year 3

BIOS1101	Evolutionary and Functional Biology	6
CEIC0010	Mass Transfer & Materials Balance	3
CVEN2222	Geotechnical Engineering 1	3
CVEN2022	Civil Engineering Practice 2 *or*	
CVEN2722	Environmental Engineering Practice 2	3
CVEN2125	Systems Engineering	3
CVEN3126	Engineering Management 1	3
CVEN3322	Structural Engineering 2	6
CVEN3324	Structural Engineering 3	3
CVEN3438	Transport Planning & Environment	3
CVEN3448	Transport Engineering	3
CVEN3526	Water Resources Engineering	3
CVEN3527	Water Engineering	3
GMAT0753	Introduction to Spatial Information Systems	3
INDC4120	Chemistry of the Industrial Environment	3
Total units of credit		**48**

Year 4

BIOS3301	Population & Community Ecology for Environmental Engineers	3
CEIC0050	Atmospheric & Process Chemistry	3
CVEN3023	Civil Engineering Practice 3A *or*	
CVEN3723	Environmental Engineering Practice 3A	3
CVEN3024	Civil Engineering Practice 3B *or*	
CVEN3724	Environmental Engineering Practice 3B	3
CVEN3025	Engineering Computations 2	3
CVEN3125	Engineering Construction 2	3
CVEN3222	Geotechnical Engineering 2	3
CVEN3223	Geotechnical Engineering 3	3
CVEN3531	Principles & Applications of Aquatic Chemistry	3
CVEN3725	Waste Management	3
CVEN3726	Environmental Policy, Law & Economics	3
CVEN4323	Structural Engineering 4	3
	6 Units of Credit Geography Elective	6
	General Education	6
Total units of credit		**48**

Year 5 – Session 1

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).

		UOC
CVEN4126	Engineering Management 2	3
CVEN4225	Geotechnical Engineering 4	3
CVEN4526	Water & Wastewater Treatment	3
CVEN4533	Transport & Fate of Pollutants	3

Plus two of the following electives

CVEN4000	Honours Thesis – Part A	6
CVEN4027	Civil Engineering Practice 4A	6
CVEN4028	Civil Engineering Practice 4B	6
CVEN4029	Civil Engineering Practice 4C	6
CVEN4727	Environmental Engineering Practice 4A	6
CVEN4728	Environmental Engineering Practice 4B	6
CVEN4729	Environmental Engineering Practice 4C	6
Total	**HPW Session 1**	**20**
Total units of credit		**24**

Year 5 – Session 2

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.

		UOC
CVEN4001	Honours Thesis Part B	4
Construction and Management Major		
CVEN4139	Advanced Construction & Project Management	4
CVEN4149	Professional Level Project Management Tools & Skills	4
CVEN4159	Advanced Construction Technology & Engineering	4
Geotechnical Major		
Any 3 of the following 4 courses:		
CVEN4269	Environmental Geomechanics	4
CVEN4279	Rock and Slope Engineering	4
CVEN4289	Site Investigation and Dam Engg	4
CVEN4299	Advanced Topics in Geotechnical Engg	4
Structures Major		
CVEN4339	Design of Bridges	4
CVEN4349	Special Topics in Concrete, Steel & Composite Structures	4
CVEN4359	Structural Analysis & Finite Elements	4
Transport Major		
CVEN4439	Transport Operations & Systems Design	4
CVEN4449	Traffic Management & Control	4
CVEN4459	Transport & Environment	4
Water Major		
Any 3 of the following 4 courses:		
CVEN4539	Advanced Water Quality & Treatment	4
CVEN4549	Advanced Catchment & Coastal Processes	4
CVEN4559	Advanced Water Engineering	4
CVEN4569	Advanced Environmental Systems	4
Total units of credit		**24**

Note each major strand is divided into at least three units 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.

3. 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.

4. There will be a testamur for each degree in the combined program.

5. 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 or with the permission of the Head of School of Civil and Environmental Engineering.

6. The total units of credit in the program is 5 x 48 = 240.

3146 Civil Engineering/Mining Engineering – Full-time Program – Plans CVENAD3146 and MINEFD3146

Bachelor of Engineering Bachelor of Engineering BE BE

Students enrol in the Bachelor of Engineering in Civil Engineering (program 3620) which is administered by the School of Civil and Environmental Engineering. The first three years of the combined degree program are therefore identical to program 3620. After completing 6 sessions of this program, students may apply to enter the Bachelor of Engineering in Mining Engineering (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.

4775 Civil Engineering/Law – Full-time Program – CVENA14775 and Laws Plan

Bachelor of Engineering Bachelor of Laws BE LLB

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.

4777 Environmental Engineering/Law – Full-time Program – CVENB14777 and Laws Plan

Bachelor of Engineering Bachelor of Laws BE LLB

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

3620 Civil Engineering/Master of Engineering Science – Full-time Program – Plan CVENG13620

Bachelor of Engineering Master of Engineering Science BE MEngSc

3625 Environmental Engineering/Master of Engineering Science – Full-time Program – 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) 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; (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) 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 but courses are available.

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 Co-ordinator: Ms R Bautarua
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 are 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.

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 3728 is 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 also offered as a major in the combined BE BSc programs, combined BSc BA and combined BSc LLB and is offered as a minor in the program, BSc (Science and Mathematics) 3970 and as a major or minor in 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
3728 BE MBiomedE in Computer Engineering	5 years
3749 BE MBiomedE in Software Engineering	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

Program and Degree	**Duration**
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
3746	BE BSc in Surveying and Spatial Information Systems	5 years

Combined BSc BSc		**Duration**
3983	BSc BSc in Computer Science	4 years

Combined BSc with Other Degrees		**Duration**
3529	BCom BSc Commerce/Science	4 years (Pass)
3930	BSc BA Science/Arts	4 years (Pass)
3935	BSc BSoc Sc Science/Social Science	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, 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 degrees. For a comprehensive list, see: **www.cse.unsw.edu.au/school/teaching/courses/gened.html**

Program Outlines

3645 Computer Engineering – Full-time Program – Plan COMPB13645

Bachelor of Engineering BE

Whilst jointly administered by the Schools of Computer Science and Engineering and Electrical Engineering and Telecommunications, for convenience, day-to-day administration of the program is conducted through the Computer Science and Engineering Student Office, to which enquiries should be directed.

		HPW		UOC
Year 1		**S1**	**S2**	
COMP1011	Computing1A *or*			
COMP1711*	Higher Computing 1A	6	-	6
COMP1021	Computing 1B *or*			
COMP1721*	Higher Computing 1B	-	6	6
ELEC1011	Electrical Engineering 1	-	6	6
MATH1141	Higher Mathematics 1A *or*			
MATH1131	Mathematics 1A	6	-	6
MATH1241*	Higher Mathematics 1B *or*			
MATH1231*	Mathematics 1B	-	6	6
MATH1081	Discrete Mathematics	6	-	6
PHYS1131	Higher Physics 1A	6	-	6
PHYS1231	Higher Physics 1B	-	6	6
Total	**HPW Session 1**	**24**		
	HPW Session 2		**24**	
	Units of credit			**48**
Year 2				
ACCT9003	Accounting Fundamentals	2	-	3
COMP2011	Data Organisation *or*			
COMP2711*	Higher Data Organisation	5	-	6
COMP2021	Digital Systems Structures	5	-	6
COMP3111	Software Engineering	-	5	6
COMP3221	Microprocessors & Embedded Systems	-	5	6
ELEC2031	Circuits and Systems A	3	-	3
ELEC2032	Circuits and Systems B	-	3	3
MATH2610*	Higher Real Analysis *or*			
MATH2510	Real Analysis	2.5	-	3
MATH2620*	Higher Complex Analysis *or*			
MATH2520	Complex Analysis	-	2.5	3
MATH2859	Probability, Statistics & Information	3	-	3
	General Education	-	4	6
Total	**HPW Session 1**	**20.5**		
	HPW Session 2		**19.5**	
	Units of credit			**48**

		HPW		UOC
Year 3		**S1**	**S2**	
COMP3710	Software Project Management	-	2.5	3
COMP3211	Computer Architecture	-	5	6
COMP3231	Operating Systems	5	-	6
ELEC3006	Electronics A	5	-	6
MATH2509	Linear Algebra *or*			
COMP3120	Introduction to Algorithms	-	3	3
TELE3013	Telecommunications Systems 1	-	5	6
	2 Electives	5	5	12
	General Education	4	-	6
Total	**HPW Session 1**	**19**		
	HPW Session 2		**20.5**	
	Units of credit			**48**
Year 4				
COMP3720	Total Quality Management	2.5	-	3
COMP4910	Thesis Part A	3	-	3
COMP4911	Thesis Part B	-	12	15
COMP4920	Professional Issues and Ethics	-	2.5	3
	4 Electives	15	5	24
Total	**HPW Session 1**	**20.5**		
	HPW Session 2		**19.5**	
	Units of credit			**48**

Elective Courses

1. The Program Director or Undergraduate Coordinator 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**.
iv) At most 6 units of credit may be counted from **Group D.**

		UOC
Group N	**Networks Electives**	
TELE3018	Data Networks 1	6
COMP3331	Computer Networks and Applications *or*	
COMP9331	Computer Networks and Applications *or*	
TELE4352	Data Networks 2	6
Group S	**Science Electives**	
MATH2301	Mathematical Computing A	6
MATH2400	Finite Mathematics	3
MATH3141	Mathematical Methods EE	6
MATH3411	Information, Codes and Ciphers	6
PHYS2010	Mechanics	3
PHYS2020	Computational Physics	3
PHYS2040	Quantum Physics	3
PHYS2310	Nuclear Science Technology	3
Group CE3	**Level-3 Computer Engineering Electives**	
COMP2411	Logic and Logic Programming	6
COMP3131	Programming Languages & Compilers *or*	
COMP9102	Compiling Techniques and Programming Languages	6
COMP3141	Software System Design and Implementation	6
COMP3151	Foundations of Concurrency *or*	
COMP9151	Foundations of Concurrency	6
COMP3311	Database Systems *or*	
COMP9311	Database Systems	6
COMP3411	Artificial Intelligence *or*	
COMP9414	Artificial Intelligence	6
COMP3421	Computer Graphics *or*	
COMP9415	Computer Graphics *or*	
COMP3441	Cryptography and Distributed Systems Security *or*	
COMP9441	Cryptography and Distributed	6
COMP3511	Human-Computer Interaction *or*	
COMP9511	Human-Computer Interaction	6
ELEC3004	Signal Processing 1	6
ELEC3014	Systems & Control 1	6
ELEC3016	Electronics B	6
TELE9301	Switching System Design	6
TELE9303	Network Management	6

Group CE4	Level-4 Computer Engineering Electives	UOC
COMP4001	Object-Oriented System Development	6
COMP4002	Logic Synthesis & Verification	6
COMP4132	Advanced Functional Programming	6
COMP4211	Advanced Architectures and Algorithms	6
COMP4411	Experimental Robotics	6
COMP4412	Introduction to Modal Logic	6
COMP4415	Logical Foundations of Artificial Intelligence	6
COMP4416	Intelligent Agents	6
COMP9018	Advanced Graphics	6
COMP9116	Software Development Using the B-Method & B-Toolkit	6
COMP9117	Architectures of Software Systems	6
COMP9231	Integrated Digital Systems *or*	
ELEC4532	Integrated Digital Systems	6
COMP9242	Advanced Operating Systems	12
COMP9314	Next Generation Database Systems	6
COMP9315	Database System Implementation	6
COMP9316	eCommerce Systems Implementation	6
COMP9332	Network Routing & Switching	6
COMP9333	Advanced Computer Networks	6
COMP9334	Capacity Planning of Computer Systems and Networks	6
COMP9417	Machine Learning	6
COMP9444	Neural Networks	6
COMP9517	Image Processing and Applications	6
COMP9518	Pattern Recognition and Vision	6
COMP9790	Principles of GNSS Positioning	6
COMP9791	Modern Navigation & Positioning Technologies	6
ELEC4042	Signal Processing 2	6
ELEC4205	Electrical Energy Systems	6
ELEC4216	Electrical Drive Systems	6
ELEC4240	Power Electronics	6
ELEC4412	Systems & Control 2	6
ELEC4413	Systems & Control 3	6
ELEC4483	Biomedical Instrumentation, Measurement and Design	6
ELEC4503	Electronics C	6
ELEC4522	Microelectronics Design & Technology	6
SOLA3540	Applied Photovoltaics	6
ELEC9334	Speech and Audio Processing	6
ELEC9370	Digital Image Processing	6
TELE4313	Optical Communications	6
TELE4323	Digital Modulation and Coding	6
TELE4333	Wireless Data Communication Systems	6
TELE4343	Source Coding and Compression	6
TELE4352	Data Networks 2	6
TELE4353	Mobile and Satellite Communication Systems	6
TELE4354	Network Management	6
TELE4363	Telecommunication Systems	6
TELE9337	Advanced Networking	6

3647 Bioinformatics – Full-time Program – Plan COMPB13647

Bachelor of Engineering BE

Whilst jointly administered by the Schools of Computer Science and Engineering and the Faculty of Science, for convenience, day-to-day administration of the program is conducted through the Computer Science and Engineering Student Office, to which enquiries should be directed.

		HPW		UOC
Year 1		**S1**	**S2**	
BINF1001	Bioinformatics 1	-	5	6
BIOS1101	Evolutionary & Functional Biology *or*			
CHEM1021	Fundamentals of Chemistry 1B *or*			
CHEM1041	Higher Chemistry 1D	-	5	6
BIOS1201	Molecules, Cells & Genes	5	-	6
CHEM1031	Higher Chemistry 1C *or*			
CHEM1011	Fundamentals of Chemistry 1A	6	-	6
COMP1011	Computing 1A *or*			
COMP1711*	Higher Computing 1A	6	-	6
COMP1021	Computing 1B *or*			
COMP1721*	Higher Computing 1B	-	6	6
MATH1141*	Higher Mathematics 1A *or*			
MATH1131	Mathematics 1A	6	-	6
MATH1241*	Higher Mathematics 1B *or*			
MATH1231	Mathematics 1B	-	6	6
Total	**HPW Session 1**	**23**		
	HPW Session 2		**22**	
	Units of credit			**48**
Year 2				
BINF2001	Bioinformatics 2	-	5	6
BIOC2201	Principles of Molecular Biology	-	6	6
BIOS2021	Genetics *or*			
BIOS2621	Genetics (Advanced)	-	5	6
COMP2011	Data Organisation *or*			
COMP2711*	Higher Data Organisation	5	-	6
COMP2041	Software Construction: Techniques and Tools	-	5	6
LIFE2101	Introductory Biochemistry & Microbiology	6	-	6
MATH1081	Discrete Mathematics	6	-	6
MATH2901	Higher Theory of Statistics *or*			
MATH2801	Theory of Statistics	4	-	6
Total	**HPW Session 1**	**21**		
	HPW Session 2		**21**	
	Units of credit			**48**
Year 3				
BINF3001	Bioinformatics 3	-	5	6
BIOC3121	Molecular Biology of Nucleic Acids	6	-	6
COMP3121	Algorithms & Programming Techniques	5	-	6
COMP3311	Database Systems	5	-	6
COMP3710	Software Project Management	-	2.5	3
	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)	6	10	18
	General Education	-	2	3
Total	**HPW Session 1**	**22**		
	HPW Session 2		**19.5**	
	Units of credit			**48**
Year 4				
COMP3720	Total Quality Management	-	2.5	3
BINF4910	Thesis Part A	2.5	-	3
BINF4911	Thesis Part B	-	10	12
BINF4920	Professional Issues and Ethics	2.5	-	3
	3 Electives (at least one from Life Science and one from COMP/MATH)	10	6	18
	3 General Education	6	-	9
Total	**HPW Session 1**	**21**		
	HPW Session 2		**18.5**	
	Units of credit			**48**

Electives for Stages 3 and 4 total 42 units of credit and are selected from the lists below:

Year 3 Electives		**UOC**
BIOC3111	Molecular Biology of Proteins	6
BIOC3281	Recombinant DNA Techniques	6
BIOC3291	Genes, Genomes and Evolution	6
BIOC3151	Human Genetics and Variation	6
BIOT3011	Biotechnology A	6
BIOT3061	Biopharmaceuticals	6
COMP2021	Digital Systems Structures	6
COMP3231	Operating Systems	6
COMP3331	Computer Networks & Applications	6
COMP3111	Software Engineering	6
COMP3411	Artificial Intelligence	6
MATH2831	Linear Models *or*	
MATH2931	Higher Linear Models	6
Year 4 Electives		
BIOT3071	Commercial Biotechnology	6
COMP3151	Foundations of Concurrency	6
COMP3221	Microprocessors and Embedded Systems	6
COMP3511	Human Computer Interaction	6
COMP9316	e-Commerce Systems Implementation	6
COMP9333	Advanced Computer Networks	6
COMP9314	Next Generation Database Systems	6
COMP9417	Machine Learning	6
COMP9444	Neural Networks	6
MATH3801	Probability and Stochastic Processes *or*	

		UOC
MATH3901	Higher Probability and Stochastic Processes	6
MATH3811	Statistical Inference *or*	
MATH3911	Higher Statistical Inference	6
MATH3821	Statistical Modelling and Computing	6
MICR3011	Microbial Physiology: A Molecular Approach	6
MICR3021	Microbial Genetics	6

Other level 3 MATH electives may also be considered.
Other level 3/4/9 COMP courses are permitted.

3648 Software Engineering – Full-time Program – Plan SENGAI3648

Bachelor of Engineering BE

The Software Engineering program is jointly administered by the School of Computer Science and Engineering and the School of Information Systems, Technology and Management. 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.

		HPW		UOC
Stage 1		**S1**	**S2**	
SENG1010	Software Engineering Workshop 1A	-	2.5	3
SENG1020	Software Engineering Workshop 1B	-	2.5	3
COMP1011	Computing 1A *or*			
COMP1711*	Higher Computing 1A	6	-	6
MATH1141	Higher Math 1A *or*	6	-	6
MATH1131	Mathematics 1A			
MATH1081	Discrete Mathematics	6	-	6
INFS1603	Business Data Management	6	-	6
COMP1021	Computing 1B *or*			
COMP1721*	Higher Computing1B	-	6	6
INFS1611	Requirements Engineering	-	1.5	3
MATH2400	Finite Mathematics	-	2	3
	Stage 1 – Free Electives	-	6	6
Total	**HPW Session 1**	**24**		
	HPW Session 2		**20.5**	
	Units of credit			**48**
Stage 2				
SENG2010	Software Engineering Workshop 2A	2.5	-	3
SENG2020	Software Engineering Workshop 2B	-	2.5	3
COMP2110	Software System Specification	2.5	-	3
COMP2011	Data Organisation *or*			
COMP2711*	Higher Data Organisation	-	5	6
COMP2021	Digital Systems Structures	-	5	6
COMP2411	Logic & Logic Programming	5	-	6
INFS2603	Systems Analysis and Design	5	-	6
MATH2859	Probability, Statistics and Information	-	3	3
	General Education	4	-	6
	Stage 2 – Free Electives	-	6	6
Total	**HPW Session 1**	**19**		
	HPW Session 2		**21.5**	
	Units of credit			**48**
Stage 3				
SENG3010	Software Engineering Workshop 3A	2.5	-	3
SENG3020	Software Engineering Workshop 3B	-	2.5	3
COMP3141	Software System Design & Implementation	5	-	6
INFS2607	Business Data Networks	-	5	6
	SE Electives	10	10	24
	General Education	2	2	6
Total	**HPW Session 1**	**19.5**		
	HPW Session 2		**19.5**	
	Units of credit			**48**
Stage 4				
SENG4921	Professional Issues and Ethics	4	-	6
SENG4910	Thesis Part A	7	-	6
SENG4911	Thesis Part B	-	14	12
	SE Electives	10	10	24
Total	**HPW Session 1**	**21**		
	HPW Session 2		**24**	
	Units of credit			**48**

Electives

1. The 8 electives (48 UOC) for stages 3 and 4 may include any third and fourth stage COMP, INFS and 3rd year MATHS courses. Electives and more information can be found at **www.cse.unsw.edu.au/seng**

***Notes for BE:**

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. 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.

Award of Honours for BE:

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 *NewSouth Student* is not used for this purpose.

Honours Class 1: WA $\geqslant$ 75

Honours Class 2: Division 1: 70 $\leqslant$ WA < 75
Division 2: 65 $\leqslant$ WA < 70

3978 Computer Science – Full-time Program – Plan COMPA13978

Bachelor of Science BSc

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.

		HPW		UOC
Year 1		**S1**	**S2**	
COMP1011	Computing 1A *or*			
COMP1711*	Higher Computing 1A	6	-	6
COMP1021	Computing 1B *or*			
COMP1721*	Higher Computing 1B	-	6	6
MATH1141	Higher Mathematics 1A *or*			
MATH1131	Mathematics 1A	6	-	6
MATH1241*	Higher Mathematics 1B *or*			
MATH1231*	Mathematics 1B	-	6	6
MATH1081	Discrete Mathematics	6	-	6
	Electives	6	12	18
Total	**HPW Session 1**	**24**		
	HPW Session 2		**24**	
	Units of credit			**48**

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		**UOC**
COMP2011	Data Organisation *or*	
COMP2711*	Higher Data Organisation	6
COMP2021	Digital Systems Structures	6
COMP2041	Software Construction	6
COMP2920	Professional Issues & Ethics	3
	Electives	21
	General Education	6
Total	**Units of credit**	**48**

Four of the ten courses in Year 2 comprise core computing. The remainder 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		**UOC**
COMP3111	Software Engineering*	6
	Level 3/4 Computer Science Electives*	24
	General Education	6
	Electives*	12
Total	**Units of credit**	**48**

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		**UOC**
COMP3121	Algorithms & Programming Techniques	6
COMP3131	Programming Languages & Compilers	6
COMP3211	Computer Organisation & Design	6
COMP3231	Operating Systems	6
COMP3311	Database Systems	6
COMP3331	Computer Networks and Applications	6
COMP3411	Artificial Intelligence	6
COMP3421	Computer Graphics	6
COMP3441	Cryptography and Security	6
COMP3511	Human Computer Interaction	6

Level 4 Computing Electives		**UOC**
COMP3141	Software System Design and Implementation	6
COMP3151	Foundations of Concurrency	6
COMP3221	Microprocessors and Embedded Systems	6
COMP9314	Next Generation Database Systems	6
COMP9316	e-Commerce Systems Implementation	6
COMP9333	Advanced Computer Networks	6
COMP9417	Machine Learning	6
COMP9444	Neural Networks	6

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 may also select electives from COMP9XXX courses having met the required prerequisites.

***Notes for BSc (Computer Science):**

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.

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/**

Formal notification of acceptance into the Honours program will be mailed on the day following the University's official notification of results.

		UOC
COMP4910	Thesis Part A	3
COMP4911	Thesis Part B	15
Computing Electives:		
Level 3/4 Computer Science Courses (subject to approval)		12
Level 4 Computer Science Courses (subject to the approval of the Program Director)		18
Total units of credit		**48**

Computer Science Honours students must at least complete 18 UOC Level 4 elective courses. Students may substitute Level 4 courses from other schools with the permission of the Program Director.

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.

3722 Computer Engineering/Bachelor of Arts - Plan COMPB13722

Bachelor of Engineering Bachelor of Arts BE BA

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.

3726 Computer Engineering/Bachelor of Science - Plan COMPB13726

Bachelor of Engineering Bachelor of Science BE BSc

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.

Bioinformatics Engineering

3756 Bioinformatics/Bachelor of Arts - Plan BINFB13756

Bachelor of Engineering Bachelor of Arts BE BA

Students qualify for the award of the two degrees of Bachelor of Engineering in 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 in 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 42 UOC in Years 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.

		HPW		UOC
Year 1		**S1**	**S2**	
BINF1001	Bioinformatics 1	-	5	6
BIOS1201	Molecules, Cells & Genes	5	-	6
CHEM1041	Higher Chemistry 1D *or*			
CHEM1021	Fundamentals of Chemistry 1B *or*			
BIOS1101	Evolutionary & Functional Biology	-	5	6
CHEM1031	Higher Chemistry 1C *or*			
CHEM1011	Fundamentals of Chemistry 1A	6	-	6
COMP1711*	Higher Computing 1A *or*			
COMP1011	Computing 1A	6	-	6
COMP1721*	Higher Computing 1B *or*			
COMP1021	Computing 1B	-	6	6
MATH1141*	Higher Mathematics 1A *or*			
MATH1131	Mathematics 1A	6	-	6
MATH1241*	Higher Mathematics 1B *or*			
MATH1231	Mathematics 1B	-	6	6
Total	**HPW Session 1**	**23**		
	HPW Session 2		**22**	
	Units of credit			**48**

		HPW		UOC
Year 2		**S1**	**S2**	
BIOC2201	Principles of Molecular Biology	-	6	6
BIOS2621	Genetics (Advanced) *or*			
BIOS2021	Genetics	-	5	6
COMP2041	Software Construction: Techniques and Tools	-	5	6
LIFE2101	Introductory Biochemistry & Microbiology	6	-	6
MATH1081	Discrete Mathematics	6	-	6
MATH2901	Higher Theory of Statistics *or*			
MATH2801	Theory of Statistics	4	-	6
	Arts major level 1	6	-	6
	Arts major level 1	-	6	6
Total	**HPW Session 1**	**22**		
	HPW Session 2		**22**	
	Units of credit			**48**
Year 3				
BIN2001	Bioinformatics 2	-	6	6
BIOC3121	Molecular Biology of Nucleic Acids	6	-	6
COMP2711	Higher Data Organisation *or*			
COMP2011	Data Organisation	5	-	6
COMP3311	Database Systems	-	5	6
	Arts major level 2	6	-	6
	Arts major level 2 or Arts elective	-	6	6
	2 Year 3 electives	5	5	12
Total	**HPW Session 1**	**22**		
	HPW Session 2		**22**	
	Units of credit			**48**
Year 4				
BINF3001	Bioinformatics 3	-	5	6
COMP3121	Algorithms & Programming Techniques	5	-	6
COMP3710	Software Project Management	-	2.5	3
BINF4920	Professional Issues and Ethics	-	2.5	3
	2 Arts major level 2 or 3	5	5	12
	2 Arts major level 3 or Arts electives	5	5	12
	1 level 3 elective	5	-	6
Total	**HPW Session 1**	**20**		
	HPW Session 2		**20**	
	Units of credit			**48**

Overall electives in stages 3 and 4 must include at least one computer science elective and one life science elective.

Year 5				
COMP3720	Total Quality Management	2.5	-	3
BINF4910	Thesis Part A	2.5	-	3
BINF4911	Thesis Part B	-	10	12
	2 level 3 Arts major	5	5	12
	3 Years 3 or 4 or 5 electives	10	5	18
Total	**HPW Session 1**	**20**		
	HPW Session 2		**20**	
	Units of credit			**48**

Year 3 and 4 Electives		**UOC**
BIOC3111	Molecular Biology of Proteins	6
BIOC3281	Recombinant DNA Techniques	6
BIOC3291	Genes, Genomes and Evolution	6
BIOC3151	Human Genetics and Variation	6
BIOT3011	Biotechnology A	6
BIOT3061	Biopharmaceuticals	6
COMP2021	Digital Systems Structures	6
COMP3111	Software Engineering	6
COMP3331	Computer Networks & Applications	6
COMP3411	Artificial Intelligence	6
MICR3021	Microbial Genetics	6

Year 5 Electives		
BIOT3071	Commercial Biotechnology	6
COMP3151	Foundations of Concurrency	6
COMP3221	Microprocessors and Embedded Systems	6
COMP3511	Human Computer Interaction	6
COMP9316	eCommerce Systems Implementation	6
COMP9333	Advanced Computer Networks	6
COMP9314	Next Generation Database Systems	6
COMP9417	Machine Learning	6
COMP9444	Neural Networks	6
MICR3011	Microbial Physiology: A Molecular Approach	6

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

3755 Bioinformatics/Bachelor of Science - Plan BINFB13755

Bachelor of Engineering Bachelor of Science BE BSc

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 in 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 in Years 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.

		HPW		UOC
Year 1		**S1**	**S2**	
BINF1001	Bioinformatics 1	-	5	6
BIOS1201	Molecules, Cells & Genes	5	-	6
CHEM1041	Higher Chemistry 1D *or*			
CHEM1021	Fundamentals of Chemistry 1B *or*			
BIOS1101	Evolutionary & Functional Biology	-	5	6
CHEM1031	Higher Chemistry 1C *or*			
CHEM1011	Fundamentals of Chemistry 1A	6	-	6
COMP1711*	Higher Computing 1A *or*			
COMP1011	Computing 1A	6	-	6
COMP1721*	Higher Computing 1B *or*			
COMP1021	Computing 1B	-	6	6
MATH1141*	Higher Mathematics 1A *or*			
MATH1131	Mathematics 1A	6	-	6
MATH1241*	Higher Mathematics 1B *or*			
MATH1231	Mathematics 1B	-	6	6
Total	**HPW Session 1**	**23**		
	HPW Session 2		**22**	
	Units of credit			**48**
Year 2				
BIOC2201	Principles of Molecular Biology	-	6	6
BIOS2621	Genetics (Advanced) *or*			
BIOS2021	Genetics	-	5	6
COMP2041	Software Construction: Techniques and Tools	-	5	6
LIFE2101	Introductory Biochemistry & Microbiology	6	-	6
MATH1081	Discrete Mathematics	6	-	6
MATH2901	Higher Theory of Statistics *or*			
MATH2801	Theory of Statistics	4	-	6
	Science major level 1 or 2	6	-	6
	Science major level 1 or 2	-	6	6
Total	**HPW Session 1**	**22**		
	HPW Session 2		**22**	
	Units of credit			**48**
Year 3				
BIN2001	Bioinformatics 2	-	6	6
BIOC3121	Molecular Biology of Nucleic Acids	6	-	6
COMP2711	Higher Data Organisation *or*			
COMP2011	Data Organisation	5	-	6
COMP3311	Database Systems	-	5	6
	Science major level 2	6	-	6
	Science major level 2	-	6	6
	2 Year 3 electives	5	5	12
Total	**HPW Session 1**	**22**		
	HPW Session 2		**22**	
	Units of credit			**48**
Year 4				
BINF3001	Bioinformatics 3	-	5	6
COMP3121	Algorithms & Programming Techniques	5	-	6
COMP3710	Software Project Management	-	2.5	3
BINF4920	Professional Issues and Ethics	-	2.5	3
	4 level 3 Science major	10	10	24
	1 Year 3 elective	5	-	6
Total	**HPW Session 1**	**20**		
	HPW Session 2		**20**	
	Units of credit			**48**

Overall electives in stages 3 and 4 must include at least one computer science elective and one life science elective.

		HPW		UOC
Year 5		**S1**	**S2**	
COMP3720	Total Quality Management	2.5	-	3
BINF4910	Thesis Part A	2.5	-	3
BINF4911	Thesis Part B	-	10	12
	2 level 3 Science major	5	5	12
	3 Years 3/4/5 electives	5	5	18
Total	**HPW Session 1**	**21**		
	HPW Session 2		**20**	
	Units of credit			**48**

Year 3 and 4 Electives		**UOC**
BIOC3111	Molecular Biology of Proteins	6
BIOC3281	Recombinant DNA Techniques	6
BIOC3291	Genes, Genomes and Evolution	6
BIOC3151	Human Genetics and Variation	6
BIOT3011	Biotechnology A	6
BIOT3061	Biopharmaceuticals	6
COMP2021	Digital Systems Structures	6
COMP3111	Software Engineering	6
COMP3331	Computer Networks & Applications	6
COMP3411	Artificial Intelligence	6
MICR3021	Microbial Genetics	6
Year 5 Electives		
BIOT3071	Commercial Biotechnology	6
COMP3151	Foundations of Concurrency	6
COMP3221	Microprocessors and Embedded Systems	6
COMP3511	Human Computer Interaction	6
COMP9316	eCommerce Systems Implementation	6
COMP9333	Advanced Computer Networks	6
COMP9314	Next Generation Database Systems	6
COMP9417	Machine Learning	6
COMP9444	Neural Networks	6
MICR3011	Microbial Physiology: A Molecular Approach	6

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.

Software Engineering

3651 Software Engineering/Bachelor of Science - Plan SENGA13651

Bachelor of Engineering Bachelor of Science BE BSc

This 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 in Stages 2 and 3, with at least 18 UOC in Year 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.

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 above.

Please refer to the School's website for examples of specific SE/Science programs: **www.cse.unsw.edu.au/seng**

		UOC	
Stage 1		**S1**	**S2**
SENG1010	Software Engineering Workshop 1A	-	3
SENG1020	Software Engineering Workshop 1B	-	3
MATH1141	Higher Mathematics 1A *or*		
MATH1131	Mathematics 1A	6	-
MATH1081	Discrete Mathematics	6	-
MATH2400	Finite Mathematics	-	3
COMP1011	Computing 1A		
COMP1711*	Higher Computing 1A	6	-
COMP1021	Computing 1B *or*		
COMP1721*	Higher Computing 1B	-	6
INFS1611	Requirements Engineering	-	3
INFS1603	Business Data Management	6	-
	Stage 1 Science electives	-	6
	Total units of credit	**24**	**24**
Stage 2			
SENG2010	Software Engineering Workshop 2A	3	-
SENG2020	Software Engineering Workshop 2B	-	3
COMP2110	Software System Specification	3	-
COMP2011	Data Organisation *or*		
COMP2711*	Higher Data Organisation	-	6
COMP2021	Digital Systems Structures	-	6
COMP2411	Logic & Logic Programming	6	-
INFS2603	System Analysis & Design	6	-
MATH2859	Statistics for Computing	-	3
	Stage 2 Science electives	6	6
	Total units of credit	**24**	**24**
Stage 3			
SENG3010	Software Engineering Workshop 3A	3	-
SENG3020	Software Engineering Workshop 3B	-	3
COMP3141	Software System Design & Implementation	6	-
INFS2607	Business Data Networks	-	6
	SE Electives	12	12
	Stage 2 Science electives	3	3
	Total units of credit	**24**	**24**
Stage 4			
Stage 2 or 3 Science electives		18	12
Stage 3 Science electives		6	12
	Total units of credit	**24**	**24**
Stage 5			
SENG4910	Thesis part A	6	-
SENG4911	Thesis part B	-	12
SENG4921	Professional Issues and Ethics	6	-
	SE electives	12	12
	Total units of credit	**24**	**24**

3652 Software Engineering/Bachelor of Arts - Plan SENGA13652

Bachelor of Engineering Bachelor of Arts BE BA

This combined program requires the completion of 240 units of credit, including at least 60 UOC (units of credit) of Arts courses, and must contain a major sequence of 42 UOC 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 below. 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's web-page for examples of specific SE/Arts programs at: **www.cse.unsw.edu.au/seng**

The Faculty of Arts and Social Science should approve all Arts programs.

		UOC	
Stage 1		**S1**	**S2**
SENG1010	Software Engineering Workshop 1A	-	3
SENG1020	Software Engineering Workshop 1B	-	3
MATH1141	Higher Mathematics 1A *or*		
MATH1131	Mathematics 1A	6	-
MATH1081	Discrete Mathematics	6	-
MATH2400	Finite Mathematics	-	3
COMP1011	Computing 1A *or*		
COMP1711*	Higher Computing 1A	6	-
COMP1021	Computing 1B *or*		
COMP1721*	Higher Computing 1B	-	6
INFS1611	Requirements Engineering	-	3
INFS1603	Business Data Management	6	-
	Stage 1 Arts electives	-	6
	Total units of credit	**24**	**24**
Stage 2			
SENG2010	Software Engineering Workshop 2A	3	-
SENG2020	Software Engineering Workshop 2B	-	3
COMP2110	Software System Specification	3	-
COMP2011	Data Organisation *or*		
COMP2711*	Higher Data Organisation	-	6
COMP2021	Digital Systems Structures	-	6
COMP2411	Logic & Logic Programming	6	-
INFS2603	System Analysis & Design	6	-
MATH2859	Statistics for Computing	-	3
	Arts electives	6	6
	Total units of credit	**24**	**24**
Stage 3			
SENG3010	Software Engineering Workshop 3A	3	-
SENG3020	Software Engineering Workshop 3B	-	3
COMP3141	Software System Design & Implementation	6	
INFS2607	Business Data Networks	-	6
	SE electives	9	9
	Arts electives	6	6
	Total units of credit	**24**	**24**
Stage 4			
	SE electives	-	6
	Arts electives	24	18
	Total units of credit	**24**	**24**
Stage 5			
SENG4921	Professional Issues and Ethics	6	-
SENG4910	Thesis part A	6	-
SENG4911	Thesis part B	-	12
	SE electives	12	12
	Total units of credit	**24**	**24**

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.

3653 Software Engineering/Bachelor of Commerce- Plan SENGA13653

Bachelor of Engineering Bachelor of Commerce BE BCom

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 below. 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.

All programs should be approved by the Faculty of Commerce and Economics.

		UOC	
Stage 1		**S1**	**S2**
COMP1011	Computing 1A *or*		
COMP1711	Higher Computing 1A	6	-
MATH1131	Mathematics 1A *or*	6	-
MATH1141	Higher Mathematics 1A		
MATH1081	Discrete Mathematics	6	-
INFS1603	Business Data Management	6	-
SENG1010	Software Engineering Workshop 1A	-	3
SENG1020	Software Engineering Workshop 1B	-	3
MATH2400	Finite Mathematics	-	3
COMP1021	Computing 1B *or*		
COMP1721	Higher Computing 1B	-	6
INFS1611	Requirements Engineering	-	3
ACCT1501	Accounting and Financial Management 1A	-	6
Total units of credit		**24**	**24**
Stage 2			
SENG2010	Software Engineering Workshop 2A	3	-
SENG2020	Software Engineering Workshop 2B	-	3
COMP2110	Software System Specification	3	-
COMP2011	Data Organisation *or*		
COMP2711	Higher Data Organisation	-	6
COMP2021	Digital Systems Structures	-	6
COMP2411	Logic & Logic Programming	6	-
INFS2603	System Analysis & Design	6	-
MATH2859	Probability, Statistics and Information	-	3
ECON1101	Microeconomics 1	-	6
ACCT1511	Accounting and Financial Management 1B	6	
Total units of credit		**24**	**24**
Stage 3			
SENG3010	Software Engineering Workshop 3A	3	-
SENG3020	Software Engineering Workshop 3B	-	3
COMP3141	Software System Design & Implementation	6	
INFS2607	Business Data Networks	-	6
ECON1102	Macroeconomics 1	6	
	SE electives	9	15
Total units of credit		**24**	**24**
Stage 4			
	FCE electives	24	24
Total units of credit		**24**	**24**
Stage 5			
SENG4910	Thesis Part A	6	-
SENG4911	Thesis Part B	-	12
SENG4921	Professional Issues and Ethics	6	-
	SE electives*	12	12
Total units of credit		**24**	**24**

** At least 3 UOC of the SE 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**

Computer Science Combined Programs

Students in Computer Science 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 Science Bachelor of Arts BSc BA, Bachelor of Science Bachelor of Commerce BSc BCom, Bachelor of Science Bachelor of Law BSc LLB and the Bachelor of Science Bachelor of Social Science BSc BSocSc. 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 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.

3983 Computer Science/Bachelor of Science Plan COMPA13983

Bachelor of Science Bachelor of Science (Computer Science) BSc BSc

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.

Sample program:

Year 1		**UOC**
COMP1011	Computing 1A *or*	6
COMP1711	Higher Computing 1A	
COMP1021	Computing 1B *or*	6
COMP1721	Higher Computing 1B	
MATH1141	Higher Mathematics 1A *or*	6
MATH1131	Mathematics 1A	
MATH1241	Higher Mathematics 1B *or*	6
MATH1231	Mathematics 1B	
	Science electives, Level 1	24
Total units of credit		**48**
Year 2		**UOC**
COMP2011	Data Organisation *or*	6
COMP2711	Higher Data Organisation	
COMP2021	Digital Systems Structures	6
COMP2041	Software Construction	6
MATH1081	Discrete Mathematics	6
	Science electives, Level 2	24
Total units of credit		**48**
Year 3		**UOC**
COMP3111	Software Engineering	6
	Level 3/4 Computer Science Electives	18
	Science electives, Levels 2 & 3	24
Total units of credit		**48**
Year 4		**UOC**
COMP2920	Professional Issues and Ethics	3
	Level 3/4 Computer Science electives	6
	Other Computer Science electives*	6
	Science electives, Levels 2 & 3	12

Electives	15
General Education courses	6
Total units of credit	**48**

** 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.*

Fast-Track Programs

3645 Computer Engineering/Master of Engineering Science – Plan COMPLI3645

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 BINFLI3647

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 SENGLI3648

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).

Concurrent Programs

3728 Computer Engineering/Master of Biomedical Engineering – Plan COMPB13728

Bachelor of Engineering Master of Biomedical Engineering BE MBiomedE

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.

		HPW		UOC
Year 1		**S1**	**S2**	
BIOM1001	Professional Biomedical Studies	2	-	3
COMP1011	Computing 1A	6	-	6
MATH1090	Discrete Mathematics	3	-	3
MATH1131	Mathematics 1A *or*			
MATH1141	Higher Mathematics 1A	6	-	6
PHYS1131	Higher Physics 1A	6	-	6
BIOM2010	Biomedical Engineering Practice	-	2	3
CHEM1817	Chemistry 1ME	-	3	3
COMP1021	Computing 1B	-	6	6
MATH1231	Mathematics 1B *or*			
MATH1241	Higher Mathematics 1B	-	6	6
PHYS1231	Higher Physics 1B	-	6	6
Total	**HPW Session 1**	**23**		
	HPW Session 2		**23**	
	Units of credit			**48**

		HPW		UOC
Year 2		**S1**	**S2**	
ACCT9003	Accounting Fundamentals	3	-	3
BIOM9420	Clinical Laboratory Science	3	-	6
COMP2011	Data Organisation	5	-	6
COMP2021	Digital Systems Structures	5	-	6
MATH2510	Real Analysis *or*			
MATH2610	Higher Real Analysis	3	-	3
ANAT2511	Fundamentals of Anatomy	-	6	6
COMP3111	Software Engineering	-	5	6
ELEC1011	Electrical Engineering 1	-	6	6
	General Education	-	2	3
MATH2520	Complex Analysis *or*			
MATH2620	Higher Complex Analysis	-	3	3
Total	**HPW Session 1**	**19**		
	HPW Session 2		**22**	
	Units of credit			**48**

		HPW		UOC
Year 3		**S1**	**S2**	
BIOM9XXX	Biomedical Engineering Elective	3	-	6
COMP3231	Operating Systems	5	-	6
COMPXXXX	Elective (COMP)	5	-	6
ELEC2031	Circuits and Systems	3	-	3
MATH2859	Probability, Statistics and Information	3	-	3
COMP3211	Computer Architecture	-	5	6
COMP3221	Microprocessors and Embedded Systems	-	5	6
COMP3710	Software Project Management	-	3	3
ELEC2032	Electronics and Systems	-	3	3
	General Education	-	2	3
MATH2509	Linear Algebra *or*			
COMP3120	Introduction to Algorithms	-	3	3
Total	**HPW Session 1**	**19**		
	HPW Session 2		**21**	
	Units of credit			**48**

		HPW		UOC
Year 4		**S1**	**S2**	
COMPXXXX	Elective (COMP)	5	-	6
COMPXXXX	Elective (COMP)	5	-	6
ELEC3006	Electronics A	5	-	6
PHPH2101	Physiology 1A	6	-	6
BIOM5920	Thesis Part A	-	3	3
BIOM9027	Medical Imaging	-	3	6
COMP4920	Professional Issues and Ethics	-	3	3
PHPH2201	Physiology 1B	-	6	6
TELE3013	Telecommunications Systems 1	-	4	6
Total	**HPW Session 1**	**21**		
	HPW Session 2		**19**	
	Units of credit			**48**

		HPW		UOC
Year 5		**S1**	**S2**	
BIOM5921	Thesis Part B	15	-	15
BIOM9XXX	Biomedical Engineering Elective	3	-	6
COMP3720	Total Quality Management	3	-	3
BIOM9410	Regulatory Requirements for Biomedical Technology	-	3	6
BIOM9913	Masters Project or 2 Biomedical Electives	-	6	12
BIOM9XXX	Biomedical Engineering Elective	-	3	6
Total	**HPW Session 1**	**21**		
	HPW Session 2		**12**	
	Units of Credit			**48**

Preferred Biomedical Engineering Electives		HPW S1	HPW S2	UOC
BIOM9613	Medical Instrumentation	3	-	6
BIOM9440	Biomedical Practical Measurement	-	3	6
BIOM9450	Clinical Information Systems	-	3	6

Other Biomedical Engineering Electives		HPW S1	HPW S2	UOC
BIOM9060	Biomedical Systems Analysis	3	-	6
BIOM9430	Electromedical Standards	3	-	6
BIOM9510	Introductory Biomechanics	3	-	6
BIOM9601	Biomedical Applications of Microcomputers	3	-	6
BIOM9621	Biological Signal Analysis	3	-	6
BIOM9701	Dynamics of the Cardiovascular System	3	-	6
SESC9451	Experimental Biomechanics	3	-	6
BIOM9050	Microprocessors and Circuit Design for Biomedical Engineers	-	3	6
BIOM9311	Mass Transfer in Medicine	-	3	6
BIOM9321	Physiological Fluid Mechanics	-	3	6
BIOM9332	Biocompatibility	-	3	6
BIOM9541	Mechanics of the Human Body	-	3	6
BIOM9551	Biomechanics of Physical Rehabilitation	-	3	6
BIOM9561	Mechanical Properties of Biomaterials	-	3	6

3749 Software Engineering/Master of Biomedical Engineering – Plan SENGA13749

Bachelor of Engineering Master of Biomedical Engineering
BE MBiomedE

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.

Year 1		HPW S1	HPW S2	UOC
COMP1011	Computing 1A *or*			
COMP1711	Higher Computing 1A	5	-	6
INFS1603	Business Data Management	5	-	6
MATH1081	Discrete Mathematics	3	-	6
MATH1131	Mathematics 1A *or*			
MATH1141	Higher Mathematics 1A	6	-	6
COMP1021	Computing 1B *or*			
COMP1721	Higher Computing 1B	-	5	6
	General Education	-	2	3
INFS1611	Requirements Engineering	-	3	3
MATH2400	Finite Mathematics	-	3	3
SENG1010	Software Engineering Workshop 1A	-	3	3
SENG1020	Software Engineering Workshop 1B	-	3	3
BIOM2010	Biomedical Engineering Practice	-	2	3
Total	**HPW Session 1**	**19**		
	HPW Session 2		**21**	
	Units of credit			**48**

Year 2		HPW S1	HPW S2	UOC
BIOM1001	Professional Biomedical Studies	2	-	3
BIOM9XXX	Biomedical Engineering Elective	3	-	6
COMP2110	Software System Specification	3	-	3
	General Education	2	-	3
INFS2603	System Analysis and Design	5	-	6
SENG2010	Software Engineering Workshop 2A	3	-	3
COMP2011	Data Organisation *or*			
COMP2711	Higher Data Organisation	-	5	6
COMP2021	Digital Systems Structures	-	5	6
INFS2607	Business Data Networks	-	5	6
MATH2859	Probability, Statistics and Information	-	3	3
SENG2020	Software Engineering Workshop 2B	-	3	3
Total	**HPW Session 1**	**18**		
	HPW Session 2		**21**	
	Units of credit			**48**

Year 3		HPW S1	HPW S2	UOC
COMP2411	Logic and Logic Programming	5	-	6
COMP3141	Software System Design and Implementation	5	-	6
PHPH2101	Physiology 1A	6	-	6
SENG3010	Software engineering Workshop 3A	3	-	3
SENGXXXX	Software Engineering Electives	2	-	3
PHPH2201	Physiology 1B	-	6	6
SENG3020	Software Engineering Workshop 3B	-	3	3
SENGXXXX	Software Engineering Electives	-	9	15
Total	**HPW Session 1**	**21**		
	HPW Session 2		**18**	
	Units of credit			**48**

Year 4		HPW S1	HPW S2	UOC
BIOM9XXX	Biomedical Engineering Elective	3	-	6
SENG4921	Professional Issues and Ethics	5	-	6
SENGXXXX	Software Engineering Electives	6	-	12
BIOM5001	Thesis Part A	-	4	6
BIOM9XXX	Biomedical Engineering Elective	-	3	6
BIOM9XXX	Biomedical Engineering Elective	-	3	6
SENGXXXX	Software Engineering Electives	-	5	6
Total	**HPW Session 1**	**14**		
	HPW Session 2		**15**	
	Units of credit			**48**

Year 5		HPW S1	HPW S2	UOC
BIOM5904	Thesis Part B	12	-	12
BIOM9XXX	Biomedical Engineering Elective	3	-	6
SENGXXXX	Software Engineering Electives	5	-	6
BIOM9913	Masters Project or 2 Biomedical Electives	-	6	12
BIOM9XXX	Biomedical Engineering Elective	-	3	6
BIOM9XXX	Biomedical Engineering Elective	-	3	6
Total	**HPW Session 1**	**20**		
	HPW Session 2		**12**	
	Units of credit			**48**

Preferred Biomedical Engineering Electives		HPW S1	HPW S2	UOC
BIOM9420	Clinical Laboratory Science	3	-	6
BIOM9613	Medical Instrumentation	3	-	6
BIOM9321	Physiological Fluid Mechanics	-	3	6
BIOM9332	Biocompatibility	-	3	6
BIOM9440	Biomedical Practical Measurement	-	3	6

Other Biomedical Engineering Electives		HPW S1	HPW S2	UOC
BIOM9060	Biomedical Systems Analysis	3	-	6
BIOM9430	Electromedical Standards	3	-	6
BIOM9510	Introductory Biomechanics	3	-	6
BIOM9601	Biomedical Applications of Microcomputers	3	-	6
BIOM9621	Biological Signal Analysis	3	-	6
BIOM9701	Dynamics of the Cardiovascular System	3	-	6
BIOM9027	Medical Imaging	-	3	6
BIOM9050	Microprocessors & Circuit Design for	-	3	6
BIOM9450	Clinical Information Systems	-	3	6
BIOM9541	Mechanics of the Human Body	-	3	6

School of Electrical Engineering and Telecommunications

Head of School: Professor BG Celler
Director of Academic Studies: Associate Professor E Ambikairajah
Administrative Officers: Ms. C Fuller, Ms MV Spano

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
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 the combined degrees program 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.

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.

Program Outlines

3640 Electrical Engineering – Full-time Program

Bachelor of Engineering BE

Year 1	**Session 1**	**UOC**	**HPW**
ELEC1010	Introduction to Electrical Engineering	3	3
ELEC1011	Electrical Engineering 1	6	6
MATH1090	Discrete Mathematics	3	3
MATH1141	Higher Mathematics 1A	6	6
PHYS1131	Higher Physics 1A	6	6
	Total	**24**	**24**
Year 1	**Session 2**		
COMP1011	Computing 1A	6	6
ELEC1041	Digital Circuits	6	4
MATH1241	Higher Mathematics 1B	6	6
PHYS1231	Higher Physics 1B	6	6
	Total	**24**	**22**

Note: MATH1141 and MATH1241 may be taken at the ordinary level (MATH1131 and MATH1231).

Year 2	**Session 1**		
COMP1021	Computing 1B	6	6
ELEC2031	Circuits and Systems	3	3
MATH2111	Higher Several Variable Calculus	6	5
PHYS2939	Electromagnetism	3	3
	General Education	6	4
	Total	**24**	**21**
Year 2	**Session 2**		
ELEC2032	Electronics and Systems	3	3
ELEC2015	Electromagnetic Applications	3	3
ELEC2042	Real Time Instrumentation	3	3
MATH2620	Higher Complex Analysis	3	3
MATH2859	Probability, Statistics & Information	3	3
MATH2509	Linear Algebra for Engineers	3	3
	General Education	6	4
	Total	**24**	**22**

Note: MATH2620 and MATH2111 may be taken at the ordinary level (MATH2520 and MATH2011).

COMP1011 and COMP1021 may be taken at the higher level (COMP1711 and COMP1721).

Year 3	**Session 1**		
ELEC3004	Signal Processing & Transform Methods	6	5
ELEC3005	Electrical Energy 1	6	5
ELEC3006	Electronics A	6	5
ELEC2041	Microprocessors and Interfacing	6	4
	Total	**24**	**19**
Year 3	**Session 2**		
ELEC3017	Electrical Engineering Design	6	5
ELEC3014	Systems & Control 1	6	5
	2 Electives from		
TELE3013	Telecommunication Systems 1	6	5
ELEC3015	Electrical Energy 2	6	5
ELEC3016	Electronics B	6	5

		UOC	HPW
ELEC3041	Real Time Engineering	6	5
TELE3018	Data Networks 1	6	5
COMP2011	Data Organisation	6	5
ELEC3402	Introductory Physiology for Engineers	6	5
	Total	**24**	**20**
Year 4	**Session 1**		
ELEC4010	Introduction to Management for Electrical Engineers	3	3
ELEC4910	Thesis – Part A	3	4
	3 Professional Electives	18	12
	Total	**24**	**19**
Year 4	**Session 2**		
ELEC4011	Ethics and Electrical Engineering Practice	3	2
ELEC4911	Thesis – Part B	9	10
	2 Professional Electives	12	8
	Total	**24**	**20**

Notes: 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 subjects may be prerequisites for the Professional Electives they choose in Year 4.

COMP2011 may be taken at the higher level (COMP2711).

3643 Telecommunications – Full-time Program

Bachelor of Engineering BE

Year 1	**Session 1**	**UOC**	**HPW**
ELEC1011	Electrical Engineering 1	6	6
MATH1090	Discrete Mathematics	3	3
MATH1141	Higher Mathematics 1A	6	6
TELE1010	Introduction to Telecommunications	3	3
PHYS1131	Physics 1A	6	6
	Total	**24**	**24**
Year 1	**Session 2**		
COMP1011	Computing 1A	6	6
ELEC1041	Digital Circuits	6	4
MATH1241	Higher Mathematics 1B	6	6
PHYS1231	Physics 1B	6	6
	Total	**24**	**22**

Note: MATH1141 and MATH1241 may be taken at the ordinary level (MATH1131 and MATH1231).

Year 2	**Session 1**		
COMP1021	Computing 1B	6	6
ELEC2031	Circuits and Systems	3	3
ELEC2041	Microprocessors and Interfacing	6	4
MATH2111	Higher Several Variable Calculus	6	5
MATH2859	Probability, Statistics & Information	3	3
	Total	**24**	**21**
Year 2	**Session 2**		
ELEC2032	Electronics and Systems	3	3
ELEC2042	Real Time Instrumentation	3	3
TELE3018	Data Networks 1	6	4
MATH2620	Higher Complex Analysis	3	3
MATH2509	Linear Algebra for Engineers	3	3
	General Education	6	4
	Total	**24**	**20**

Note: MATH2620 and MATH2111 may be taken at the ordinary level (MATH2520 and MATH2011).

COMP1011 and COMP1021 may be taken at the higher level (COMP1711 and 1721).

Year 3	**Session 1**		
ELEC3006	Electronics A	6	5
PHYS2939	Electromagnetism	3	3
TELE3013	Telecommunication Systems 1	6	5
TELE4352	Data Networks 2	6	4
	General Education	3	2
	Total	**24**	**19**
Year 3	**Session 2**	**UOC**	**HPW**
ELEC3004	Signal Processing & Transform Methods	6	5
ELEC3017	Electrical Engineering Design	6	5
TELE3015	High Frequency Electromagnetics	3	3
	General Education	3	2
	1 Elective from		
COMP2011	Data Organisation	6	5
ELEC3014	Systems & Control 1	6	5
ELEC3016	Electronics B	6	5
ELEC3041	Real Time Engineering	6	5
	Total	**24**	**20**
Year 4	**Session 1**		
ELEC4010	Introduction to Management for Electrical Engineers	3	3
TELE4363	Telecommunication Systems 2	6	4
TELE4354	Network Management	6	4
TELE4910	Thesis Part A	3	4
	1 Professional elective	6	4
	Total	**24**	**19**
Year 4	**Session 2**		
ELEC4011	Ethics and Electrical Engineering Practice	3	2
TELE4911	Thesis Part B	9	10
	2 Professional electives	12	8
	Total	**24**	**20**

Notes: 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 (TELE4914 and TELE4915).

Students who intend to major in particular disciplines should note that certain Year 3 elective subjects may be prerequisites for the Professional Electives they choose in Year 4.

COMP2011 may be taken at the higher level (COMP2711).

3644 Photonic Engineering – Full-time Program

Bachelor of Engineering BE

Year 1	**Session 1**	**UOC**	**HPW**
PHTN1010	Introduction to Photonic Engineering	3	3
ELEC1011	Electrical Engineering 1	6	6
MATH1090	Discrete Mathematics	3	3
MATH1141	Higher Mathematics 1A	6	6
PHYS1131	Higher Physics 1A	6	6
	Total	**24**	**24**
Year 1	**Session 2**		
COMP1011	Computing 1A	6	6
ELEC1041	Digital Circuits	6	4
MATH1241	Higher Mathematics 1B	6	6
PHYS1231	Higher Physics 1B	6	6
	Total	**24**	**22**

Note: MATH1141 and MATH1241 may be taken at the ordinary level (MATH1131 and MATH1231).

Year 2	**Session 1**	**UOC**	**HPW**
COMP1021	Computing 1B	6	6
ELEC2031	Circuits and Systems	3	3
MATH2859	Probability, Statistics & Information	3	3
MATH2111	Higher Several Variable Calculus	6	5
PHYS2030	Laboratory A	3	3
PHYS2040	Quantum Physics	3	2
	Total	**24**	**22**
Year 2	**Session 2**		
ELEC2032	Electronics and Systems	3	3
PHYS2050	Electromagnetism	3	2
ELEC2042	Real Time Instrumentation	3	3
MATH2620	Higher Complex Analysis	3	3
MATH2130	Higher Mathematical Methods for Differential Equations	3	2.5
MATH2509	Linear Algebra for Engineers	3	3
	General Education	6	4
	Total	**24**	**20.5**

Note: MATH2111, MATH2620 and MATH2130 may be taken at the ordinary level (MATH2011, MATH2520 and MATH2120).

COMP1011 and COMP1021 may be taken at the higher level (COMP1711 and COMP1721).

Year 3	Session 1	UOC	HPW
ELEC3004	Signal Processing & Transform Methods	6	5
PHYS3030	Electromagnetism (Advanced)	3	2
PHYS3770	Laser & Spectroscopy Lab	3	4
ELEC3006	Electronics A	6	5
	General Education	6	4
	Total	**24**	**20**
Year 3	**Session 2**		
ELEC3017	Electrical Engineering Design	6	5
PHYS3060	Advanced Optics	3	2
PHYS3310	Physics of Solid State Devices	3	2
TELE3013	Telecommunication Systems 1	6	4
6 UOC from:			
ELEC2041	Microprocessors and Interfacing	6	5
ELEC3014	Systems and Control 1	6	5
TELE3018	Data Networks 1	6	5
COMP2011	Data Organisation	6	5
PHYS3010	Quantum Mechanics (Advanced)	3	2
PHYS3080	Solid State Physics	3	2
	Total	**24**	**18**

Note: 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 1	UOC	HPW
ELEC4010	Introduction to Management for Electrical Engineers	3	3
ELEC4910	Thesis – Part A	3	4
PHYS4979	Photonic Devices & Effects	6	4
TELE4313	Optical Fibres	6	4
	1 Professional Electives	6	4
	Total	**24**	**19**
Year 4	**Session 2**		
ELEC4011	Ethics and Electrical Engineering Practice	3	2
ELEC4911	Thesis – Part B	9	10
	2 Professional electives	12	8
	Total	**24**	**20**

Notes: 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 subjects may be prerequisites for the Professional Electives they choose in Year 4.

3640, 3643 and 3644 BE in Electrical Engineering, Telecommunications and Photonic Engineering – Part-time Programs

Bachelor of Engineering BE

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 subjects 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.

Professional Electives for 3640 & 3643

Microelectronics		UOC	HPW	S1/S2
ELEC4503	Electronics C	6	4	1
ELEC4522	Microelectronics Design and Technology	6	4	1
ELEC4532	Integrated Digital Systems	6	4	2
Systems & Control				
ELEC4412	Systems and Control 2	6	4	1
ELEC4413	Systems and Control 3	6	4	2
Energy Systems				
ELEC4205	Electrical Energy Systems*	6	4	1
ELEC4216	Electrical Drive Systems*	6	4	2
ELEC4240	Power Electronics*	6	4	1
SOLA3540	Applied Photovoltaics*	6	4	1
Signal Processing				
ELEC4042	Signal Processing 2	6	4	1
ELEC4483	Biomedical Instrumentation, Measurement and Design	6	4	2
Telecommunications				
TELE4313	Optical Communications	6	4	1
TELE4323	Digital Modulation and Coding	6	4	1
TELE4363	Telecommunications Systems 2**	6	4	1
TELE4333	Wireless Data Communication Systems	6	4	2
TELE4343	Source Coding and Compression	6	4	2
TELE4352	Data Networks 2**	6	4	1
TELE4353	Mobile and Satellite Communication Systems	6	4	2
TELE4354	Network Management**	6	4	1
Computer Systems				
COMP3111	Software Engineering	6	4	1/2
COMP3211	Computer Organisation and Design	6	4	1/2
COMP3231	Operating Systems	6	4	2
COMP3311	Database Systems	6	4	2
COMP3411	Artificial Intelligence	6	4	2
MATH3411	Information, Codes and Ciphers	6	4	2
Business Administration				
ELEC4444	New Business Creation	6	4	2

Notes: **Not available for BE in Telecommunications students.*
***Core for BE in Telecommunications students.*

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.

Professional Electives for 3644

Microelectronics		UOC	HPW	S1/S2
ELEC4503	Electronics C	6	4	1
ELEC4522	Microelectronics Design and Technology	6	4	1
Systems & Control				
ELEC4412	Systems and Control 2	6	4	1
ELEC4413	Systems and Control 3	6	4	2
Signal Processing				
PHTN4310	Optical Signal Processing	6	4	2
ELEC4042	Signal Processing 2	6	4	1
ELEC4483	Biomedical Instrumentation, Measurement and Design	6	4	2
Telecommunications				
TELE4314	Optical Communications Systems	6	4	2
TELE4323	Digital Modulation and Coding	6	4	1
TELE4363	Telecommunications Systems 2	6	4	1
TELE4333	Wireless Data Communication Systems	6	4	2
TELE4343	Source Coding and Compression	6	4	2
TELE4352	Data Networks 2	6	4	1
TELE4353	Mobile and Satellite Communication Systems	6	4	2
Computer Systems				
COMP3111	Software Engineering	6	4	1/2
COMP3311	Database Systems	6	4	2
COMP3411	Artificial Intelligence	6	4	2
MATH3411	Information, Codes and Ciphers	6	4	2
Business Administration				
ELEC4444	New Business Creation	6	4	2

Physics		UOC	HPW	S1/S2
PHYS4949	Advanced Topics in Physics	6	4	2

Notes: 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.

Combined and Concurrent Degree Programs

Students may apply to the Faculty of Engineering for direct entry into one of the Faculty's combined or concurrent degree programs. The available programs are BE BA (Engineering and Arts), BE BSc (Engineering and Science, usually Computer Science, Mathematics or Physics), and BE MBiomedE (Bachelor of Engineering Master of Biomedical Engineering). 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.

Fast-Track Degree Programs

BE MEngSc (Bachelor of Engineering Master of Engineering Science) offers an accelerated completion of a postgraduate coursework program in engineering to high achieving students over 4.5 years full-time

Students already in a BE Program who maintain a credit average performance may qualify for transfer to one of the Combined Degree Programs. Students wishing to enrol in a combined program may do so only on the recommendation of the Head of School, with the approval of the Faculty of Engineering and either the Faculty of Arts, or the Faculty of Science, or the Concurrent Degree Program in the Postgraduate School of Biomedical Engineering as appropriate. Students who wish to enrol in, transfer into, or continue in a combined or concurrent course shall have complied with all the requirements for prerequisite study, sequencing and academic attainment (a credit average performance, i.e. 65% average) of both the Program Authorities concerned.

Students who commence a program but subsequently do not wish to proceed with both areas of study, or who fail to maintain a credit average performance, can revert to a single degree program with appropriate credit given for courses completed.

Students may transfer into a combined program after partially completing the requirements for either degree provided suitable courses have been studied. However, later choice of courses and the time taken to complete the program may be affected by earlier course selection. Thus, students considering combined degree programs should contact the School of Electrical Engineering and Telecommunications as early as possible in their academic career. Application for transfer to a combined program must be made in writing to the School Office for the approval of the Head of School.

All combined degree programs are administered by the School of Electrical Engineering and Telecommunications. The School offers the following combined concurrent and fast-track degree programs:

	Electrical Engineering	Telecommunications
BE BA	3720	3646
BE BSc	3725	3641
BE MBiomedE	3727	3723
BE MEngSc	3640	3643

Rules for all combined Degree programs

For Science and Arts, in addition to the BE course, students must complete 60 units of credit offered by the relevant faculty, comprising a major sequence within Science or 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.

3725 and 3720 Electrical Engineering/Bachelor of Science or Bachelor of Arts

Bachelor of Engineering Bachelor of Science or Bachelor of Arts
BE BSc or BE BA

Year 1

As for Program 3640

Year 2	Session 1	UOC	HPW
COMP1021	Computing 1B	6	6
ELEC2031	Circuits and Systems	3	3
ELEC2041	Microprocessors and Interfacing	6	4
MATH2111	Higher Several Variable Calculus	6	5
PHYS2939	Electromagnetism	3	3
	Total	**24**	**21**
Year 2	**Session 2**		
	Science/Arts Elective/Core	6	5
	Science/Arts Elective	6	5
ELEC2032	Electronics and Systems	3	3
ELEC2015	Electromagnetic Applications	3	3
MATH2620	Complex Analysis	3	3
MATH2859	Probability, Statistics & Information	3	3
	Total	**24**	**22**

Notes: 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).

COMP1011 and COMP1021 may be taken at the higher level (COMP1711 and COMP1721).

Year 3	Session 1	UOC	HPW
ELEC3004	Signal Processing & Transform Methods	6	5
ELEC3005	Electrical Energy 1	6	5
ELEC3006	Electronics A	6	5
	Year 2 Science/Arts elective	6	5
	Total	**24**	**20**
Year 3	**Session 2**		
ELEC3014	Systems & Control 1	6	5
ELEC2042	Real Time Instrumentation	3	3
ELEC3017	Electrical Engineering Design	6	5
MATH2509	Linear Algebra for Engineers	3	3
	1 ELEC elective (Year 3)	6	5
	Total	**24**	**21**
Year 4	**Session 1**		
	4 Year 3 Arts/Science electives	**24**	**20**
Year 4	**Session 2**		
	1 Year 3 Arts/Science elective	6	5
	1 ELEC elective (Year 3)	6	5
	2 electives [Arts, Science, ELEC (Year 3)]	12	10
	Total	**24**	**20**

Notes: ELEC (Year 3) electives are chosen from the Year 3 Elective list for 3640.

It will be possible to delay/advance electives by one 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.

3641 and 3646 Telecommunications/Bachelor of Science or Bachelor of Arts

Bachelor of Engineering Bachelor of Science or Bachelor of Arts
BE BSc or BE BA

Year 1

As for Program 3643

Year 2	Session 1	UOC	HPW
COMP1021	Computing 1B	6	6
ELEC2031	Circuits and Systems	3	3
ELEC2041	Microprocessors and Interfacing	6	4
MATH2111	Higher Several Variable Calculus	6	5
MATH2859	Probability, Statistics & Information	3	3
	Total	**24**	**21**
Year 2	**Session 2**		
	Arts/Science Core/Elective	6	5
	Arts/Science Elective	6	5
ELEC2032	Electronics and Systems	3	3
TELE3018	Data Networks 1	6	4
MATH2620	Higher Complex Analysis	3	3
	Total	**24**	**20**

Notes: 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).

COMP1011 and COMP1021 may be taken at the higher level (COMP1711 and COMP1721).

Year 3	Session 1	UOC	HPW
ELEC2042	Real Time Instrumentation	3	3
ELEC3006	Electronics A	6	5
PHYS2939	Electromagnetism	3	3
TELE3013	Telecommunication Systems 1	6	5
TELE4352	Data Networks 2	6	4
	Total	**24**	**20**
Year 3	**Session 2**		
ELEC3004	Signal Processing & Transform Methods	6	5
ELEC3017	Electrical Engineering Design	6	5
MATH2509	Linear Algebra for Engineers	3	3
TELE3015	Electromagnetic Applications	3	3
	Arts/Science Elective	6	5
	Total	**24**	**21**
Year 4	**Session 1**		
	Four Year3 Arts/Science electives	**24**	**20**
Year 4	**Session 2**		
ELEC3041	Real Time Engineering	6	5
	Three Year3/4 Arts/Science electives	18	15
	Total	**24**	**20**

Notes: It will be possible to delay/advance electives by one 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.

3640 Electrical Engineering/Master of Engineering Science – Plan ELECD13640

Bachelor of Engineering Master of Engineering Science

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 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).

3727 Electrical Engineering/Master of Biomedical Engineering

Bachelor of Engineering Master of Biomedical Engineering BE MBiomedE

Program 3727 is a concurrent BE in Electrical Engineering and Master of Biomedical Engineering.

Year 1	Session 1	UOC	HPW
BIOM1001	Professional Biomedical Studies	3	2
ELEC1011	Electrical Engineering 1	6	6
MATH1090	Discrete Mathematics	3	3
MATH1131	Mathematics 1A *or*		
MATH1141	Higher Mathematics 1A	6	6
PHYS1131	Higher Physics 1A	6	6
	Total	**24**	**23**
Year 1	**Session 2**	**UOC**	**HPW**
BIOM2010	Biomedical Engineering Practice	3	2
CHEM1817	Chemistry 1 ME	3	3
COMP1011	Computing 1A	6	6
MATH1231	Mathematics 1B *or*		
MATH1241	Higher Mathematics 1B	6	6
PHYS1231	Higher Physics 1B	6	6
	Total	**24**	**23**
Year 2	**Session 1**	**UOC**	**HPW**
BIOM9420	Clinical Laboratory Science	6	3
COMP1021	Computing 1B	6	6
ELEC2031	Circuits and Systems	3	3
MATH2011	Several Variable Calculus	6	4
PHYS2939	Electromagnetism	3	3
	Total	**24**	**19**
Year 2	**Session 2**	**UOC**	**HPW**
ELEC1041	Digital Circuits	6	4
ELEC2015	Electromagnetic Applications	3	3
ELEC2032	Electronics and Systems	3	3
	General Education	3	2
MATH2509	Linear Algebra for Engineers	3	3
MATH2520	Complex Analysis *or*		
MATH2620	Higher Complex Analysis	3	3
MATH2859	Probability, Statistics and Information	3	3
	Total	**24**	**21**
Year 3	**Session 1**	**UOC**	**HPW**
ELEC2041	Microprocessors and Interfacing	6	4
ELEC3004	Signal Processing and Transform Methods	6	5
ELEC3006	Electronics A	6	5
ELEC4010	Intro to Management for Electrical Engineers	3	3
	General Education	3	2
	Total	**24**	**19**
Year 3	**Session 2**	**UOC**	**HPW**
BIOM9XXX	Biomedical Engineering Elective	6	3
ELEC2042	Real Time Instrumentation	3	3
ELEC3014	Systems and Control 1	6	5
ELEC3017	Electrical Engineering Design	6	5
ELEC4011	Ethics and Electrical Engineering Practice	3	2
	Total	**24**	**18**
Year 4	**Session 1**	**UOC**	**HPW**
BIOM9430	Electromedical Standards	6	3
BIOM9XXX	Biomedical Engineering Elective	6	3
ELEC3005	Electrical Energy 1	6	5
PHPH2101	Physiology 1A	6	6
	Total	**24**	**17**
Year 4	**Session 2**	**UOC**	**HPW**
BIOM5910	Thesis Part A	6	8
ELEC4483	Biomedical Instrumentation, Measurement and Design	6	4
ELECXXXX	Elective from Stage 3 List	6	4
PHPH2201	Physiology 1B	6	6
	Total	**24**	**22**

Year 5	Session 1	UOC	HPW
BIOM5911	Thesis Part B	6	8
BIOM9XXX	Biomedical Engineering Elective	6	3
BIOM9XXX	Biomedical Engineering Elective	6	3
ELECXXXX	Professional Elective	6	4
	Total	**24**	**18**

Year 5	Session 2	UOC	HPW
BIOM9410	Regulatory Requirements for Biomedical Technology	6	3
BIOM9913	Masters Project or 2 Biomedical Electives	12	6
ELECXXXX	Elective from Stage 3 List	6	4
	Total	**24**	**13**

Preferred Biomedical Engineering Electives		UOC	HPW
Session 2			
BIOM9027	Medical Imaging	6	3

Other Biomedical Engineering Electives		UOC	HPW
Session 1			
BIOM9060	Biomedical Systems Analysis	6	3
BIOM9510	Introductory Biomechanics	6	3
BIOM9701	Dynamics of the Cardiovascular System	6	3
SESC9451	Experimental Biomechanics	6	3
Session 2			
ANAT2511	Fundamentals of Anatomy	6	6
BIOM9321	Physiological Fluid Mechanics	6	3
BIOM9332	Biocompatibility	6	3
BIOM9440	Biomedical Practical Measurement	6	3
BIOM9450	Clinical Information Systems	6	3
BIOM9541	Mechanics of the Human Body	6	3
BIOM9551	Biomechanics of Physical Rehabilitation	6	3
BIOM9561	Mechanical Properties of Biomaterials	6	3

3723 Telecommunications/Master of Biomedical Engineering

Bachelor of Engineering Master of Biomedical Engineering
BE MBiomedE

Program 3723 is a concurrent BE in Telecommunications and Master of Biomedical Engineering

Year 1	Session 1	UOC	HPW
BIOM1001	Professional Biomedical Studies	3	2
ELEC1011	Electrical Engineering 1	6	6
MATH1090	Discrete Mathematics	3	3
MATH1131	Mathematics 1A *or*		
MATH1141	Higher Mathematics 1A	6	6
PHYS1131	Higher Physics 1A	6	6
	Total	**24**	**23**

Year 1	Session 2	UOC	HPW
BIOM2010	Biomedical Engineering Practice	3	2
CHEM1817	Chemistry 1 ME	3	3
COMP1011	Computing 1A	6	6
MATH1231	Mathematics 1B *or*		
MATH1241	Higher Mathematics 1B	6	6
PHYS1231	Higher Physics 1B	6	6
	Total	**24**	**23**

Year 2	Session 1	UOC	HPW
BIOM9420	Clinical Laboratory Science	6	3
COMP1021	Computing 1B	6	6
ELEC2031	Circuits and Systems	3	3
MATH2011	Several Variable Calculus	6	4
MATH2859	Probability, Statistics and Information	3	3
	Total	**24**	**19**

Year 2	Session 2	UOC	HPW
ELEC1041	Digital Circuits	6	4
ELEC2032	Electronics and Systems	3	3
ELEC2042	Real Time Instrumentation	3	3
MATH2509	Linear Algebra for Engineers	3	3
MATH2520	Complex Analysis *or*		
MATH2620	Higher Complex Analysis	3	3
TELE3018	Data Networks 1	6	4
	Total	**24**	**20**

Year 3	Session 1	UOC	HPW
ELEC3004	Signal Processing and Transform Methods	6	5
ELEC3006	Electronics A	6	5
ELEC4010	Intro to Management for Electrical Engineers	3	3
PHYS2939	Electromagnetism	3	3
TELE4352	Data Networks 2	6	4
	Total	**24**	**20**

Year 3	Session 2	UOC	HPW
BIOM9XXX	Biomedical Engineering Elective	6	3
ELEC3017	Electrical Engineering Design	6	5
ELEC4011	Ethics and Electrical Engineering Practice	3	2
TELE3013	Telecommunications Systems 1	6	4
TELE3015	High Frequency Electromagnetics	3	2
	Total	**24**	**16**

Year 4	Session 1	UOC	HPW
BIOM9430	Electromedical Standards	6	3
ELEC2041	Microprocessors and Interfacing	6	4
ELECXXXX	Elective from Stage 3 List	6	4
PHPH2101	Physiology 1A	6	6
	Total	**24**	**17**

Year 4	Session 2	UOC	HPW
BIOM5910	Thesis Part A	6	8
	General Education	6	4
PHPH2201	Physiology 1B	6	6
TELE4354	Network Management	6	4
	Total	**24**	**22**

Year 5	Session 1	UOC	HPW
BIOM5911	Thesis Part B	6	8
BIOM9XXX	Biomedical Engineering Elective	6	3
BIOM9XXX	Biomedical Engineering *or*		
ELECXXXX	Electrical Professional Elective	6	3
TELE4363	Telecommunication Systems 2	6	4
	Total	**24**	**18**

Year 5	Session 2	UOC	HPW
BIOM9410	Regulatory Requirements for Biomedical Technology	6	3
BIOM9913	Masters Project or 2 Biomedical Electives	12	6
BIOM9XXX	Biomedical Engineering Elective	6	3
	Total	**24**	**12**

Preferred Biomedical Engineering Electives		UOC	HPW
Session 1			
BIOM9613	Medical Instrumentation	6	3
Session 2			
BIOM9027	Medical Imaging	6	3
BIOM9440	Biomedical Practical Measurement	6	3

Other Biomedical Engineering Electives

Session 1		UOC	HPW
BIOM9060	Biomedical Systems Analysis	6	3
BIOM9510	Introductory Biomechanics	6	3
BIOM9601	Biomedical Applications of Microcomputers	6	3
BIOM9701	Dynamics of the Cardiovascular System	6	3
SESC9451	Experimental Biomechanics	6	3
Session 2		**UOC**	**HPW**
ANAT2511	Fundamentals of Anatomy	6	3
BIOM9311	Mass Transfer in Medicine	6	3
BIOM9321	Physiological Fluid Mechanics	6	3
BIOM9332	Biocompatibility	6	3
BIOM9450	Clinical Information Systems	6	3
BIOM9541	Mechanics of the Human Body	6	3
BIOM9551	Biomechanics of Physical Rehabilitation	6	3
BIOM9561	Mechanical Properties of Biomaterials	6	3

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: Dr JM Challen
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, Commerce 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.

Program Outlines

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 area of computer science, materials science, mathematics, physics, statistics 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) degrees.

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 contained in this Handbook. As well, 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 *failure*, 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

The University's *NewSouth 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 Mechatronic Engineering
MTRNA13710.

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 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.

Single Degree Programs

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)

		HPW		UOC
Year 1 of all plans		**S1**	**S2**	
CHEM1817	Chemistry 1ME	-	3	3
MANF1130	Introduction to Manufacturing	-	7	6
MATH1131	Mathematics 1A	6	-	6
MATH1231	Mathematics 1B	-	6	6
MATS9520	Engineering Materials		3	3
MECH1120	Design and the Engineering Profession	3	-	3
MECH1300	Engineering Mechanics 1	4	-	6
MECH1400	Mechanics of Solids 1	-	4	6
MECH1500	Computing 1M	3	-	3
PHYS1169	Physics ICME	6	-	6
Year 2 of all plans				
ELEC0807	Electrical Engineering 1E	-	4	6
MATH2029	Engineering Mathematics 2A	6	-	6
MATH2039	Engineering Mathematics 2B	-	3	3
MATH2839	Statistics SM	-	3	3
MECH2101	Machine Design A	3	-	3
MECH2102	Machine Design B	-	3	3
MECH2300	Engineering Mechanics 2	3	-	3
MECH2411	Mechanics of Solids 2A	3	-	3
MECH2412	Mechanics of Solids 2B	-	3	3
MECH2611	Fluid Mechanics A	2	-	3
MECH2711	Thermodynamics A	2	-	3
MECH2612	Fluid Mechanics B	-	2	3
MECH2712	Thermodynamics B	-	2	3
	General Education Elective	2	-	3

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 he gives his recommendation.

		HPW		UOC
Year 3		**S1**	**S2**	
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 Systems	-	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
Year 4				
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 he gives his 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

		HPW S1	HPW S2	UOC
NAVL3400	Ship Structures 1	-	3	3
NAVL3603	Ship Hydrodynamics A	6	-	6
NAVL3604	Ship Hydrodynamics 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

Combined Degree Programs

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)

The combined degree program 3711 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 the standard 24 units of credit of courses and hence the 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 Science 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 single degree Engineering program and be given appropriate credit for courses satisfactorily completed.

		HPW S1	HPW S2	UOC
Year 1				
CHEM1817	Chemistry 1ME	-	3	3
MANF1130	Introduction to Manufacturing	-	7	6
MATH1131	Mathematics 1A	6	-	6
MATH1231	Mathematics 1B	-	6	6
MATS9520	Engineering Materials	-	3	3
MECH1120	Design and the Engineering Profession	3	-	3
MECH1500	Computing 1M	3	-	3
PHYS1169	Physics 1CME	6	-	6
	Science course	3	-	6
	Science course	-	3	6
Year 2				
MATH2029	Engineering Mathematics 2A	6	-	6
MATH2039	Engineering Mathematics 2B	-	3	3
MATH2839	Statistics SM	-	3	3
MECH1300	Engineering Mechanics 1	4	-	6
MECH1400	Mechanics of Solids 1	-	4	6
MECH2611	Fluid Mechanics A	2	-	3
MECH2711	Thermodynamics A	2	-	3
MECH2612	Fluid Mechanics B	-	2	3
MECH2712	Thermodynamics B	-	2	3
	Science course	3	-	6
	Science course	-	3	6
Year 3				
ELEC0807	Electrical Engineering 1E	-	4	6
MECH2101	Machine Design A	3	-	3
MECH2102	Machine Design B	-	3	3
MECH2300	Engineering Mechanics 2	-	3	3
MECH2411	Mechanics of Solids 2A	3	-	3
MECH2412	Mechanics of Solids 2B	-	3	3
MECH3000	Professional Responsibilities	-	3	3
	Science course	3	-	6
	Science course	3	-	6
	Science course	3	-	6
	Science course	-	3	6
Year 4				
	S1 Year 3 engineering plan, less General Education	x	-	18
	S2 Year 3 engineering plan, less General Education & MECH3000	-	x	18
	Science course	3	-	6
	Science course	-	3	6
Year 5				
	S1 Year 4 engineering plan	x	-	24
	S2 Year 4 engineering plan	-	x	24

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)

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. The basic BE BA engineering plans are the same as the BE BSc plans described immediately above. 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 program 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.

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.

Students should work out for themselves the Arts plan they would like to add to their chosen Engineering plan. The Faculty of Arts and Social Sciences 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 Faculty of

Arts and Social Sciences 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.

Rules

1. In addition to their chosen Engineering plan, students must complete an approved Arts plan which totals at least 60 units of credit of Arts courses and includes a major Arts sequence.

Mathematics majors are not usually permitted. BE BSc combined degrees are more appropriate for this.

2. There will be a testamur for each degree 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.

Fast-Track Program

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. The first three years are unchanged.

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 M EngSc 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 M EngSc 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 M EngSc 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.

Concurrent Degree Programs

Bachelor of Engineering/Master of Biomedical Engineering

BE MBiomedE

3683 Mechanical Engineering (plan MECHA13683)/Master of Biomedical Engineering (plan BIOMA13683)

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.

		HPW		UOC
Year 1		**S1**	**S2**	
BIOM1001	Professional Biomedical Studies	2	-	3
BIOM2010	Biomedical Engineering Practice	-	2	3
CHEM1817	Chemistry 1ME	-	3	3
MANF1130	Introduction to Manufacturing	-	7	6
MATH1131	Mathematics 1A	6	-	6
MATH1231	Mathematics 1B	-	6	6
MECH1120	Design and the Engineering Profession	3	-	3
MECH1300	Engineering Mechanics 1	4	-	6
MECH1400	Mechanics of Solids 1	-	4	6
PHYS1169	Physics ICME	6	-	6
Year 2				
BIOM9420	Clinical Laboratory Science	3	-	6
ELEC0807	Electrical Engineering 1E	-	4	6
MATH2029	Engineering Mathematics 2A	6	-	6
MATH2039	Engineering Mathematics 2B	-	3	3
MATH2839	Statistics SM	-	3	3
MATS9520	Engineering Materials	-	3	3
MECH1500	Computing 1M	3	-	3
MECH2411	Mechanics of Solids 2A	3	-	3
MECH2412	Mechanics of Solids 2B	-	3	3
MECH2611	Fluid Mechanics A	2	-	3
MECH2711	Thermodynamics A	2	-	3
MECH2612	Fluid Mechanics B	-	2	3
MECH2712	Thermodynamics B	-	2	3
Year 3				
ANAT2511	Fundamentals of Anatomy	-	6	6
MECH2101	Machine Design A	3	-	3
MECH2102	Machine Design B	-	3	3
MECH2300	Engineering Mechanics 2	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
MECH3520	Programming and Numerical Methods	3	-	3
MECH3601	Thermofluid System Design	3	-	3
MECH3602	Advanced Thermodynamics	-	3	3
MTRN3212	Principles of Control	-	3	3
	Biomedical Engineering Elective	3	-	6
Year 4				
BIOM5001	Thesis Part A	-	0	6
MANF4430	Management for Engineers	6	-	6
MECH3101	Machine Systems Design A	3	-	3
MECH3102	Machine Systems Design B	-	3	3
MECH3400	Mechanics of Solids 3	3	-	3
MECH4001	Communications for Professional Engineers	-	3	3
PHPH2101	Physiology 1A	6	-	6
PHPH2201	Physiology 1B	-	6	6
	Biomedical Engineering Elective	-	3	6
	Mech Technical Elective	3	-	6
Year 5				
BIOM5002	Thesis Part B	0	-	9
BIOM9410	Regulatory Requirements of Biotechnology	-	3	6
MECH3000	Professional Responsibilities	-	3	3
	Biomedical Engineering Electives	6	-	12
	Biomedical Engineering Electives*	-	6	12
	General Education Elective	2	-	3
	General Education Elective	-	2	3

***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.

3688 Mechatronic Engineering (plan MTRNA13688)/Master of Biomedical Engineering (plan BIOMA13688)

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.

		HPW		UOC
Year 1		**S1**	**S2**	
BIOM1001	Professional Biomedical Studies	2	-	3
BIOM2010	Biomedical Engineering Practice	-	2	3
CHEM1817	Chemistry 1ME	-	3	3
MANF1130	Introduction to Manufacturing	-	7	6
MATH1131	Mathematics 1A	6	-	6
MATH1231	Mathematics 1B	-	6	6
MECH1120	Design and the Engineering Profession	3	-	3
MECH1300	Engineering Mechanics 1	4	-	6
MECH1400	Mechanics of Solids 1	-	4	6
PHYS1169	Physics ICME	6	-	6
Year 2				
BIOM9420	Clinical Laboratory Science	3	-	6
ELEC0807	Electrical Engineering 1E	-	4	6
MATH2029	Engineering Mathematics 2A	6	-	6
MATH2039	Engineering Mathematics 2B	-	3	3
MATH2839	Statistics SM	-	3	3
MATS9520	Engineering Materials	-	3	3
MECH1500	Computing 1M	3	-	3
MECH2411	Mechanics of Solids 2A	3	-	3
MECH2412	Mechanics of Solids 2B	-	3	3
MECH2611	Fluid Mechanics A	2	-	3
MECH2711	Thermodynamics A	2	-	3
MECH2612	Fluid Mechanics B	-	2	3
MECH2712	Thermodynamics B	-	2	3
Year 3				
ANAT2511	Fundamentals of Anatomy	-	6	6
MECH2101	Machine Design A	3	-	3
MECH2102	Machine Design B	-	3	3
MECH2300	Engineering Mechanics 2	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
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
	Biomedical Engineering Elective	3	-	6
Year 4				
BIOM5001	Thesis Part A	-	0	6
ELEC2042	Real Time Instrumentation	-	3	3
MANF4430	Management for Engineers	6	-	6
MECH3101	Machine Systems Design A	3	-	3
MECH3400	Mechanics of Solids 3	3	-	3
MECH3601	Thermofluid System Design	3	-	3
MECH4001	Communications for Professional Engineers	-	3	3
MTRN4221	Industrial Robotics	3	-	3
PHPH2101	Physiology 1A	6	-	6
PHPH2201	Physiology 1B	-	6	6
	Biomedical Engineering Elective	-	3	6
Year 5				
BIOM5002	Thesis Part B	0	-	9
BIOM9410	Regulatory Requirements of Biotechnology	-	3	6
BIOM9613	Medical Instrumentation	3	-	6
MECH3000	Professional Responsibilities	-	3	3
	Biomedical Engineering Electives*	-	6	12
	Mtrn Technical Elective	3	-	6
	General Education Elective	2	-	3
	General Education Elective	-	2	3

***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.

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**

Program Outlines

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 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.

3140 Mining Engineering – Full-time Program

Bachelor of Engineering BE

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.

		HPW		UOC
Year 1		**S1**	**S2**	
GEOS1111	Fundamentals of Geology	4	-	6
MATH1131	Maths 1A	6	-	6
MINE1010	Introduction to Mining Engineering	4	-	6
PHYS1169	Physics	6	-	6
CHEM1817	Chemistry 1 ME	-	3	3
MATH1231	Maths 1B	-	6	6
MATS9410	Materials for Mining Engineers	-	3	3
MINE1020	Mining Industry Practice	-	4	6
MINE1300	Applied Mechanics	-	4	6
	Total	**20**	**20**	**48**
Year 2				
ELEC0809	Electric Power Engineering	3	-	3
MATH2029	Engineering Maths 1	6	-	6
MINE2310	Structural Mechanics	4	-	6
MINE2500	Fluids and Thermodynamics	4	-	6
MINE2700	Mining Data Analysis	2	-	3
GMAT0443	Mine Surveying	-	3	3
MATH2039	Engineering Maths 2	-	3	3
MINE2010	Mining Project Development	-	4	6
MINE2320	Mining Stress Analysis	-	3	3
	3 x General Education electives	-	6	9
	Total	**20**	**20**	**48**
Year 3				
GEOS3300	Mine Geology	3	-	3
MINE3300	Mining Geomechanics	4	-	6
MINE3410	Coal Mining Systems	4	-	6
MINE3420	Metal Mining Systems	4	-	6
MINE3620	Mine Infrastructure and Services	3	-	3
MINE3210	Mineral Resources & Reserves Modelling		2	3
MINE3500	Mine Workplace Environment	-	5	6
MINE3610	Excavation Engineering	-	5	6
MINE3710	Mine Economics & Business Systems	-	4	6
MINE3800	Mineral Processing	-	3	3
	Total	**18**	**19**	**48**
Year 4				
MINE4210	Mine Planning	5	-	6
MINE4300	Geotechnical Engineering	5	-	6
MINE4410	Industry Applications	4	-	6
MINE4700	Mining Law	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
MINE4500	Sustainable Mining Practices	-	2	3
MINE4420	Thesis A	-	5	6
	Mining elective (see below)	-	3	3
	General Education	-	2	3
	Total	**18**	**19**	**48**

Mining electives (select one)

MINE4800	Mine Simulation & Modelling
MINE4805	Mineral Process Technology
MINE4810	Computational Methods in Geomechanics

OR *students may select from the following electives*

1. 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
ECON5125	Fundamental Knowledge in Environmental Management: Economics
IEST5001	Frameworks for Environmental Management
IEST5002	Tools for Environmental Management
LAWS3439	Fundamental Knowledge in Environmental Management: Law
SCTS5317	Fundamental Knowledge in Environmental Management: Social Science

2. With the approval of the Head of School and subject to the student having achieved at least a credit average in their previous studies, students may undertake MINE8780 Environmental Management in Mining in lieu of MINE4500 and one 3 UOC Mining elective.

3142 Mining Engineering/Bachelor of Science

Bachelor of Engineering Bachelor of Science BE BSc

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. Contact the School of Mining Engineering for more information.

3144 Mining Engineering/Bachelor of Arts

Bachelor of Engineering Bachelor of Arts BE BA

A wide range of options is available in this five 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 program 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. Contact the School of Mining Engineering for more information.

3146 Civil Engineering and 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.

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 Session1, students undertake four 6 UOC Mining MEngSc courses according to their specialisation 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.

Program Outlines

3045 Petroleum Engineering – Full-time (Hons)

Bachelor of Engineering BE

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.

		HPW		UOC
Stage 1		**S1**	**S2**	
PTRL1010	Introduction to the Petroleum Industry	3	-	3
PTRL1013	Computing for Petroleum Engineers	-	3	6
PTRL1016	Reservoir Rock and Fluid Properties	-	6	6
CEIC1020	Introduction to Chemical Engineering	-	6	6
MECH0130	Engineering Drawing & Solid Modelling	3	-	3
CHEM1011	Fundamentals of Chemistry 1A	6	-	6
PHYS1169	Physics 1	6	-	6
MATH1131	Math 1A or	6	-	6
MATH1141	Higher Math 1A			
MATH1231	Math 1B or	-	6	6
MATH1241	Higher Math 1B			
Total	**HPW Session 1**	**24**		
	HPW Session 2		**21**	
	Units of credit			**48**
Stage 2				
PTRL2010	Business Communications & Practices for Engineers		3	6
PTRL2014	Fluid Dynamics in Porous Media	3	-	3
PTRL2015	Well Drilling Equip & Operations	-	3	3
PTRL2016	Introduction to Petrophysics	-	3	3
CVEN1023	Statics	3	-	3
MATH2020	Mathematics 2A	2	-	3
MATH2030	Mathematics 2B	-	2	3
MATH2899	Applied Statistics CE	-	3	3
CEIC2110	Material and Energy Balances	3	-	3
CEIC2120	Flow of Fluids	3	-	3
CEIC2130	Heat Transfer	-	3	3
GEOS3321	Elements of Petroleum Geology	4		6
GEN ED	General Education	2	2	6
Total	**HPW Session 1**	**20**		
	HPW Session 2		**19**	
	Units of credit			**48**
Stage 3				
PTRL3008	Reservoir Engineering A	3	-	6
PTRL3009	Reservoir Engineering B	-	3	6
PTRL3013	Reservoir Characterisation& Modelling	-	3	3
PTRL3016	Field Dev. Geology for Petroleum Eng.	3	-	3
PTRL3023	Formation Evaluation	-	6	6
PTRL3024	Drilling Fluids and Cementing	-	6	6
PTRL3025	Petroleum Economics	6	-	6
	General Education	2	2	6
Electives:				
PTRL3021	Design Project	4	-	6
SESC9711	Environment Planning and Assessment	3	-	6
Total	**HPW Session 1**	**18**		
	HPW Session 2		**20**	
	Units of credit			**48**
Students must take 6 UOC of 'electives' in Stage 3				
Stage 4				
PTRL4001	Integrated Oil/Gas Field Evaluation	-	6	9
PTRL4015	Numerical Reservoir Simulation	-	3	3
PTRL4016	Natural Gas Engineering	3	-	3
PTRL4017	Well Technology	6	-	6
PTRL4018	Petroleum Production Engineering	-	3	3
GEOS3331	Reservoir Geophysics	3	-	6
MARK1012	Marketing Fundamentals	-	4	6
SESC9221	Major Hazards Management	3	-	6
Electives:				
GEOL5412	Special Topics in Petroleum Geoscience	3		3
SESC4310	Health, Safety, Environmental Management		2	3
Total	**HPW Session 1**	**18**		
	HPW Session 2		**18**	
	Units of credit			**48**
Student must take 6 UOC of 'electives' in Stage 4.				

School of Surveying and Spatial Information Systems

Head of School: Associate Professor A H W Kearsley
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 Program

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 in Computer Science Program

This combined degree program of five years full-time study enables a student to qualify for the award of the two degrees of BSc in Computer Science and BE in Surveying & SIS. This program is open to all students who satisfy both the Surveying & SIS and Computer Science entry conditions.

The program is designed for those wishing to broaden their career options, in Surveying, Spatial Information Systems and Computer Science. The content of the program comprises courses from the BSc in Computer Science and BE degree programs, with some variations to accommodate the requirements of both degrees.

3747 Bachelor of Engineering in Surveying & SIS Bachelor of Arts Program

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.

3741 Bachelor of Engineering in Surveying & SIS / Master of Engineering Science Program

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.

Computing Requirements

Information regarding recommended computing equipment and software for the courses offered by the School is available from the School Office.

Program Outlines

3741 Surveying and Spatial Information Systems

Bachelor of Engineering BE

		HPW		UOC
Year 1		**S1**	**S2**	
GMAT1100	Principles of Surveying	5	-	6
GMAT1300	Computing Applications in Geomatics	4	-	6
MATH1131	Mathematics 1A *or*	6	-	6
MATH 1141	Higher Mathematics 1A			
PHYS1189	Physics 1	6	-	6
GMAT1150	Survey Methods & Computations	-	5	6
GMAT1200	Visualisation of Spatial Data	-	4	6
GMAT1400	Land Studies in Geomatics	-	5	6
MATH 1231	Mathematics 1B *or*	-	6	6
MATH1241	Higher Mathematics 1B			
Total	**HPW Session 1**	**21**		
	HPW Session 2		**21**	
	Units of credit			**48**
Year 2				
GMAT2100	Electronic Surveying Instrumentation: Principles and Practice	5	-	6
GMAT2350	Computing for Spatial Information Sciences	3	-	3
GMAT2700	Geometry of Coord. Ref. Systems	5	-	6
MATH2829	Statistics SU	3	-	3
PHYS2969	Physics of Measurements	3	-	3
	General Education courses	2	2	6
MATH 2019	Engineering Mathematics 2CE	-	5	6
GMAT2110	Electronic & GPS Positioning Technologies	-	5	6
GMAT2200	Geographic Inf. Systems & CAD	-	5	6
GMAT2300	Analysis of Observations	-	3	3
Total	**HPW Session 1**	**21**		
	HPW Session 2		**20**	
	Units of credit			**48**

The program structure for Years 3 and 4 of the program depends on the electives chosen by students.

Year 3				
GMAT3200	Geospatial Information Technologies and Application	5	-	6
GMAT3400	Cadastral Surveying 1	3	-	3
	General Education course/s	2	2	6
	Session 1 Electives			12
GMAT3500	Photogrammetry & Remote Sensing	-	5	6
GMAT3410	Land Economics & Valuation	-	2	3
GMAT3150	Field Projects	-	5	6
	Session 2 Electives			6
	Total Units of credit			**48**
Electives: Session 1				
CVEN0646	Water and Wastewater Engineering	3	-	3
GMAT3100	Surveying Applications	5	-	6
BENV2901	City Planning Today	2	-	3
COMP1011	Computing 1A	6	-	6
MATH1081	Discrete Mathematics	6	-	6
Electives: Session 2				
CVEN0656	Soil and Pavement Engineering	-	3	3
GMAT3450	Cadastral Surveying 2	-	3	3
COMP1011	Computing 1A	-	6	6
MATH1081	Discrete Mathematics	-	6	6
COMP1021	Computing 1B	-	6	6
COMP2011	Data Organisation	-	5	6

		HPW		UOC
Year 4		**S1**	**S2**	
GMAT4000	Thesis Part A	2	-	3
GMAT4001	Thesis Part B	-	8	9
GMAT4700	Project Management 1	3	-	3
GMAT4750	Project Management 2	-	3	3
GMAT4850	Surveying and Spatial Information Systems for Sustainability	3	-	3
	Session 1 Electives			15
	Session 2 Electives			12
Electives				
Any remaining Year 3 electives and				
GMAT4020	Project in Surveying and Spatial Information Systems	5 or 5		6
GMAT4400	Land Manag & Devel Proj. 1	2	-	6
GMAT4450	Land Manag & Devel Proj. 2	-	2	6
GMAT4900	Principles of GNSS Positioning	3	-	6
GMAT4910	Modern Navigation & Pos	-	3	6
GMAT4410	Land Subdivision & Development	3	-	3
GMAT9211	Introduction to Geodesy	-	3	6
GMAT9121	Network & Deformation Analysis	3	-	6
PLAN1122	Development Processes	-	3	6
PLAN2111	Economics, Planning & Development	3	-	6
GEOH3911	Environmental Impact Assessment			3

The following electives 5 HPW, 6 UOC courses may be chosen once COMP1011, COMP1021 and MATH1081 have been completed:

COMP2021 COMP2021 COMP2041 COMP3111 COMP2411 COMP3121 COMP3211 COMP3131 COMP3231 COMP3221 COMP3241 COMP3311 COMP3421 COMP3331 COMP3511 COMP3411and 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

Combined Programs

3746 Surveying and Spatial Information Systems/ Bachelor of Science (Computer Science)

Bachelor of Engineering Bachelor of Science in Computer Science BE BSc

The structure of this program is flexible to accommodate timetabling but a recommended program which will satisfy pre-requisites is:

Year 1

Session 1: COMP1011, GMAT1100, MATH1131 or MATH1141, PHYS1189.

Session 2: COMP1021, GMAT1150, MATH1231 or MATH1241, and Year 1 GMAT elective (either GMAT1400 Land Studies in Geomatics, or GMAT1200 Visualisation of Spatial Data)

Year 2

Session 1: GMAT2100, GMAT2700, MATH1081, MATH2829, PHYS2969

Session 2: GMAT2110, GMAT2200, GMAT2300, COMP2011, and Year 2 free elective

Year 3

Session 1: COMP2 (a Level 2 computing elective), GMAT3200, GMAT3400, Year 3 electives: CVEN0646, GMAT3100, PLAN1093, General Education course/s

Session 2: GMAT3410, GMAT3450, GMAT3500, COMP 2 (a Level 2 computing elective), Year 3 electives: CVEN 0656, GMAT3150, General Education course/s

Year 4

Session 1: GMAT4700, COMP3 (a Level 3 computing elective), GMAT4850, Year 4 GMAT electives from: GMAT4400, GMAT4410, GMAT4900, GMAT9121

Session 2: GMAT4750, COMP3 (a Level 3 computing elective) and Year 4 GMAT electives from: GMAT4020, GMAT4450, GMAT4910, GMAT9211

Year 5

Session 1: GMAT4000 (Thesis Part A), COMP3 (2 Level 3 Comp Sci & Eng. electives totalling 12 units of credit)

Year 5 electives (totalling 9 units of credit)

Session 2: GMAT4001 (Thesis Part B), COMP3 (a Level 3 Comp Sci & 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.

3747 Surveying and Spatial Information Systems/ Bachelor of Arts

Bachelor of Engineering Bachelor of Arts BE BA

Organisation

The BE (Surveying and Spatial Information Systems)/Bachelor of Arts 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 while 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.

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 programs 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 areas of:

Chinese Studies; Education; English; Environmental Studies*; French; German Studies; Greek (Modern); History; History & Philosophy of Science; Indonesian Studies; Japanese Studies; Korean Studies; Linguistics; Music; Philosophy; Policy Studies; Politics and International Relations; Russian Studies; Sociology and Anthropology; Spanish and Latin American Studies; Theatre, Film and Dance.

** 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 program. Students must also complete a minor sequence of 24 units of credit in one of the other areas listed in Rule 2, 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 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 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 the Honours year. It should be noted that entry into a particular BA Honours program requires completion of courses additional to those specified under Rules 1–4.

1) There will be a separate testamur for each part of the combined degree program.

3741 Surveying and Spatial Information Systems/Master of Engineering Science Fast Track Program – 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 and Chemical Engineering. 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, and in Telecommunication Engineering.

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 and either the College of Electrical or Mechanical Engineering. The degrees are accorded substantial or complete recognition by overseas engineering institutions.

Bachelor of Engineering Master of Biomedical Engineering

BE MBiomed E

Please contact Biomedical Engineering or go to the Biomedical Engineering website (**www.gsbme.unsw.edu.au**) for specific information on the concurrent degrees:

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

3723 Bachelor of Engineering (Telecommunications Engineering)/Master of Biomedical Engineering

3749 Bachelor of Engineering(Software Engineering)/ Master of Biomedical Engineering

Courses offered in each program can be found listed under the 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**

Centre for Photovoltaic Engineering

Head of Centre: Professor S.R. Wenham
Director of Academic Studies: Dr J.E. Cotter
Postgraduate Co-coordinator: Dr Alistair Sproul
Administrative Office Manager: Ms. L. Cahill

The Centre for Photovoltaic Engineering was formerly part of the School of Electrical Engineering. 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 a new centre was established in 2003 merging the three centres into the UNSW Centre of Excellence for Advanced Silicon Photovoltaics and Photonics. The need for the centre and it's educational programs 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.

The Centre for Photovoltaic Engineering 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 15 years 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

Fast Track Program

3642	BE in Photovoltaics and Solar Energy / MEngSc	4.5 years

Industrial Training Requirements

Students must complete a minimum of 60 days of suitable industrial training. At least some of this should be carried out in Australia. Overseas employment must have prior approval. Students are required to submit to the school evidence from their employers confirming completion of the prescribed training, and a report summarising the work done, training received, and the professional role of an engineer made apparent through the training. Industrial training must be completed as part of ELEC4011 Ethics and Electrical Engineering Practice.

Computing Requirements

Information regarding recommended computing requirements for the courses offered by the Centre is available from the Centre for Photovoltaic Engineering office in room LG11 of the Electrical Engineering building.

Program Outlines

3642 Photovoltaics and Solar Energy – Full-time – Plan SOLAA13642

Bachelor of Engineering BE

Introduction

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 Post-Presentation Award at a recent major international photovoltaic conference in Rome. The program has been established in response to rapid growth in the industry in recent years in both manufacturing capacity and job creation.

The program includes training in technology development, manufacturing, quality control, reliability and lifecycle analysis, cell interconnection and encapsulation, the full range of solar cell applications, system design, maintenance and fault diagnosis, marketing, policy development and the use of all 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 with skills suiting most areas of the project, electronics engineers, control engineers, mechanical engineers for the aerodynamics and mechanical design, chemical engineers in relation to battery technology, power engineers for motor technology, biomedical engineers for monitoring driver performance and fatigue, computer engineers, and communications engineers for telemetry, etc.

A unique feature of this program is that in Year 2, students have the opportunity to select one of eleven 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 Head of the Centre. 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 School Office approval.

		HPW S1	HPW S2	UOC
Year 1				
SOLA1050	Introduction to Solar Energy, Photovoltaics & Computing 1	4	-	6
SOLA1051	Introduction to Solar Energy, Photovoltaics & Computing 2	-	3	3
SOLA1060	Chemical Processes for Renewable Energy Systems	-	3	3
ELEC1011	Electrical Engineering 1	6	-	6
ELEC1041	Digital Circuits	-	4	6
MATH1141*	Higher Mathematics 1A	6	-	6
MATH1241*	Higher Mathematics 1B	-	6	6
PHYS1131	Higher Physics 1A	6	-	6
PHYS1231	Higher Physics 1B	-	6	6
	Total	**22**	**22**	**48**

**MATH1141 and MATH1241 may be taken at the ordinary level (MATH1131 and MATH1231).*

		HPW S1	HPW S2	UOC
Year 2				
	Selected Strand	5	5	12
SOLA2051	Project in Photovoltaics and Solar Energy 1	5	-	6
SOLA2052	Project in Photovoltaics and Solar Energy 2	-	5	6
SOLA2020	Photovoltaic Technology and Manufacturing	5	-	6
SOLA2053	Sustainable and Renewable Energy Technology	-	4	6
SOLA2060	Introduction to Electronic Devices	-	2.5	3
MATH2859	Probability, Statistics and Information	-	3	3
MATH2120	Mathematical Methods of Differential Equations	2	-	3
	General Education electives	2	-	3
	Total	**19**	**19.5**	**48**
Year 3				
	Professional Electives	4	7	15
	Selected Strand (continued)	5	-	6
SOLA3010	Photovoltaics in Built Environment	-	4	6
SOLA3540	Applied Photovoltaics	4	-	6
SOLA3507	Solar Cells and Systems	-	4	6
ELEC2031	Circuits and Systems	-	3	3
	General Education electives	4	-	6
	Total	**17**	**18**	**48**
Year 4				
	Professional Electives	4	7	15
ELEC4010	Introduction to Management for Electrical Engineers	4	-	3
ELEC4011	Ethics and Electrical Engineering Practice	-	3	3
SOLA4012	Grid Connected Photovoltaic Systems	4	-	6
SOLA4910	Thesis Part A	5	-	6
SOLA4911	Thesis Part B	-	10	12
	General Education elective	2	-	3
	Total	**19**	**20**	**48**

Years 2 & 3 Strand Options

		HPW S1	HPW S2	UOC
Strand 1	***Computing***			
COMP1011	Computing 1A, *or*			
COMP1711	Higher Computing 1A*	6	-	6
COMP1021	Computing 1B, or			
COMP1721	Higher Computing 1B*	-	6	6
	And choice from the following to complete the strand:			
COMP2011	Data Organisation, *or*			
COMP2711	Higher Data Organisation*	5	-	6
COMP3111	Software Engineering	5	-	6
COMP3120	Introduction to Algorithms	2	-	3
ELEC2041	Microprocessors and Interfacing	4	-	6

** Students must choose whether to take the course at the ordinary or higher level.*

		HPW S1	HPW S2	UOC
Strand 2	***Electronics***			
ELEC2032	Electronics and Systems	3	-	3
ELEC3006	Electronics A	5	-	6
	And choice from the following to complete the strand:			
ELEC4240	Power Electronics	4	-	6
ELEC4503	Electronics C	5	-	6
ELEC4522	Microelectronics Design and Technology	4	-	6
ELEC3017	Electrical Engineering Design	-	5	6
Strand 3	***Electric Energy***			
ELEC2015	Electromagnetic Applications	-	3	3
ELEC3005	Electrical Energy 1	4	-	6
MATH2011	Several Variable Calculus	5	-	6
PHYS2939	Physics 2 (Electrical Engineering)	3	-	3
Strand 4	***Communications and Control***			
ELEC2032	Electronics and Systems	3	-	3
ELEC2042	Real Time Instrumentation	-	4	3
MATH2011	Several Variable Calculus	5	-	6
	And choice from the following to complete the strand:			
ELEC3004	Signal Processing and Transform Methods	5	-	6
ELEC3014	Systems and Control 1	-	5	6
MATH2509	Linear Algebra for Engineers	-	3	3
TELE3013	Telecommunication Systems	4	-	6
Strand 5	***Mathematics***			
MATH2011	Several Variable Calculus	5	-	6
MATH2520	Complex Analysis	-	2.5	3
MATH2509	Linear Algebra for Engineers	-	3	3
	And choice from the following to complete the strand:			
MATH3041	Mathematical Modelling for Real World Systems	4	-	6
MATH3121	Mathematical Methods	4	-	6
MATH3241	Fluid Dynamics	4	-	6
MATH3261	Atmosphere-Ocean Dynamics	-	4	6
Strand 6	***Mechanical Engineering***			
MECH2611	Fluid Mechanics A	2	-	3
MECH2612	Fluid Mechanics B	-	2	3
MECH2711	Thermodynamics A	2	-	3
MECH2712	Thermodynamics B	-	2	3
	And choice from the following to complete the strand:			
MECH3601	Thermofluid System Design	3	-	3
MECH3602	Advanced Thermodynamics	-	3	3
MECH9720	Solar Thermal Energy Design	-	3	6
MECH9740	Power Plant Engineering	-	3	6
Strand 7	***Civil Engineering****			
CVEN1023	Statics	3	-	4
CVEN1026	Engineering Materials 1	-	3	4
CVEN1531	Intro to Water Chemistry	-	4	4
CVEN2023	Mechanics of Solids	3	-	3
CVEN2026	Engineering Materials 2	3	-	3
Strand 8	***Chemical Engineering****			
	Single Session First Year Chemistry (See School of Chemistry for details)	6 or 6		6
CEIC0010	Mass Transfer & Material Balances	3	-	3
CEIC2120	Fluid Flow	3	-	3
CHEN2130	Heat Transfer	-	3	3
CEIC3110	Thermodynamics	3	-	3

**These strands are currently under revision. Please see the Centre for Photovoltaic Engineering for more information*

		HPW S1	HPW S2	UOC
Strand 9	***Physics***			
MATH2011	Several Variable Calculus	5	-	6
PHYS2040	Quantum Physics	2	-	3
PHYS2060	Thermal Physics	-	2	3
	And choice from the following to complete the strand:			

		HPW S1	HPW S2	UOC
PHYS3010	Quantum Mechanics (Advanced)	2	-	3
PHYS3020	Statistical Physics	2	-	3
PHYS3080*	Solid State Physics	2	-	3
PHYS3210	Quantum Mechanics	2	-	3
PHYS3310#	Physics of Solid State Devices	-	2	3
PHYS3770	Laser and Spectroscopy Laboratory	4	-	3

**PHYS3080 has PHYS3010 or PHYS3210 and PHYS3020 as co-requisites*
#PHYS3310 has PHYS3080 as a prerequisite

Strand 10 Faculty of the Built Environment

BENV1072*	Design for Energy Efficiency	-	3	6

And choice from the following to complete the strand:

BLDG1050	Structures 1	-	4	6
BLDG1211	Construction Technology 1A (Domestic Construction)	4	-	6
BLDG1212*	Construction Technology 1B (Low Rise Residential)	-	4	6
BENV1242*	Computer-Aided Design	-	3	3
BENV1341*	Design Modeling and Visualisation	3	-	3
BENV2103	Environmental Planning	-	2	3
BENV2720	Intro to Lighting and Acoustics	2	-	4
BENV2901	City Planning Today	2	-	3

**Please note:*
BENV1072 requires a WAIVER from prerequisite ARCH1271–Architectural Technology 3
BLDG1212 requires COMPLETION of BLDG1211 – Construction Technology 1A
BENV1242 requires a WAIVER from prerequisite BENV1141 – Computer & Information Technology
BENV1341 requires COMPLETION of BENV1242 – Computer-Aided Design

Strand 11 Renewable Energy

Choice of 18 UOC from:

SOLA5052	Biomass	4	-	6
SOLA5053	Wind Energy Converters	-	4	6
BENV1072*	Design for Energy Efficiency	-	3	6
MECH2611†	Fluid Mechanics A	2	-	3
MECH2612†	Fluid Mechanics B	-	2	3
MECH9720†	Solar Thermal Energy Design	-	3	6

******BENV1072 requires a WAIVER from prerequisite ARCH1271 Architectural Technology 3*
†MECH2611, MECH2612 and MECH9720 must be taken as a sequence

Professional Electives for Years 3 & 4

Because of timetable clashes not all combinations of subjects are possible.

SOLA5011	Solar Cells: Operating Principles and Technology	-	4	6
SOLA5050	Renewable Energy Policy and International Programs	2	-	3
SOLA5051	Life Cycle Assessment	2	-	3
SOLA5052	Biomass	4	-	6
SOLA5053	Wind Energy Converters	-	4	6
SOLA5054	Photovoltaic Stand-Alone System Design and Installation	-	4	6
SOLA5508	High Efficiency Silicon Solar Cells	3	-	6
SOLA5058	Special Topic in Photovoltaics	4 or 4		6
SOLA5059	Industrial Elective			6
SOLA5060	Industrial Elective			3
SOLA5061	Industrial Elective			3
SOLA9005	Advanced Semi-Conductor Devices*			6
M523 (Murdoch)	Renewable Energy Systems Design	5	-	6
MECH9720	Solar Energy	-	3	6
MECH9740	Thermal Power Plant Engineering	3	-	6

******This postgraduate course may be substituted for an undergraduate professional elective with permission from the Head of the Centre.*

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.

The program selected by each student must be approved by the Head of Centre. 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 or Renewable Energy Engineering.

3657 Renewable Energy Engineering – Full-time – Plan SOLAA13657

Bachelor of Engineering BE

Introduction

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 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 Centre for Photovoltaic 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 all the renewable energy technologies and their use. These include electricity generation from solar thermal systems, photovoltaics, wind generators, biomass, tidal energy, fuel cells, geothermal systems, and also includes the important areas of solar architecture and the design of energy efficient housing.

Year 1		HPW S1	HPW S2	UOC
SOLA1055	Introduction to Renewable Energy Technologies & Computing 1	4	-	6
SOLA1056	Introduction to Renewable Energy Technologies & Computing 2	-	3	3
SOLA1060	Chemical Processes for Renewable Energy Systems	-	3	3
ELEC1011	Electrical Engineering 1	6	-	6
ELEC1041	Digital Circuits	-	4	6
MATH1141*	Higher Mathematics 1A	6	-	6
MATH1241*	Higher Mathematics 1B	-	6	6
PHYS1131	Higher Physics 1A	6	-	6
PHYS1231	Higher Physics 1B	-	6	6
	Total	**22**	**22**	**48**

**MATH1141 and MATH1241 may be taken at the ordinary level (MATH1131 and MATH1231).*

Year 2				
SOLA1172	Solar Architectural Technologies	-	6	9
SOLA2020	Photovoltaic Technology and Manufacturing	5	-	6
SOLA2060	Introduction to Electronic Devices	-	2.5	3
SOLA5050	Renewable Energy Policy & International Programs	2	-	3
SOLA5051	Life Cycle Assessment	2	-	3
MATH2859	Prob, Stats and Information	-	3	3
MATH2509	Linear Algebra for Engineers	-	3	3
MECH2611	Fluid Mechanics A	2	-	3
MECH2612	Fluid Mechanics B	-	2	3
MECH2711	Thermodynamics A	2	-	3
MECH2712	Thermodynamics B	-	2	3
	General Education	4	-	6
	Total	**17**	**18.5**	**48**

Year 3				
	Professional Electives	4	4	12
SOLA2053	Sustainable and Renewable Energy Technologies	-	4	6
SOLA3010	Photovoltaics in the Built Environment	-	4	6
SOLA3540	Applied Photovoltaics	4	-	6
SOLA5053	Wind Energy Converters	-	4	6
MECH9740	Thermal Power Plant Engineering	4	-	6
	General Education	4	-	6
	Total	**16**	**16**	**48**

		HPW S1	HPW S2	UOC
Year 4				
	Professional Electives	4	8	18
SOLA5052	Biomass	4	-	6

		HPW S1	HPW S2	UOC
ELEC4010	Introduction to Management for Electrical Engineers	4	-	3
ELEC4011	Ethics and Electrical Engineering Practice	-	3	3
SOLA4912	Thesis in Renewable Energy Engineering – Part A	8	-	9
SOLA4913	Thesis in Renewable Energy Engineering – Part B	-	8	9
	Total	**20**	**19**	**48**
Professional Electives				
ARCH1271	Architectural Technologies 3	4	-	6
BENV1072†	Design for Energy Efficiency	-	3	6
ELEC2015*	Electromagnetic Applications	-	3	3
ELEC3005	Electric Energy 1	4	-	6
ELEC3015	Electric Energy 2	-	4	6
MATH2011*	Several Variable Calculus	5	-	6
MECH3602	Advanced Thermodynamics	-	3	3
MECH9720	Solar Thermal Energy Design	-	3	6
M523 (Murdoch)	Renewable Energy Systems Design	5	-	6
PHYS2939*	Physics 2 (Electrical Engineering)	3	-	3
SOLA3507	Solar Cells and Systems	-	4	6
SOLA4012	Grid Connected Photovoltaic Systems	4	-	6
SOLA5054	Photovoltaic Stand-Alone System Design and Installation	-	4	6
SOLA5508	High Efficiency Silicon Solar Cells	3	-	3
SOLA9020	Semiconductor laboratory Operation & Development	5	-	6

†BENV1072 requires an exemption from ARCH1371 – Architectural Technology 5
**Courses which cannot be taken in Year 4 without course authority permission.*

With the program authority's permission, courses can also be chosen from amongst the electives offered by other schools provided appropriate prerequisite requirements have been satisfied and they conform to the credit point requirements.

3642 Photovoltaic and Solar Energy, 3657 Renewable Energy Engineering - Part-time Programs

Bachelor of Engineering BE

No formal part-time program is being offered. However, after completing Year 1 full-time, it is possible for students to progress on a semi-part-time basis with a reduced program. It should be noted that very few undergraduate courses are offered in the evenings and some courses are organised as part of a two year rolling program.

Combined Degree Programs

The Centre for Photovoltaic Engineering offers programs combined with Science and Arts. These programs comprise 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 relevant faculty. Students may enter directly in Year 1 through UAC or apply to transfer from the normal engineering program after satisfactory completion of at least one year of study. Students are required to have a weighted average of at least a credit and apply in writing to the Head of the Centre.

Students who commence a course but subsequently do not wish to proceed with both areas of study, or who fail to maintain a creditable performance, need to revert to a single degree program with appropriate credit for subjects completed. AUSTUDY support is available for the five years of the combined degree programs.

Generally students are expected to complete the requirements for both degrees to be eligible to graduate.

3655 Photovoltaics and Solar Energy/Bachelor of Science – SOLAA13655

Bachelor of Engineering Bachelor of Science BE BSc

With this combined degree program, students can add their choice of Science program to the standard Engineering program offered by the Centre for Photovoltaic Engineering.

Because the Engineering and Science 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 Science.

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 Director of Academic Studies and the Executive Assistant to the Dean of the Faculty of Science.

Students should work out for themselves the Science program they would like to add to their chosen 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 Centre for Photovoltaic Engineering.

3656 Photovoltaics and Solar Energy/Bachelor of Arts – SOLAA13656

Bachelor of Engineering Bachelor of Arts BE BA

With this combined degree program, students can add their choice of Arts program to the standard Engineering program offered by the Centre for Photovoltaic 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 representatives of the Faculty of Arts and Social Sciences as soon as possible, preferably well before enrolment in Year 2. Enquiries should be directed to the Director of Academic Studies and 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 program. The Faculty of Arts and Social Sciences section in this Handbook describes the options.

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 Arts component must be approved by the Faculty of Arts and Social Sciences.

The final program and schedule must be approved by the Centre for Photovoltaic Engineering.

Fast-Track Programs

3642 Photovoltaics and Solar Energy/Master of Engineering Science

Bachelor of Engineering Master of Engineering Science BE MEngSc

This fast-track program allows students to complete a Bachelor of Engineering and a Master of Engineering Science in four and a half years of full-time study. Students:

a. undertake the first three years of their standard BE program,

b. substitute 12 units of credit of professional electives for postgraduate courses in their 4th year,

c. complete a 12 unit of credit project in the summer session following completion of the BE, and

d. complete the remaining 24 units of credit the following session.

To be eligible for this program students must have a minimum weighted average of a credit in the first three years of their undergraduate engineering degree. Application is made in writing to the School Office at the end of a student's 3rd year of studies.

A Message from the Dean

Welcome to the UNSW Law Faculty. It is a pleasure to know that you are interested in our educational philosophy, teaching programs and rich intellectual and professional traditions. The UNSW 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

Faculty of Law

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Atax (Australian Taxation Studies Program)

Information and Assistance

Some People Who Can Help You

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, Level 10, Library Tower.

Please refer to the Faculty of Law homepage for timetables and general information: **www.law.unsw.edu.au**

For enquiries relating to Atax, please contact the Atax Student Services Office, telephone (02) 9385 9333.

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 Faculty, 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 Faculty.

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 2004 can be found in alphabetical order by the course code at the back of this Handbook or in the Virtual Handbook at **www.student.unsw.edu.au/handbook**

Enrolment Procedures

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 relevant section of this Handbook.

Guidelines for Maximum Workload

The sequence of study for each program is set out under 'Program Outlines' 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 take extra courses must submit an 'Overload Request' form at the Level 10 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 UOC 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. Students must note that the Faculty generally requires that at least 50% of law studies be completed at UNSW.

The Faculty 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 'creditability' 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 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 mooting, 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.

The Law Society office is Room 1112, telephone (02) 9385 2271, email lawsoc@unsw.edu.au, website **www.unswlawsoc.org**

Program and Course Information

The following programs are available:

Law Programs

1. Bachelor of Laws (three years full-time), this program is available only to graduates or graduands.

2. 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.

Jurisprudence Program

3. 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

4. Bachelor of Architecture and Bachelor of Laws (seven years full-time)

5. Bachelor of Art Theory and Bachelor of Laws (five years full-time)

6. Bachelor of Arts and Bachelor of Laws (five years full-time)

7. Bachelor of Arts (Asian Studies) and Bachelor of Laws*

8. Bachelor of Arts (Media and Communications) and Bachelor of Laws (five years full-time)**

9. Bachelor of Commerce and Bachelor of Laws (five years full-time)

10. Bachelor of Economics and Bachelor of Laws (five years full-time)

11. Bachelor of Engineering and Bachelor of Laws (six years full-time)

12. Bachelor of International Studies and Bachelor of Laws (six years full-time)

13. Bachelor of Jurisprudence and Bachelor of Laws (five years full-time)

14. Bachelor of Planning and Bachelor of Laws (seven years full-time)

15. Bachelor of Science and Bachelor of Laws (five years full-time)

16. Bachelor of Social Science and Bachelor of Laws (five years full-time)

17. Bachelor of Social Work and Bachelor of Laws (six years full-time)

** The last admission to this program was in 2002.*
*** To be offered in 2005, subject to Council approval.*

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

from a single degree to 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 Outlines

Bachelor of Laws Degree Program (Full-time) for Graduates or Graduands

4790 Bachelor of Laws

LLB 3 Years Full-Time

This program enables students who have already completed another degree to obtain the Bachelor of Laws degree. The main features of the program are as follows:

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).

4. 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		**UOC**
LAWS1001	Criminal Law 1	6
LAWS1011	Criminal Law 2	6
LAWS1052	Foundations of Law	6
LAWS1061	Torts	6
LAWS1071	Contracts 1	3
LAWS1072	Contracts 2	6
LAWS2140	Public Law	3
LAWS2160	Administrative Law	6
LAWS6210	Law, Lawyers and Society	6
	Total	**48**
Year 2		
LAWS1081	Property, Equity and Trusts 1	6
LAWS1082	Property and Equity 2	6
LAWS2150	Federal Constitutional Law	6
LAWS2311	Litigation 1	6
LAWS2321	Litigation 2	6
LAWS4010	Business Associations 1	6
LAWS7420	Advanced Legal Research	2
LAWS8820	Law & Social Theory, *or*	6
LAWS8320	Legal Theory	
	Law elective	4
	Total	**48**
Year 3		
	Law electives	**48**

UOC Distribution	Number of Courses		UOC
Core courses	17	92	
Electives	6 x 8 UOC, 1 x 4 UOC	52	
Total			**144**

Bachelor of Laws Degree Program (Part-time)

4791 Bachelor of Laws

LLB 6 Years Part-Time

1. 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.

2. Entry Requirement: 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.

3. Attendance Requirement: The program involves attendance at classes on two afternoons a week.

4. Electives: The courses of the LLB degree program are set out in Rule 5 appearing later under 'Rules for Award of Degrees'. However, it will not be possible to provide the full range of electives at times convenient to part-time students.

5. 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.

Year 1		**UOC**
LAWS1052	Foundations of Law	6
LAWS1061	Torts	6
LAWS1071	Contracts 1	3
LAWS1072	Contracts 2	6
LAWS2140	Public Law	3
	Total	**24**
Year 2		
LAWS1001	Criminal Law 1	6
LAWS1011	Criminal Law 2	6
LAWS2160	Administrative Law	6
LAWS6210	Law, Lawyers and Society	6
	Total	**24**
Year 3		
LAWS1081	Property, Equity and Trusts 1	6
LAWS1082	Property and Equity 2	6
LAWS2311	Litigation 1	6
LAWS2321	Litigation 2	6
	Total	**24**
Year 4		
LAWS2150	Federal Constitutional Law	6
LAWS4010	Business Associations 1	6
LAWS7420	Advanced Legal Research	2
LAWS8820	Law & Social Theory, *or*	6
LAWS8320	Legal Theory	
	Law electives	4
	Total	**24**
Year 5		
	Law electives	**24**
Year 6		
	Law electives	**24**

UOC Distribution	Number of Courses		UOC
Core courses	17	92	
Electives	6 x 8 UOC, 1 x 4 UOC	52	
Total			**144**

Combined Jurisprudence/Law Program

4780 Bachelor of Jurisprudence Bachelor of Laws

BJuris LLB 5 Years Full-Time

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 the 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 'Rules for the Award of Degrees'.

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, e.g. 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.

1. 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).

2. Assumed Knowledge: Students must satisfy any assumed knowledge requirements (but not general Faculty assumed knowledge requirements) for courses studied in other faculties.

3. 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 School 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 School 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.

4. BJuris: Candidates may be awarded the degree of Bachelor of Jurisprudence subject to satisfying the requirements as listed in Rule 10 of the Rules for the Award of Degrees, including satisfaction of General Education requirements for the single pass degree (12 units of credit).

5. General Education: Candidates for the BJuris LLB must complete 6 units of credit of general education. BJuris LLB is the only combined law program which has a general education requirement.

6. 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.

Year 1		**UOC**
	Non-Law Major Sequence Year 1	12
	Additional non-law courses	12
LAWS1052	Foundations of Law	6
LAWS1061	Torts	6
LAWS1071	Contracts 1	3
LAWS1072	Contracts 2	6
LAWS2140	Public Law	3
	Total	**48**
Year 2		
	Non-Law Major Sequence Year 2	12
LAWS1001	Criminal Law 1	6
LAWS1011	Criminal Law 2	6
LAWS1081	Property, Equity and Trusts 1	6
LAWS1082	Property and Equity 2	6
LAWS2160	Administrative Law	6
LAWS6210	Law, Lawyers and Society	6
	Total	**48**
Year 3		
	Non-Law Major Sequence Year 3	24
LAWS2150	Federal Constitutional Law	6
LAWS4010	Business Associations 1	6
LAWS8820	Law and Social Theory, *or*	6
LAWS8320	Legal Theory	
	General Education courses	6
	Total	**48**
Year 4		
LAWS2311	Litigation 1	6
LAWS2321	Litigation 2	6
LAWS7420	Advanced Legal Research	2
	Law electives	16
	Law or non-law electives	18
	Total	**48**
Year 5		
	Law electives	**48**

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 (18UOC) *or*			
2 Law electives (16UOC), plus Law research project (2UOC)			
Total			**240**

Faculty of Arts & Social Sciences and Faculty of Law

4760 Bachelor of Arts Bachelor of Laws

BA LLB 5 Years Full-Time

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.

1. Duration/Award: The program is a five year full-time combined program leading to the award of the two degrees of Bachelor of Arts and Bachelor of Laws (BA LLB).

2. Honours: Students wishing to take the BA degree program at Honours level must obtain prior approval from the relevant school in the Faculty of Arts and Social Sciences. At least one and possibly two additional years of study are required.

3. 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.

4. Arts & Social Science Courses: 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:

(i) a major sequence from one school or program. Details of approved major sequences can be found in Lists A and B of the Rules for the Award of Degrees, 3400 BA program;

(ii) at least 12 Upper Level units of credit from other schools or programs.

5. Approved Sequence of Study: 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 School of Law. An approved sequence is given below; other sequences may be approved under special circumstances.

Year 1		**UOC**
	Arts School A – Level 1 courses	12
	Arts School B – Level 1 courses	12
	Arts School C – Level 1 courses	12
LAWS1052	Foundations of Law	6
LAWS1061	Torts	6
	Total	**48**
Year 2		
	Arts School A - Upper Level courses	12
	Arts School B - Upper Level courses	12
LAWS1001	Criminal Law 1	6
LAWS1011	Criminal Law 2	6
LAWS1071	Contracts 1	3
LAWS1072	Contracts 2	6
LAWS2140	Public Law	3
	Total	**48**
Year 3		
	Arts - Upper Level courses (including courses required to complete a major)	24
LAWS1081	Property, Equity & Trusts 1	6
LAWS1082	Property & Equity 2	6
LAWS2160	Administrative Law	6
LAWS6210	Law, Lawyers & Society	6
	Total	**48**

Year 4		UOC
LAWS2150	Federal Constitutional Law	6
LAWS2311	Litigation 1	6
LAWS2321	Litigation 2	6
LAWS4010	Business Associations 1	6
LAWS7420	Advanced Legal Research	2
LAWS8820	Law & Social Theory, *or*	6
LAWS8320	Legal Theory	
	Law electives	16
	Total	**48**
Year 5	Law electives	**48**

UOC Distribution	Number of Courses		UOC
Arts & Social Science			**84**
Major sequence	7 x 6 UOC	42*	
Upper level courses	2 x 6 UOC	12	
Other approved courses	5 x 6 UOC	30	
Law			**156**
Core courses	17	92	
Electives	8 x 8 UOC	64	
Total			**240**

**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.*

Bachelor of International Studies Bachelor of Laws

BInSt LLB 6 Years Full-Time

There are four specialisations available:

- 4766 Bachelor of International Studies in Asian Studies Bachelor of Laws
- 4767 Bachelor of International Studies in European Studies Bachelor of Laws
- 4768 Bachelor of International Studies in Globalisation Bachelor of Laws
- 4769 Bachelor of International Studies in Languages Bachelor of Laws

These programs provide an opportunity to obtain two degrees of professional importance to the public sector, community service, business and law practice. The Law component satisfies the requirements for the award of the professional LLB degree.

1. Duration/Award: A minimum of six years full-time study leading to the award of the two degrees of Bachelor of International Studies and Bachelor of Laws (BInSt LLB).

3. Honours: The BInSt component is available at Honours level. Full details can be found in the Arts and Social Science section of the Handbook.

4. Distinction: The BInSt component 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 the degree.

5. Graduation: Students unable to complete the combined degree may apply to transfer to the Bachelor of International Studies or Bachelor of Arts degree program with credit for all courses completed.

6. Law Courses: For all four programs a total of 150 units of credit (92 units of credit in compulsory law courses and 58 units of credit in electives).

7. Arts & Social Science Courses: A total of 138 units of credit of approved Arts & Social Science courses, including two semesters of study at an overseas institution. Details for each specialisation are detailed below.

8. Overseas Study Program: As part of the BInSt, students must complete two semesters of study (48 units of credit) of an approved program at an overseas institution. This is normally taken during the third and fourth years of study. Full details can be found in the Arts and Social Science section of the Handbook.

9. 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. Specifically all, or the majority of law core course must be completed prior to enrolling in electives. The approved sequence of study is as follows:

Year 1		UOC
	International Studies	36
LAWS1052	Foundations of Law	6
LAWS1061	Torts	6
	Total	**48**
Year 2		
	International Studies	24
LAWS1071	Contracts 1	3
LAWS1072	Contracts 2	6
LAWS2140	Public Law	3
LAWS1001	Criminal Law 1	6
LAWS1011	Criminal Law 2	6
	Total	**48**
Year 3		
	International Studies	12
LAWS1081	Property, Equity and Trusts 1	6
LAWS6210	Law, Lawyers & Society	6
	Individual Study Program (Overseas)	24
	Total	**48**
Year 4		
	Individual Study Program (Overseas)	24
	International Studies	18
LAWS1082	Property and Equity 2	6
	Total	**48**
Year 5		
LAWS2150	Federal Constitutional Law	6
LAWS2160	Administrative Law	6
LAWS2311	Litigation 1	6
LAWS2321	Litigation 2	6
LAWS4010	Business Associations 1	6
LAWS7420	Advanced Legal Research	2
LAWS8820	Law & Social Theory, *or*	6
LAWS8320	Legal Theory	
	Law elective	8
	Law Research Project	2
	Total	**48**
Year 6		
	Law electives	**48**

UOC Distribution	Number of Courses		UOC
Arts & Social Science			**138**
Sequence 1	6 x 6 UOC	36	
Sequence 2	7 x 6 UOC	42	
Level 1 courses	2 x 6 UOC	12	
Overseas Study Component	2 semesters	48	
Law			**150**
Core courses	17	92	
Electives	7 x 8 UOC, 1 x 2 UOC	58	
Total			**288**

4766 Bachelor of International Studies in Asian Studies LLB

Arts & Social Science Courses	**138 units of credit**
1. 36 units of credit	6 courses in ASIA and Asia-related courses;
2. 42 units of credit	7 courses in CHIN Chinese, INDO Indonesian, JAPN Japanese or KORE Korean;
3. 12 Level 1 units of credit	2 courses from Lists A, B and C of the BA Rules;
4. 48 units of credit	2 semesters approved Overseas Study Program
Law Courses	**150 units of credit**
5. 92 units of credit	17 compulsory core courses (set sequence in Yrs 1 to 4 – no selection required)
6. 58 units of credit	7 courses x 8 UOC, 1 course x 2 UOC (selection made in Yrs 5 and 6)

Sample program outline: BInSt in Asian Studies LLB

Year	Asia Related	UOC	Language	UOC	Level 1 Elective	UOC	Law	UOC	UOC	Total
1	ASIA x 2	12	CHIN x 2	12	ECON x 2	12	LAWS* x 2	12		**48**
2	HIST x 2	12	CHIN x 2	12			LAWS* x 5	24		**48**
3.1	POLS x 1	6	CHIN x 1	6			LAWS* x 2	12		**24**
3.2	**Individual Study Program B** [INST3102]								24	**24**
4.1	**Individual Study Program A** [INST3101]								24	**24**
4.2	POLS x 1	6	CHIN x 2	12			LAWS* x 1	6		**24**
5							LAWS* x 9	48		**48**
6							LAWS x 6	48		**48**
Total		**36**		**42**		**12**		**150**	**48**	**288**

** compulsory LAWS courses - no selection required*

4767 Bachelor of International Studies in European Studies/LLB

Arts & Social Science Courses **138 units of credit**

1. 36 units of credit — 6 courses in EURO European Studies;
2. 42 units of credit — 7 courses in FREN French, GERS German, GREK Greek (Modern), ITAL Italian, RUSS Russian or SPAN Spanish;
3. 12 Level 1 units of credit — 2 courses from Lists **A**, **B** and **C** of the BA Rules;
4. 48 units of credit — 2 semesters approved Overseas Study Program

Law Courses **150 units of credit**

5. 92 units of credit — 17 compulsory core courses (set sequence in Yrs 1 to 4 – no selection required)
6. 58 units of credit — 7 courses x 8 UOC, 1 course x 2 UOC (selection made in Yrs 5 and 6)

Sample program outline: BInSt in European Studies LLB

Year	EURO Core	UOC	Language	UOC	Level 1 Electives	UOC	Law	UOC	UOC	Total
1	EURO x 2	12	FREN x 2	12	INST x 2	12	LAWS* x 2	12		**48**
2	EURO x 2	12	FREN x 2	12			LAWS* x 5	24		**48**
3.1	EURO x 1	6	FREN x 1	6			LAWS* x 2	12		**24**
3.2	**Individual Study Program B** [INST3102]								24	**24**
4.1	**Individual Study Program A** [INST3101]								24	**24**
4.2	EURO x 1	6	FREN x 2	12			LAWS* x 1	6		**24**
5							LAWS* x 9	48		**48**
6							LAWS x 6	48		**48**
Total		**36**		**42**		**12**		**150**	**48**	**288**

** compulsory LAWS courses - no selection required*

4768 Bachelor of International Studies in Globalisation/LLB

Arts & Social Science Courses **138 units of credit**

1. 36 units of credit — 6 courses in INST International Studies;
2. 42 units of credit — 7 courses in approved International Studies related courses*;
3. 12 Level 1 units of credit — 2 courses from Lists **A**, **B** and **C** of the BA Rules;
4. 48 units of credit — 2 semesters approved Overseas Study Program

** With the approval of the coordinator, other courses offered by schools and programs of the Faculty may be substituted.*

Law Courses **150 units of credit**

5. 92 units of credit — 17 compulsory core courses (set sequence in Yrs 1 to 4 – no selection required)
6. 58 units of credit — 7 courses x 8 UOC, 1 course x 2 UOC (selection made in Yrs 5 and 6)

Sample program outline: BInSt in Globalisation LLB

Year	INST Core	UOC	INST Related	UOC	Level 1 Electives	UOC	Law	UOC	UOC	Total
1	INST x 2	12	COMD x 2	12	SPAN x 2	12	LAWS* x 2	12		**48**
2	INST2000/1	12	SPAN x 2	12			LAWS* x 5	24		**48**
3.1	INST3001	6	SPAN x 1	6			LAWS* x 2	12		**24**
3.2	**Individual Study Program B** [INST3102]								24	**24**
4.1	**Individual Study Program A** [INST3101]								24	**24**
4.2	INST3000	6	SPAN x 1 SOCA x 1	6 6			LAWS* x 1	6		**24**
5							LAWS* x 9	48		**48**
6							LAWS x 6	48		**48**
Total		**36**		**42**		**12**		**150**	**48**	**288**

** compulsory LAWS courses - no selection required*

4769 Bachelor of International Studies in Languages/LLB

Arts & Social Science Courses	**138 units of credit**
1. 42 units of credit	7 courses in CHIN Chinese, FREN French, GERS German, GREK Greek (Modern), ITAL Italian, INDO Indonesian, JAPN Japanese, KORE Korean, RUSS Russian, SPAN Spanish;
2. 36 units of credit	6 courses in a further language;
3. 12 Level 1 units of credit	2 courses from Lists **A**, **B** and **C** of the BA Rules;
4. 48 units of credit	2 semesters approved Overseas Study Program
Law Courses	**150 units of credit**
5. 92 units of credit	17 compulsory core courses (set sequence in Yrs 1 to 4 – no selection required)
6. 58 units of credit	7 courses x 8 UOC, 1 course x 2 UOC (selection made in Yrs 5 and 6)

Sample program outline: BInSt in Languages LLB

Year	Further Language	UOC	Core Program	UOC	Level 1 Electives	UOC	Law	UOC	UOC	Total
1	FREN x 2	12	CHIN x 2	12	EURO x 1 ASIA x 1	6 6	LAWS* x 2	12		**48**
2	FREN x 2	12	CHIN x 2	12			LAWS* x 5	24		**48**
3.1	FREN x 1	6	CHIN x 1	6			LAWS* x 2	12		**24**
3.2	**Individual Study Program B** [INST3102]								24	**24**
4.1	**Individual Study Program A** [INST3101]								24	**24**
4.2	FREN x 1	6	CHIN x 2	12			LAWS* x 1	6		**24**
5							LAWS* x 9	48		**48**
6							LAWS x 6	48		**48**
Total		**36**		**42**		**12**		**150**	**48**	**288**

** compulsory LAWS courses - no selection required*

4761 Bachelor of Social Science Bachelor of Laws

BSocSc LLB 5 Years Full-Time

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.

1. 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).

2. Honours: A student wishing to take the BSocSc degree program at Honours level should consult with the coordinator of the BSocSc degree program before commencing the 4th year of the combined program.

3. BSocSc: Students unable to complete the requirements for the combined degree can apply to transfer to the BSocSc degree program with credit for all courses completed.

4. BSocSc Core Courses: The first three years of the program includes the Bachelor of Social Science core program totalling 48 units of credit.

5. Arts & Social Science Major:

5.1 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, 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, Film & Dance.

5.2 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 or 8 x 8 UOC)

6. Approved Sequence of Study: Students must study Social Science courses in a sequence approved by the Faculty of Arts and Social Sciences and Law courses in a sequence approved by the School of Law. An approved sequence is given below; other sequences may be approved under special circumstances.

Year 1		**UOC**
SLSP1000	Social Science & Policy, *or*	6
SLSP1002	Introduction to Policy Analysis *and*	
SLSP1001	Research & Information Management	6
	Arts & Social Sciences major – Level 1*	12
LAWS1052	Foundations of Law	6
LAWS1061	Torts	6
LAWS1071	Contracts 1	3
LAWS1072	Contracts 2	6
LAWS2140	Public Law	3
	Total	**48**
Year 2		
SLSP2000	Economics & Society	6
SLSP2001	Applied Social Research 1	6
SLSP2002	Policy Analysis Case Studies	6
	Arts & Social Sciences major – Upper Level*	12
LAWS1001	Criminal Law 1	6
LAWS1011	Criminal Law 2	6
LAWS6210	Law, Lawyers & Society	6
	Total	**48**
Year 3		
SLSP3000	Social Theory & Policy	6
SLSP3001	Applied Social Research 2	6
SLSP3002	Social Science & Policy Project	6
	Arts & Social Sciences major – Upper Level*	12
LAWS1081	Property, Equity and Trusts 1	6
LAWS1082	Property and Equity 2	6
LAWS2160	Administrative Law	6
	Total	**48**
Year 4		
LAWS2150	Federal Constitutional Law	6
LAWS2311	Litigation 1	6
LAWS2321	Litigation 2	6
LAWS4010	Business Associations 1	6
LAWS7420	Advanced Legal Research	2
LAWS8820	Law & Social Theory, *or*	6
LAWS8320	Legal Theory	
	Law electives, *or*	16

	Arts & Social Science major (6 UOC) plus Law electives (10 UOC)	
	Total	**48**
Year 5		
	Law electives	**48**

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**

**Please see item 5.2 above.*

4785 Bachelor of Social Work Bachelor of Laws

BSW LLB 6 Years Full-Time

This six year full-time program qualifies students for the professional practice of both social work and law. 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.

1. 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).

2. 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.

3. 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 School of Law. An approved sequence is given below; other sequences may be approved under special circumstances.

4. 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.

6. 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.

Year 1		**UOC**
SOCW1001	Introduction to Social Work	6
SOCW1002	Communication & Social Work Practice	6
	Psychology elective	6
	Sociology elective	6
LAWS1052	Foundations of Law	6
LAWS1061	Torts	6
LAWS1071	Contracts 1	3
LAWS1072	Contracts 2	6
LAWS2140	Public Law	3
	Total	**48**

Year 2		
SOCW1003	Human Behaviour 1	6
SOCW2002	Society & Social Work 1	6
SOCW2003	Social Work Practice – Casework	6
SOCW2006	Social Work Practice – Community Work	6
LAWS1001	Criminal Law 1	6
LAWS1011	Criminal Law 2	6
LAWS2160	Administrative Law	6
LAWS6210	Law, Lawyers & Society	6
	Total	**48**

Year 3		
SOCW2001	Human Behaviour 2	6
SOCW2004	Society & Social Work 2	6
SOCW2005	Research for Social Work	6
SOCW3002	Social Work Practice – Group work	6
SOCW2100	Aboriginal People and Social Work	6
LAWS1081	Property, Equity & Trusts 1	6
LAWS1082	Property & Equity 2	6
LAWS2150	Federal Constitutional Law	6
	Total	**48**

Year 4		
SOCW3001	Social Work Practice – 3rd Year Practicum	12
SOCW3008	Social Work Practice – Selected Studies 1	6
SOCW3004	Social Policy 1	6
LAWS2311	Litigation 1	6
LAWS2321	Litigation 2	6
LAWS4010	Business Associations 1	6
LAWS7420	Advanced Legal Research	2
	Law elective	4
	Total	**48**

Year 5		
SOCW4002	Social Work Practice – Administration	6
SOCW4003	Social Work Practice – Selected Studies 2	6
SOCW4006	Social Policy 2	6
SOCW4001	Social Work Practice – 4th Year Practicum	24
LAWS8320	Legal Theory, *or*	6
LAWS8820	Law & Social Theory	
	Total	**48**

Year 6		
	Law electives	**48**

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 7 Years Full-Time

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. 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.

1. 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.

2. Eligibility: 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.

3. Organisation: The BArch LLB program is administered by the School of Law. The School requires the student to obtain approval of the Faculty of the 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

4. Honours: The degree of Bachelor of Architecture is awarded at either Pass or Honours level after successful completion of a minimum of 192 units of credit from the Architecture program and 72 units of credit 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.

5. 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 given below; other sequences may be approved under special circumstances.

Year 1	**Session 1**	**UOC**
BENV1101	Design Fundamentals: Studio 1	8
BENV1121	Architectural History and Theory 1	4
BENV1141	Computers and Information Technology	3
BENV1171	Architectural Technologies 1	9
	Session 2	
ARCH1102	Architectural Design Workshop 1	8
BENV1122	Architectural History and Theory 2	4
ARCH1142	Architectural Communications 1	4
BENV1172	Architectural Technologies 2	8
	Total	**48**
Year 2	**Session 1**	
ARCH1201	Architectural Design Workshop 2	8
ARCH1221	Architectural History and Theory 3	4
ARCH1271	Architectural Technologies 3	6
LAWS1052	Foundations of Law	6
	Session 2	
ARCH1202	Architectural Design Workshop 3	8
ARCH1222	Architectural History and Theory 4	3
BENV1242	Computer-Aided Design	3
ARCH1272	Architectural Technologies 4	4
LAWS1061	Torts	6
	Total	**48**
Year 3	**Session 1**	
ARCH1301	Architectural Design Studio 1	8
ARCH1321	Architectural History and Theory 5	3
BENV1341	Design Modelling and Visualisation	3
ARCH1371	Architectural Technologies 5	4
LAWS1071	Contracts 1	3
LAWS2140	Public Law	3
	Session 2	
ARCH1302	Architectural Design Studio 2	9
ARCH1382	Practicum	3
LAWS1072	Contracts 2	6
LAWS2160	Administrative Law	6
	Total	**48**
Year 4	**Session 1**	
ARCH1401	Architectural Design Studio 3	9
ARCH1241	Architectural Communications 2	3
LAWS1001	Criminal Law 1	6
LAWS6210	Law, Lawyers & Society	6
	Session 2	
ARCH1402	Architectural Design Studio 4	9
BENV1381	Professional Practice 1	3
ARCH1470	Building Services1 & 2	6
LAWS1011	Criminal Law 2	6
	Total	**48**
ARCH1583	Work Experience*	24
Year 5	**Session 1**	**UOC**
ARCH1501	Investigation Workshop	9
ARCH1581	Politics, Community & Practice	3
LAWS1081	Property and Equity & Trusts 1	6
LAWS8820	Law and Social Theory, *or*	6
LAWS8320	Legal Theory	
	Session 2	
ARCH1502	Graduation Studio	9
ARCH1582	Professional Practice 2	3
LAWS1082	Property & Equity 2	6
LAWS2150	Federal Constitutional Law	6
	Total	**48**
Year 6	**Session 1**	
LAWS2311	Litigation 1	6
LAWS4011	Business Associations	6
	Law electives	12
	Session 2	
LAWS2321	Litigation 2	6
LAWS7420	Advanced Legal Research	2
	Law electives	16
	Total	**48**
Year 7	**Session 1**	
	Law electives	**24**

*** 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.

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**

4707 Bachelor of Planning Bachelor of Laws

BPlan LLB 7 Years Full-Time

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.

1. 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.

2. Eligibility: 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 program.

3. Organisation: The BPlan LLB program is administered by the School of Law. Students must 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.

4. Honours: The degree of Bachelor of Planning is awarded either at Pass or Honours level after successful completion of a minimum of 144 units of credit from the Planning program and 48 units of credit 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.

5. 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.

Year 1

Session 1		**UOC**
PLAN1241	Planning Theory and Practice	6
PLAN1101	Understanding Design	6
PLAN1011	Urban Society	3
GEOS1701	Environmental Systems and Process	6
BENV1141	Computers and Information Technology	3
	Total	**24**
Session 2		
PLAN1042	Local Planning	6
PLAN1122	Development Processes	6
PLAN1052	Quantitative Methods	6
GEOH2801	Geographical Information Systems for Built Environment	6
	Total	**24**

Year 2

Session 1		
PLAN2041	Integrated Planning 1 – Communication in Planning	6
PLAN2032	Urban Design	6
PLAN2111	Economics of Planning and Development	6
LAWS1052	Foundations of Law	6
	Total	**24**
Session 2		
PLAN2152	Resources, Planning and the Natural Environment	6
PLAN2122	History, Heritage and the Built Environment	6
LAWS1061	Torts	6
LAWS2160	Administrative Law	6
	Total	**24**

Year 3

Session 1		
PLAN3031	Integrated Planning 2 – Strategic Planning	6
PLAN3041	Planning Law and Administration	6
PLAN3051	Development Assessment	6
LAWS1071	Contracts 1	3
LAWS2140	Public Law	3
	Total	**24**
Session 2		
PLAN0081	Work Experience	24

Year 4

Session 1		
PLAN0082	Work Experience	24
Session 2		
PLAN3032	Integrated Planning 3 – Master Planning	6
PLAN3015	Social Planning	6
PLAN3052	Qualitative Methods	6
LAWS1072	Contracts 2	6
	Total	**24**

Year 5

Session 1		**UOC**
PLAN4221	Regional Policy	3
PLAN4031	Research Design	3
GEOH3671	Transport, Land Use and Environment	6
LAWS1001	Criminal Law 1	6
LAWS6210	Law, Lawyers and Society	6
	Total	**24**
Session 2		
PLAN4132	Thesis Project	12
PLAN4142	Professionalism, Ethics and Politics	6
LAWS1011	Criminal Law 2	6
	Total	**24**

Year 6

Session 1		
LAWS1081	Property and Equity and Trusts 1	6
LAWS8820	Law and Social Theory *or*	
LAWS8320	Legal Theory	6
LAWS2311	Litigation	6
LAWS2150	Federal Constitutional Law	6
	Total	**24**
Session 2		
LAWS1082	Property and Equity 2	6
LAWS2321	Litigation 2	6
LAWS4010	Business Associations 1	6
LAWS7420	Advanced Legal Research	2
LAWS7420	Law Elective	4
	Total	**24**

Year 7

Session 1		
	Law Electives	24
	Total	**24**
Session 2		
	Law Electives	24
	Total	**24**

UOC Distribution	**Number of Courses**		**UOC**
Planning			**192**
Core courses		144	
Work Experience	12 months	48	
Law			**144**
Core courses	17	92	
Electives	6 x 8 UOC, 1 x 4 UOC	52	
Total			**336**

Faculty of Commerce & Economics and Faculty of Law

Combined Programs Leading to the Award of the Degrees of:

Bachelor of Commerce and Bachelor of Laws *and* Bachelor of Economics and Bachelor of Laws

The University offers combined programs leading to the award of the degrees of BCom LLB and BEc LLB. The Bachelor of Commerce degree program and the Bachelor of Economics degree program may be taken at either Pass or Honours level, the combined program taking five or six years respectively. Students wishing to take the degree at Honours level must consult the Head of the School in which they wish to study for Honours before enrolling in the second year of the program.

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, Management, or with a Bachelor of Economics specialising in Economics, Financial Economics or Econometrics.

In the modern world of business and administration there is a need in many fields for the combined professional skills of **accounting and law**. The most obvious of these is the broad field of taxation practice, already drawing on both accounting and legal specialists for such matters as estate planning and taxation aspects of business organisations. With the growing complexity of commerce, including international business activities and large scale corporate organisation, there is a new and urgent need for graduates who are well versed in a wide range of legal courses as well as in accounting and commerce generally. These graduates may enter large companies as full-time advisers or undertake specialised professional practice. In the public sector also the increasing scale and complexity of government undertakings opens up a significant range of opportunities leading to senior administrative positions. Apart from specific career considerations, there is no doubt that accounting and law are complementary studies which provide a demanding but worthwhile course for the able student.

In the financial markets, there is considerable demand for graduates with training in **finance and law**. The complexity of securities, takeover and company legislation has necessitated the employment of such graduates in merchant banks, trading banks, brokerage houses and regulatory bodies.

The combination of **economics and law** is ideally suited for those wishing to work in one of the major accounting or law firms on competition policy and indirect taxation.

There is a small but increasing demand for specialists in **information systems and law**. Apart from the usual contractual implication arising from the acquisition of strategic business resources, there are challenges in areas such as copyright, intellectual property, privacy and the impact of technology on inter-business relationships such as Electronic Data Interchange.

The growing complexity of **industrial relations** in Australia highlights the need for people wishing to become industrial advocates to have a solid grounding in economics, psychology, sociology and industrial relations, as well as in law. The combined program of Bachelor of Commerce in Industrial Relations and Bachelor of Laws is therefore recommended for people who hope to practise law in the industrial jurisdiction.

The combination of **international business and law** is relevant to career opportunities in a wide range of companies and organisations with international activities and ambitions. These include international legal, business and financial consultants, exporters, multinational manufacturing and service enterprises, and international organisations such as the UN and OECD.

Recent developments in Federal and State legislation, in the field of trade practices and consumerism in particular, have created an urgent need for managers and administrators skilled in both **law and marketing**. The combined Marketing/Law program seeks to meet this need by combining a detailed study of marketing systems in general, and marketing management in particular with the study of law. Graduates will find opportunities in both private and public sectors of the economy.

These programs provide an opportunity to obtain two degrees of professional importance to business, administration and commercial law practice.

1. Duration/Awards: The programs are of five years full-time study leading to the award of the two degrees of Bachelor of Commerce and Bachelor of Laws (BCom LLB) or Bachelor of Economics and Bachelor of Laws (BEc LLB).

2. Distinction: The BCom and BEc degrees 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.

3. Honours: The BCom and BEc degrees are 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. Full details can be found in the Faculty of Commerce and Economics section of the Handbook.

4. Transferring Majors (Plans): Students must nominate a commerce/economics major (plan code) at enrolment. Subsequent transfers to another major may be possible subject to the approval of both faculties.

5. Graduation: Candidates enrolled in one of the combined degree programs may be awarded the degree of BCom or BEc after the completion of specified requirements. Full details are given in the 'Rules Relating to the Award of Degrees'.

6. Commerce & Economics Courses: Unless specified as from which discipline they must be chosen, Commerce and Economics 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.

7. 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 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.

4733 Bachelor of Commerce Bachelor of Laws

BCom LLB 5 Years Full Time

This program includes the first year study program for the majority of BCom LLB and BEc LLB degree programs.

There are slight variations for those enrolling in Actuarial Studies, Human Resource Management, Industrial Relations, Information Systems and Marketing. Details for these majors are listed separately.

Year 1		**UOC**
ACCT1501	Accounting & Financial Management 1A	6
ACCT1511	Accounting & Financial Management 1B	6
ECON1101	Microeconomics 1	6
ECON1102	Macroeconomics 1	6
ECON1202	Quantitative Methods A	6
ECON1203	Quantitative Methods B	6
LAWS1052	Foundations of Law	6
LAWS1061	Torts	6
	Total	**48**
Year 2		
	Commerce/Economics Elective 1*	6
	Commerce/Economics Elective 2*	6
	Commerce/Economics Elective 3*	6
	Commerce/Economics Elective 4*	6
LAWS1001	Criminal Law 1	6
LAWS1011	Criminal Law 2	6
LAWS1071	Contracts 1	3
LAWS1072	Contracts 2	6
LAWS2140	Public Law	3
	Total	**48**
Year 3		
	Commerce/Economics Elective 5*	6
	Commerce/Economics Elective 6*	6
	Commerce/Economics Elective 7*	6
	Commerce/Economics Elective 8*	6
LAWS1081	Property, Equity & Trusts 1	6
LAWS1082	Property & Equity 2	6
LAWS2160	Administrative Law	6
LAWS6210	Law, Lawyers & Society	6
	Total	**48**
Year 4		
LAWS2150	Federal Constitutional Law	6
LAWS2311	Litigation 1	6
LAWS2321	Litigation 2	6
LAWS4010	Business Associations 1	6
LAWS7420	Advanced Legal Research	2
LAWS8820	Law & Social Theory, *or*	6
LAWS8320	Legal Theory	
	Law electives	16
	Total	**48**
Year 5		
	Law Electives	**48**

*** Notes:**
1. The choice of commerce/economics electives in Years 2 and 3 will vary depending on the major selected. Summary details are given below.

2. LEGT: Students enrolled in either the BCom LLB or the BEc LLB are not permitted to enrol in courses from the School of Business Law and Taxation (LEGT).

UOC Distribution	Number of Courses		UOC
Commerce & Economics			**84**
Major sequence	8 x 6 UOC	48*	
Other approved courses	6 x 6 UOC	36	
Law			**156**
Core courses	17	92	
Electives	8 x 8 UOC	64	
Total			**240**

** The major requirement for the BCom is 48 UOC, for the BEc it is 60 UOC. Students enrolling in a BEc LLB would complete 60 UOC towards a major and 24 UOC of other approved commerce/economics courses.*

4733 Bachelor of Commerce in Accounting Bachelor of Laws

BCom LLB 5 Years Full-Time

Year 1		**UOC**
	Standard BCom LLB study program	48
Year 2		
ACCT2522	Accounting & Financial Management 2A, *or*	6
ACCT2532	Accounting & Financial Management 2A (Honours)	
ACCT2542	Accounting & Financial Management 2B, *or*	6
ACCT2552	Accounting & Financial Management 2B (Honours)	
	Commerce & Economics elective#	6
	Accounting elective 1*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 3		
	Accounting elective 2*	6
	Accounting elective 3*	6
	Commerce & Economics elective 2#	6
	Accounting elective 4*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

Notes:

* Full details can be found in the Accounting Plan structure in the Faculty of Commerce and Economics section of the Handbook

#These 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 the Handbook.

Professional Recognition: Students wishing to obtain CPA/CA accreditation should refer to the required courses listed in ' Professional Recognition of Programs' in the Faculty of Commerce and Economics section of the Handbook.

4733 Bachelor of Commerce in Actuarial Studies Bachelor of Laws

BCom LLB 5 Years Full-Time

Year 1		**UOC**
ACCT1501	Accounting & Financial Management 1A	6
ACTL1001	Actuarial Studies and Commerce	6
ECON1101	Microeconomics 1	6
ECON1102	Macroeconomics 1	6
MATH1151	Mathematics for Actuarial Studies & Commerce	6
MATH1251	Mathematics for Actuarial Studies & Commerce	6
	Law courses as for BCom LLB	12
	Total	**48**
Year 2		
ACCT1511	Accounting & Financial Management 1B	6
ACTL2001	Financial Mathematics	6
ACTL2002	Probability and Statistics for Actuaries	6
ACTL2003	Stochastic Models for Actuarial Applications	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 3		**UOC**
ACTL3001	Actuarial Studies	6
ACTL3002	Life Insurance and Superannuation Models	6
ACTL3003	Insurance Risk Models	6
ACTL3004	Fin. Economics for Insurance & Superannuation	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

Professional Recognition: 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 the Part I and Part II subjects of the professional body, the Institute of Actuaries of Australia. The program allows students to complete 7 (out of a total of 9) Part I professional actuarial courses.

4733 Bachelor of Commerce in Business Economics Bachelor of Laws

BCom LLB 5 Years Full Time

Year 1		**UOC**
	Standard BCom LLB study program	48
Year 2		
	Economics Elective 1*	6
	Economics Elective 2*	6
	Economics Elective 3*	6
	Economics Elective 4*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 3		
	Economics Elective 5*	6
	Economics Elective 6*	6
	Economics Elective 7*	6
	Economics Elective 8*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

Notes: *Electives to be selected from the options under BCom Business Economics List A and List B, with at least two options from List B.

4733 Bachelor of Commerce in Business Statistics Bachelor of Laws

BCom LLB 5 Years Full-Time

Year 1		**UOC**
	Standard BCom LLB study program	**48**
Year 2		
ECON2101	Microeconomics 2	6
ECON2102	Macroeconomics 2	6
ECON2206	Introductory Econometrics	6
ECON2208	Operations Research	6
Or		
ECON2209	Business Forecasting	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 3		
	Economics elective 1*	6
	Economics elective 2*	6
	Economics elective 3*	6
	Economics elective 4*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

Notes: *Electives must be selected from the options under BCom Business Statistics List B.

4733 Bachelor of Commerce in Business Strategy & Economic Management Bachelor of Laws

BCom LLB 5 Years Full-Time

Year 1		**UOC**
	Standard BCom LLB study program	**48**
Year 2		
ECON2101	Microeconomics 2	6
ECON2105	Economics of Corporation	6
ECON2112	Game Theory and Business Strategy	6
	Commerce/Economics elective 1*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 3		
ECON3121	Managerial Economics	6
	Commerce/Economics elective 2*	6
	Commerce/Economics elective 3*	6
	Commerce/Economics elective 4*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

Notes: *Electives to be selected from the options under BCom Business Strategy and Economic Management.

4733 Bachelor of Commerce in Economic History Bachelor of Laws

BCom LLB 5 Years Full-Time

Year 1		**UOC**
	Standard BCom LLB study program	**48**
Year 2		
ECON2101	Microeconomics 2	6
ECON2102	Macroeconomics 2	6
ECON1301	Australia in the Global Economy	6
ECON1302	Australia and the Asia Pacific Economies	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 3		
ECON2206	Introductory Econometrics	6
3 Economics electives from the following list:		18
ECON2313	Australian Economic Development	6
ECON2319	Economic and Social Policy in Australia	6
ECON2321	Growth and Development of International Business	6
ECON2322	European Integration	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

4733 Bachelor of Commerce in Finance Bachelor of Laws

BCom LLB 5 Years Full-Time

Year 1		**UOC**
	Standard BCom LLB study program	**48**
Year 2		
FINS1612	Capital Markets & Institutions	6
FINS1613	Business Finance	6
FINS2624	Portfolio Management of Financial Assets	6
	Finance elective 1*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 3		
FINS3616	International Business Finance	6
	Finance elective 2*	6
	Finance elective 3*	6
	Finance elective 4*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

Notes: *Electives must be selected from the courses offered by the School of Banking and Finance.

Honours: Students who wish to take the BCom program at Honours level must take FINS3774 Financial Decision Making Under Uncertainty, FINS3775 Research Methods in Finance 1 and must consult the Head of School of Banking & Finance at the end of Year 2.

4733 Bachelor of Commerce in Financial Economics Bachelor of Laws

BCom LLB 5 Years Full-Time

Year 1		**UOC**
	Standard BCom LLB study program	**48**
Year 2		
ECON2101	Microeconomics 2	6
ECON2206	Introductory Econometrics	6
ECON2209	Business Forecasting	6
FINS1612	Capital Markets and Institutions	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 3		
ECON3260	Financial Econometrics	6
ECON3107	Economics of Finance	6
	Commerce/Economics elective 1*	6
	Commerce/Economics elective 2*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

Notes: *Electives to be selected from the options under BCom/BEc Financial Economics.

4733 Bachelor of Commerce in Human Resource Management Bachelor of Laws

BCom LLB 5 Years Full-Time

Year 1		**UOC**
ACCT1501	Accounting & Financial Management 1A	6
ACCT1511	Accounting & Financial Management 1B	6
ECON1101	Microeconomics 1	6
ECON1102	Macroeconomics 1	6
ECON1202	Quantitative Methods A	6
IROB1701	Industrial Relations	6
	Law courses as for BCom LLB	12
	Total	**48**
Year 2		
ECON1203	Quantitative Methods B	6
IROB1712	Management of Organisations	6
IROB2718	Human Resource Management	6
	1 HR (IROB) elective from List A*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 3		
	1 HR (IROB) elective from List A*	6
	1 HR (IROB) elective from List B*	6
	2 HR (IROB) electives from List A or B*	12
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

Notes: *Electives to be selected from the BCom Human Resource Management plan List A and B.

4733 Bachelor of Commerce in Industrial Relations Bachelor of Laws

BCom LLB 5 Years Full-Time

Year 1		**UOC**
ACCT1501	Accounting & Financial Management 1A	6
ACCT1511	Accounting & Financial Management 1B	6
ECON1101	Microeconomics 1	6
ECON1102	Macroeconomics 1	6
ECON1202	Quantitative Methods A	6
IROB1702	Labour Organisations	6
	Law courses as for BCom LLB	12
	Total	**48**
Year 2		
ECON1203	Quantitative Methods B	6
IROB1701	Industrial Relations	6
IROB2702	Industrial Law	6
	1 Industrial Relations elective from List A*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 3		
	1 Industrial Relations elective from List A*	6
	1 Industrial Relations elective from List B*	6
	2 Industrial Relations electives from List A or B *	12
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

Notes: *Electives to be selected from the BCom Industrial Relations List A and List B.

Honours: Students who wish to take the BCom program at Honours level must take IROB3707 Industrial Relations Research Methods and Thesis Workshop and consult the Head of School of Industrial Relations & Organisational Behaviour at the end of Year 1.

4733 Bachelor of Commerce in Information Systems Bachelor of Laws

BCom LLB 5 Years Full-Time

Year 1		**UOC**
ACCT1501	Accounting & Financial Management 1A	6
ECON1101	Microeconomics 1	6
ECON1202	Quantitative Methods A	6
ECON1203	Quantitative Methods B	6
INFS1602	Computer Information Systems	6
INFS1603	Business Data Management	6
	Law courses as for BCom LLB	12
	Total	**48**
Year 2		
ACCT1511	Accounting & Financial Management 1B	6
ECON1102	Macroeconomics 1	6
INFS2603	Systems Analysis & Design	6
INFS2607	Business Data Networks	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 3		
	Information Systems elective 1*	6
	Information Systems elective 2*	6
	Information Systems elective 3*	6
	Information Systems elective 4*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

Notes: *Electives to be selected from the options under BCom Information Systems.

4733 Bachelor of Commerce in International Business Bachelor of Laws

BCom LLB 5 Years Full-Time

Year 1		**UOC**
	Standard BCom LLB study program	**48**
Year 2		
IBUS1101	Global Business Environment	6
IBUS1102	Managing Across Cultures	6
IBUS2101	International Business & Multinational Enterprises	6
	1 Commerce/Economics/Language elective*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 3		
IBUS3101	International Business Strategy	6
IBUS3102	Asia-Pacific Business	6
	2 Commerce/Economics/Language electives*	12
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

***Elective List (prerequisites apply):**

IBUS2103	Japanese Business	6
IBUS2104	Korean Business	6
IBUS2105	Chinese Business Enterprise	6
ECON2111	Economics of Global Interdependence	6
ECON2116	Japanese Economic Policy	6
ECON2117	Economics of Tourism	6
ECON2322	Business and the New Europe	6
ECON3112	The Newly Industrialising Economies of East Asia	6
ECON3113	Economic Development in ASEAN Countries	6
JAPN1000	Japanese Communication 1A	6
JAPN1001	Japanese Communication 1B	6
KORE1000	Korean Communication 1A	6
KORE1001	Korean Communication 1B	6

Other languages offered by the School of Modern Language Studies may be taken as International Business options. Please refer to the Faculty of Arts and Social Sciences Handbook section.

4733 Bachelor of Commerce in Management Bachelor of Laws

BCom LLB 5 Years Full-Time

Year 1		**UOC**
	Standard BCom LLB study program	**48**
Year 2		
MGMT1001	Fundamentals of Management	6
MGMT1002	Managing Organisational Behaviour	6
MGMT2002	Managing Business Communication	6
	1 Commerce/Economics elective from List A*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 3		
MGMT2001	Managing Innovation & Org. Change	6
MGMT3001	Managing Business Strategy	6
	2 Commerce/Economics electives from List B#	12
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

***LIST A electives (prerequisites apply)**

ACCT2522	Management Accounting Process Improvement & Innovation	6
ECON2112	Game Theory and Business Strategy	6
IBUS1102	Managing Across Cultures	6
MARK1012	Marketing Fundamentals	6

#LIST B electives (prerequisites apply)

ACCT3585	E-Business: Strategy and Processes	6
ECON2105	Economics of the Corporation	6
FINS1612	Capital Markets and Institutions	6

FINS1613	Business Finance	6
INFS1602	Computer Information Systems	6

4733 Bachelor of Commerce in Marketing Bachelor of Laws

BCom LLB 5 Years Full-Time

Year 1		**UOC**
ACCT1501	Accounting and Financial Management 1A	6
ACCT1511	Accounting and Financial Management 1B	6
ECON1101	Microeconomics 1	6
ECON1202	Quantitative Methods A	6
ECON1203	Quantitative Methods B	6
MARK1012	Marketing Fundamentals	6
	Law courses as for BCom LLB	12
	Total	**48**
Year 2		
MARK2051	Consumer Behaviour	6
MARK2052	Marketing Research	6
MARK2053	Marketing Comm. & Promotions Mgt	6
MARK2054	Market Analysis	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 3		
ECON1102	Macroeconomics 1	6
MARK3081	Distribution Strategy & Retail Channels	6
MARK3082	Strategic Marketing Mgt	6
	1 Marketing elective*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

Notes: *Electives to be selected from the options under BCom Marketing.

4744 Bachelor of Economics in Economics Bachelor of Laws

BEc LLB 5 Years Full-Time

Year 1		**UOC**
	Standard BCom/LLB study program	**48**
Year 2		
ECON2101	Microeconomics 2	6
ECON2102	Macroeconomics 2	6
ECON2206	Introductory Econometrics	6
ECON2207	Econometric Methods	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 3		
	Economics elective 1*	6
	Economics elective 2*	6
	Economics elective 3*	6
	Economics elective 4*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

Notes: *Electives must be selected from the options under BEc Economics List A and List B with at least two options from List B.

4744 Bachelor of Economics in Econometrics Bachelor of Laws

BEc LLB 5 Years Full-Time

Year 1		**UOC**
	Standard BCom LLB study program	**48**
Year 2		
ECON2101	Microeconomics 2	6
ECON2102	Macroeconomics 2	6
ECON2207	Econometric Methods	6
ECON2206	Introductory Econometrics	6
	Law course as for BCom LLB	24
	Total	**48**
Year 3		
ECON2215	Statistics for Econometrics	6
ECON3203	Econometric Theory	6
	Economics Elective 1*	6
	Economics Elective 2*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

Notes: *Electives must be selected from the options under BEc Econometrics.

4744 Bachelor of Economics in Financial Economics Bachelor of Laws

BEc LLB 5 Years Full-Time

Year 1		**UOC**
	Standard BCom LLB study program	**48**
Year 2		
ECON2101	Microeconomics 2	6
ECON2206	Introductory Econometrics	6
ECON2209	Business Forecasting	6
FINS1612	Capital Markets and Institutions	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 3		
ECON3260	Financial Econometrics	6
ECON3107	Economics of Finance	6
	Commerce/Economics elective 1*	6
	Commerce/Economics elective 2*	6
	Law courses as for BCom LLB	24
	Total	**48**
Year 4 & Year 5		
	Law courses as for BCom LLB	

Notes: *Electives must be selected from the options under BCom/BEc Financial Economics.

Faculty of Engineering and sFaculty of Law

4775 Bachelor of Engineering in Civil Engineering Bachelor of Laws

BE LLB 6 Years Full-Time

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.

1. 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.

2. Assumed Knowledge: A prescribed standard in mathematics is recommended for entry to the Faculty of Engineering and to individual courses in that faculty. Further details are available in the UAC Guide.

3. Honours: The degree 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.

4. 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.

5. 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 School of Law. An approved sequence is

given below; other sequences may be approved under special circumstances.

Year 1		**UOC**
CVEN1021	Engineering Practice 1A	4
CVEN1025	Computing	4
CVEN1023	Statics	4
CVEN1024	Dynamics	4
CVEN1026	Engineering Materials 1	4
MATH1131	Mathematics 1A, *or*	6
MATH1141	Higher Mathematics 1A	
MATH1231	Mathematics 1B, *or*	6
MATH1241	Higher Mathematics 1B	
PHYS1279	Physics 1 CE	4
LAWS1052	Foundations of Law	6
LAWS1061	Torts	6
	Total	**48**
Year 2		
CHEM1011	Fundamentals of Chemistry A, *or*	6
CHEM1031	Higher Chemistry C	
CVEN2025	Engineering Computations 1	3
CVEN2125	Systems Engineering	3
CVEN2126	Engineering Construction	3
CVEN2023	Mechanics of Solids	3
CVEN2322	Structural Engineering 1	6
CVEN2222	Geotechnical Engineering 1	3
CVEN2525	Water Engineering 1	3
MATH2019	Engineering Mathematics 2 CE	6
LAWS1071	Contracts 1	3
LAWS1072	Contracts 2	6
LAWS2140	Public Law	3
	Total	**48**
Year 3		
CVEN3126	Engineering Management 1	3
CVEN3322	Structural Engineering 2	6
CVEN3448	Transport Engineering	3
LAWS1001	Criminal Law 1	6
LAWS1011	Criminal Law 2	6
CVEN2026	Engineering Materials 2	3
CVEN3023	Civil Engineering Practice 3A	3
CVEN3024	Civil Engineering Practice 3B	3
CVEN3222	Geotechnical Engineering 2	3
CVEN3223	Geotechnical Engineering 3	3
CVEN3324	Structural Engineering 3	3
CVEN3526	Water Resources Engineering	3
CVEN3527	Water Engineering	3
	Total	**48**
Year 4		
CVEN4008	Industrial Training	1
CVEN4000	Honours Thesis Part A, *or*	6
CVEN4021	Civil Engineering Practice 4	
CVEN4126	Engineering Management 2	4
CVEN4224	Geotechnical Engineering 2	3
CVEN4322	Structural Engineering 3	6
CVEN4525	Water Engineering 3	4
	Civil Engineering electives*	12
LAWS2160	Administrative Law	6
LAWS6210	Law, Lawyers & Society	6
	Total	**48**
Year 5		
LAWS1081	Property, Equity & Trusts 1	6
LAWS1082	Property & Equity 2	6
LAWS2150	Federal Constitutional Law	6
LAWS2311	Litigation 1	6
LAWS2321	Litigation 2	6
LAWS4010	Business Associations 1	6
LAWS7420	Advanced Legal Research	2
LAWS8320	Legal Theory, *or*	6
LAWS8820	Law & Social Theory	
	Law electives	4
	Total	**48**
Year 6		
	Law electives	**48**

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.

UOC Distribution	**Number of Courses**		**UOC**
Engineering			**144**
Law			**144**
Core courses	17	92	
Electives	6 x 8 UOC, 1 x 4 UOC	52	
Total			**288**

4777 Bachelor of Engineering in Environmental Engineering Bachelor of Laws

BE LLB 6 Years Full-Time

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. 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 rules applying to the Bachelor of Engineering in Civil Engineering Bachelor of Laws are also applicable to the Bachelor of Engineering in Environmental Engineering Bachelor of Laws program.

The courses listed below are required to complete the program. These are set out in a typical yearly program.

Year 1		**UOC**
CHEM1011	Fundamentals of Chemistry A, *or*	6
CHEM1031	Higher Chemistry C	
CVEN1021	Engineering Practice 1A	4
CVEN1023	Statics	4
CVEN1024	Dynamics	4
CVEN1025	Computing	4
CVEN1026	Engineering Materials 1	4
CVEN1531	Introduction to Water & Atmospheric Chemistry	4
MATH1131	Mathematics 1A, *or*	6
MATH1141	Higher Mathematics 1A	
	Law courses as for Civil Engineering/Law	12
	Total	**48**
Year 2		
BIOS1101	Evolutionary & Functional Biology	6
CEIC0010	Mass Transfer & Material Balance	3
CVEN2025	Engineering Computations 1	3
CVEN2125	Systems Engineering	3
CVEN2023	Mechanics of Solids	3
CVEN2525	Water Engineering 1	3
INDC4120	Chemistry of the Industrial Environment	3
MATH1231	Mathematics 1B, *or*	6
MATH1241	Higher Mathematics 1B	
LAWS1071	Contracts 1	3
LAWS1072	Contracts 2	6
LAWS2140	Public Law	3
LAWS6210	Law, Lawyers & Society	6
	Total	**48**
Year 3		
BIOS3301	Population & Community Ecology for Environmental Engineers	3
CEIC0050	Atmospheric & Process Chemistry	3
CVEN2021	Engineering Practice 2A	3
CVEN2722	Env. Engineering Practice 2B	3
CVEN3025	Engineering Computations 2	3
CVEN3126	Engineering Management 1	3
CVEN3224	Geotechnical Engineering 1	6
CVEN3438	Transport Planning & Environment	3
CVEN3525	Water Engineering 2	6
CVEN3531	Water Chemistry	3
MATH2019	Engineering Mathematics 2 CE	6
LAWS1001	Criminal Law 1	6
	Total	**48**

Year 4		UOC
CVEN4008	Industrial Training	1
CVEN4000	Honours Thesis Part A, *or*	6
CVEN4721	Environ. Engineering Practice	
CVEN4224	Geotechnical Engineering 2	3
CVEN4525	Water Engineering 3	4
CVEN4533	Transport & Fate of Pollutants	3
CVEN4722	Environmental Policy, Law & Economics	3
CVEN4723	Waste Management	4
	Civil Engineering electives*	12
LAWS1011	Criminal Law 2	6
LAWS2160	Administrative Law	6
	Total	**48**

Year 5 & Year 6

Law courses as for Civil Engineering/Law

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.

Unit of Credit Distribution - as for Civil Engineering/Law

Faculty of Science and Faculty of Law

4770 Bachelor of Science Bachelor of Laws

BSc LLB 5 Years Full-Time

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. (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)

1. 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).

2. Honours: Students wishing to complete the BSc degree program at Honours level must obtain prior approval from both program authorities. A standard Honours program in Science requires an additional year of study.

3. 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.

4. 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.

5. 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).

6. 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 School of Law. A typical sequence of study is set out below.

Year 1		UOC
	Science courses – Level 1	24
	Other approved science courses	12
LAWS1052	Foundations of Law	6
LAWS1061	Torts	6
	Total	**48**

Year 2		UOC
	Science courses	24
LAWS1001	Criminal Law 1	6
LAWS1011	Criminal Law 2	6
LAWS1071	Contracts 1	3
LAWS1072	Contracts 2	6
LAWS2140	Public Law	3
	Total	**48**

Year 3		
	Science courses	24
LAWS1081	Property, Equity & Trusts 1	6
LAWS1082	Property & Equity 2	6
LAWS2160	Administrative Law	6
LAWS6210	Law, Lawyers & Society	6
	Total	**48**

Year 4		
LAWS2150	Federal Constitutional Law	6
LAWS2311	Litigation 1	6
LAWS2321	Litigation 2	6
LAWS4010	Business Associations 1	6
LAWS7420	Advanced Legal Research	2
LAWS8820	Law & Social Theory, *or*	6
LAWS8320	Legal Theory	
	Law electives	8
	Law or Science electives	8
	Total	**48**

Year 5		
	Law electives	**48**

** See separate entry for Psychology major*

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

Students interested in this major should consult fully with the Student Office of Computer Science and Engineering prior to enrolment.

Year 1		UOC
COMP1011	Computing 1A, *or*	
COMP1711	Higher Computing 1A	6
COMP1021	Computing 1B, *or*	
COMP1721	Higher Computing 1B	6
COMP1021	Mathematics 1A	6
COMP1231	Mathematics 1B	6
MATH1081	Discrete Mathematics	6
	One Science elective	6
	Law courses as for BSc LLB	12
	Total	**48**

Year 2		
COMP2011	Data Organisation	6
COMP2021	Digital Systems Structures	6
COMP2041	Software Construction: Techniques & Tools	6
	One Science elective	6
	Law courses as for BSc LLB	24
	Total	**48**

Year 3		
	Science courses including advanced computing electives	24
	Law courses as for BSc LLB	24
	Total	**48**

Year 4

	Law courses as for BSc LLB	40
	Law or Science elective	8
	Total	**48**

Year 5

	Law courses as for BSc LLB	**48**

Bachelor of Science Bachelor of Laws with Major in Psychology

Year 1		**UOC**
PSYCH1001	Psychology 1A	6
PSYCH1011	Psychology 1B	6
	Science courses – Level 1	12
LAWS1052	Foundations of Law	6
LAWS1061	Torts	6
LAWS1071	Contracts 1	3
LAWS1072	Contracts 2	6
LAWS2140	Public Law	3
	Total	**48**

Honours: Students interested in completing Honours must contact the School of Psychology at the end of Year 1.

Year 2

PSYC2001	Research Methods 2	6
	Psychology courses (3 x Level 2)	18
LAWS1001	Criminal Law 1	6
LAWS1011	Criminal Law 2	6
LAWS2160	Administrative Law	6
LAWS6210	Law, Lawyers & Society	6
	Total	**48**

Year 3

PSYC3001	Research Methods 3A	6
	Psychology courses (3 x Level 3)	18
	Science courses (Level 1)	12
LAWS1081	Property & Equity 1	6
LAWS1082	Property & Equity 2	6
	Total	**48**

Year 4

	Law courses as for BSc LLB	40
	Law or Science elective	8
	Total	**48**

Year 5

	Law courses as for BSc LLB	**48**

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 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**

College of Fine Arts and Faculty of Law

4703 Bachelor of Art Theory Bachelor of Laws

BArtTh LLB 5 Years Full-Time

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 may gain employment in Arts Law, but broad opportunities also 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.

1. Duration/Award: The program is a five year full-time combined program leading to the award of the two degrees of Bachelor of Art Theory and Bachelor of Laws.

2. Assumed Knowledge: Students should refer to the normal assumed knowledge recommendations for entry to the Faculty of the College of Fine Arts (COFA), and to individual courses in that faculty.

3. Honours: 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.

4. Art Theory Courses: Students must complete (1) a major in Arts & Design Theory totalling 48 units of credit, and (2) a co-major of 36 units of credit or a minor program of 30 units of credit plus an additional 6 units of credit of approved COFA courses. A sample program is detailed below. For complete details of art theory courses students must consult the Faculty of the College of Fine Arts section of this Handbook.

5. Law or Non-Law Electives: Students may complete 8 units of credit in either law or non-law electives. Students can satisfy this requirement by completing either a law elective (8 units of credit) or an elective approved by the College of Fine Arts (6 units of credit) plus a Law Research Project (2 units of credit).

6. Approved Sequence of Study: Students must study Art theory courses in a sequence approved by the Faculty of the College of Fine Arts and law courses in a sequence approved by the School of Law. An approved sequence is given below; other sequences may be approved under special circumstances.

Year 1		**UOC**
SAHT1101	Art History & Theory 1A: Mapping the Modern	4
SAHT1102	Art History & Theory 1B: Mapping the Postmodern	4
SAHT1211	Theories of the Image	6
SAHT1212	Theories of Art History & Culture	6
SAHT1222	The Production of Art	6
SAHT1214	Methods of Writing & Research on Art	6
	Core BArtTh course	4
LAWS1052	Foundations of Law	6
LAWS1061	Torts	6
	Total	**48**

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

SAHT2211	Grand Narratives of Western Art	6
SAHT1213	Approaches to Australian Art	6
SAHT2212	Art and Cultural Difference	6
SAHT2221	Genres of Art Writing	6
LAWS1001	Criminal Law 1	6
LAWS1011	Criminal Law 2	6
LAWS1071	Contracts 1	3
LAWS1072	Contracts 2	6
LAWS2140	Public Law	3
	Total	**48**

Students may substitute SAHT2213 Memory and Self for 1 core BArtTh course.

Year 3

SAHT3212	Art & the Culture of Everyday Life	6
SAHT3211	Theories of Meaning/Meaning of Theory	6
SAHT3221	Contexts, Professions & Practices	6
SAHT3222	Industry Placement	6
LAWS1081	Property, Equity & Trusts 1	6
LAWS1082	Property & Equity 2	6
LAWS2160	Administrative Law	6
LAWS6210	Law, Lawyers & Society	6
	Total	**48**

Students may substitute SAHT3213 Museum Studies for a core BArtTh course.

Year 4

LAWS2150	Federal Constitutional Law	6
LAWS2311	Litigation 1	6
LAWS2321	Litigation 2	6
LAWS4010	Business Associations 1	6

LAWS7420	Advanced Legal Research	2
LAWS8320	Legal Theory, *or*	6
LAWS8820	Law & Social Theory	
	Law Electives	8
	Law or COFA electives	8
	Total	**48**

Year 5

	Law electives	**48**

UOC Distribution	**Number of Courses**		**UOC**
COFA			**84**
Art & Design Theory major	8 x 6 UOC	48	
COFA Approved co-major*	6 x 6 UOC	36	
Law			**148**
Core courses	17	92	
Electives	7 x 8 UOC	56	
Law or COFA elective			**8**
1 Law elective (8 UOC) *or*			
1 COFA elective (6 UOC), plus a Law Research Project (2 UOC)			
Total			**240**

**Or co-major of 30 units of credit + additional 6 units of credit COFA course*

Rules for the Award of Degrees

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:

(a) Bachelor of Laws

(b) Bachelor of Architecture and Bachelor of Laws

(c) Bachelor of Arts and Bachelor of Laws

(d) Bachelor of Arts (Asian Studies) and Bachelor of Laws*

(e) Bachelor of Arts (Media and Communications) and Bachelor of Laws#

(f) Bachelor of Art Theory and Bachelor of Laws

(g) Bachelor of Commerce and Bachelor of Laws

(h) Bachelor of Economics and Bachelor of Laws

(i) Bachelor of Engineering and Bachelor of Laws

(j) Bachelor of International Studies and Bachelor of Laws

(k) Bachelor of Jurisprudence and Bachelor of Laws

(l) Bachelor of Science and Bachelor of Laws

(m) Bachelor of Social Science and Bachelor of Laws

(n) Bachelor of Social Work and Bachelor of Laws

(o) Bachelor of Planning and Bachelor of Laws

** The last intake for this program was in 2002.*

 # For introduction in 2005 subject to Council approval.

(2) The programs set out in paragraphs (b) to (o) of sub rule (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.

(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:

(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;

(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) 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) 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.

Compulsory Courses		**UOC**	**Session**
LAWS1052	Foundations of Law	6	S1
LAWS1061	Torts	6	S2
LAWS1001	Criminal Law 1	6	S1
LAWS1011	Criminal Law 2	6	S2
LAWS2140	Public Law	3	S1
LAWS1071	Contracts 1	3	S1
LAWS1072	Contracts 2	6	S2
LAWS2160	Administrative Law	6	S1 S2
LAWS6210	Law, Lawyers and Society	6	S1 S2
LAWS1081	Property, Equity and Trusts 1	6	S1
LAWS1082	Property and Equity 2	6	S2
LAWS2311	Litigation 1	6	S1
LAWS2321	Litigation 2	6	S2
LAWS4010	Business Associations 1	6	S1 S2
LAWS2150	Federal Constitutional Law	6	S1 S2
LAWS7420	Advanced Legal Research	2	S2
LAWS8320	Legal Theory, *or*	6	S1 S2
LAWS8820	Law and Social Theory	6	S1 S2
	Total	**92 UOC**	

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.

In 2003, the Faculty replaced LAWS1051 Legal System and LAWS7410 Legal Research and Writing with LAWS1052 Foundations of Law. This change does not affect students who entered the School of Law prior to 2003.

5. (3) Elective Courses

The following is a list of approved electives. Approximately 25-30 electives are made available each session. The number of students that may take an elective may be limited.

		UOC
LAWS2282	Advanced Administrative Law	8
LAWS2025	Advanced Contract Law	8
LAWS1002	Advanced Criminal Law	8
LAWS2333	Advanced Legal and Social Theory	8
LAWS2052	Advanced Revenue Law	8
LAWS2121	Asian Legal Systems and Business Law	8
LAWS2156	Australian Constitutional Law Issues	4
LAWS2272	Australian Immigration Law and Practice	8
LAWS2212	Australian Indigenous Law Reporter	8
LAWS2183	Australian Journal of Human Rights	8
LAWS1091	Business Associations 1	8
LAWS1092	Business Associations 2	8
LAWS2392	Children and the Law	8

LAWS2123	Chinese Legal System	8
LAWS2304	Clinical Legal Experience	8
LAWS2303	Clinical Legal Experience (Intensive)	16
LAWS2305	Clinical Program Employment Law	16
LAWS2026	Commercial and Consumer Sales	8
LAWS2034	Commercial Equity	8
LAWS2024	Commercial Finance	8
LAWS1033	Communications Law	8
LAWS2085	Comparative Law	8
LAWS1032	Computer Applications to Law	8
LAWS2082	Conflict of Laws	8
LAWS2293	Constitutionalism	8
LAWS2037	Consumer Protection Law	8
LAWS1003	Crime and Society	8
LAWS2411	Disability, Rights and the Law	8
LAWS2412	Discrimination and the Law	8
LAWS2314	Dispute Resolution	8
LAWS2335	Economic Analysis of Law	8
LAWS2051	Elements of Income Tax Law	8
LAWS2032	Employment Protection Law	8
LAWS2361	Environmental Law	8
LAWS2313	Evidence and Advocacy	8
LAWS2313	Expert Evidence	8
LAWS2394	Families, Property & Death	4
LAWS2391	Family Law	8
LAWS2341	Feminist Legal Theory	8
LAWS2401	Health and Medical law	8
LAWS2413	Housing Law	8
LAWS2154	Human Rights in Ancient Rome	8
LAWS2182	Human Rights Law	8
LAWS2211	Indigenous People and the Law	8
LAWS2021	Industrial and Intellectual Property	8
LAWS2027	Industrial Law	8
LAWS2088	International Advocacy	8
LAWS2086	International Law Competitive Moot	8
LAWS2036	Insurance Law	8
LAWS1031	Information Technology Law	8
LAWS9988	International Business Transactions	8
LAWS2181	International Humanitarian Law	8
LAWS2084	International Trade Law	8
LAWS4611	Internet Legal Practice	8
LAWS2091	Introduction to Space Law	4
LAWS2090	Issues in Space Law	8
LAWS2241	Jewish Law	8
LAWS2035	Land Dealings: Residential and Commercial Contracts	8
LAWS2232	Law after Communism	8
LAWS2242	Law and Religion	8
LAWS2441	Law Journal	8
LAWS2332	Law and Social Theory	8
LAWS2251	Legal History	8
LAWS2131	Legal Institutions in Post-Mao China	8
LAWS2331	Legal Theory	8
LAWS2273	Local Government Law	8
LAWS2038	Mining Law	8
LAWS2031	Occupational Health and Safety Law	8
LAWS1005	Penology	8
LAWS2158	Principles of Colonial Constitutional Law	4
LAWS2081	Public International Law	8
LAWS2275	Regulation of Economic Activity	8
LAWS2301	Remedies	8
LAWS2421	Research Project	2
LAWS2423	Research Thesis	8
LAWS2422	Research Thesis	16
LAWS2079	Restitution	8
LAWS2151	Roman Law: A Guide to Legal Thinking	8
LAWS2152	Roman Law in Medieval and Modern Europe	8
LAWS2153	Roman and Modern Civil Law	8
LAWS2149	Sir Harry Gibbs National Moot Competition	8
LAWS2307	Social Justice Intern Program	8
LAWS2414	Social Security Law	8
LAWS1812	Sport and the Law	8
LAWS2315	Strategic Public Advocacy and Civil Society	8
LAWS2393	Succession	8
LAWS1006	The Criminal Appeals Project	8
LAWS2323	The Criminal Trial	4
LAWS2292	The High Court of Australia	8
LAWS2033	The Law of Banking	8
LAWS2028	The Law of Employment	8
LAWS2022	Trade Practices	8
LAWS2312	Trial Process	8
LAWS2023	Trusts	8

and any other course 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:

(1) all of the courses prescribed in Rule 5 under the heading 'Compulsory Courses', totalling 92 units of credit,

(2) selected courses from the courses prescribed in Rule 5 under the heading 'Elective Courses' so as to comply with Rule 7,

(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) Core: 92 UOC Electives: 52 UOC **Total: 144 UOC**

Bachelor of Architecture Bachelor of Laws
Bachelor of Engineering (Civil) Bachelor of Laws
Bachelor of Engineering (Environmental) Bachelor of Laws
Bachelor of Planning Bachelor of Laws
Bachelor of Laws

(b) Core: 92 UOC Electives: 52 – 58 UOC **Total: 144 – 150 UOC**

Bachelor of Social Work Bachelor of Laws

(c) Core: 92 UOC Electives: 58 UOC **Total: 150 UOC**

Bachelor of Social Science Bachelor of Laws

(d) Core: 92 UOC Electives: 64 UOC **Total: 156 UOC**

Bachelor of Arts Bachelor of Laws
Bachelor of Commerce Bachelor of Laws
Bachelor of Economics Bachelor of Laws

(e) Core: 92 UOC Electives: 56 – 64 UOC **Total: 148 –156 UOC**

Bachelor of Art Theory Bachelor of Laws
Bachelor of Science Bachelor of Laws

(f) Core: 92 UOC Electives: 64 – 82 UOC **Total: 156 – 174 UOC**

Bachelor of Jurisprudence Bachelor of Laws

(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 s/he 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		**UOC**
LAWS1051	Legal System	3
LAWS1061	Torts	6
LAWS1071	Contracts 1	6
LAWS1072	Contracts 2	3
LAWS2140	Public Law	3
LAWS7410	Legal Research and Writing	3
Year 2		
LAWS1001	Criminal Law 1	6
LAWS1011	Criminal Law 2	6
LAWS2160	Administrative Law	6
LAWS6210	Law, Lawyers & Society	6
Year 3		
LAWS8320	Legal Theory, *or*	6
LAWS8820	Law and Social Theory	

(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.

Rules Relating to the Bachelor of Commerce Bachelor of Laws Program *and* the Bachelor of Economics Bachelor of Law Program

13. Rules relating to the award of the degree of Bachelor of Commerce and Bachelor of Economics: 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.

14. 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'.

15. 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.

16. 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.

Atax (Australian Taxation Studies Program)

Information and Assistance

Atax delivers tax education across Australia. 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 Australian Taxation Office, State Government Treasury Departments and Revenue Offices. The programs were developed through intensive consultation with a large range of experts and interests both in the accounting and legal professions and within UNSW.

Some People Who Can Help You

General correspondence and telephone enquiries relating to student and program administration should be directed through:

Atax Student Services Office

Telephone: (02) 9385 9333

Email: atax@unsw.edu.au

Fax: (02) 9385 9380

Postal Address:
Atax
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 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 *Atax Study Skills Booklet,* which is included with the package of Study Materials 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*
- HECS and PELS booklets
- the Atax Student's Guide to Library Resources
- the noticeboards at Learning Centres

Atax Website

You can access the Atax Website at **www.atax.unsw.edu.au**. In addition to general information about Atax, the website also includes details of conferences and special events, links to individual lecturers' web pages, relevant research links and Atax Library Online. The *Atax Student Guide* is posted on the website, in addition to program and course information.

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, administration information, calendar of events, a Study Skills Manual and a Library Guide.

Orientation

The orientation visits by Atax staff take place twice yearly immediately prior to the commencement of each semester. Your Study Materials will be dispatched to you 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 to learn about Atax's unique delivery mode.

Flexible 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 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)
- Tutorials
- Regional Classes
- Informal Study Groups

Library Services

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/library** or contact the Atax library staff directly: Colin Fong or Roy McCrindle, telephone (02) 9385 9327 / 9312.

Program and Course Information

Program Titles and Codes

Code No: 4620
Program Title: Bachelor of Taxation
Qualification Abbreviation: BTax

Code No: 7280
Program Title: Associate Diploma in Taxation
Qualification Abbreviation: AssocDipTax

Code No: 6065
Program Title: Undergraduate Non-Award Course (Single Course Study)

Code No: 6028
Program Title: Undergraduate Cross-Institutional Course

Code No: 6255
Program Title: Undergraduate Non-Award Course (Single Course Study) – ATO Sponsored

Code No: 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 offered in 2004 can be found in alphabetical order by the course code at the back of this Handbook.

Program Outlines

4620 Bachelor of Taxation

BTax 3 Years Full-Time

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 part-time years 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 Students Seeking Accounting Professional Entry'.)

Program Objectives

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.

Student Work Load

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 work load, studying one course per semester. In special circumstances with approval from the program convenor, a heavier load could be taken. That would depend to some extent on the student's prior academic record.

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.

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.

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 Australian Taxation 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 later in this Handbook under **'Particular Requirements for Students Seeking Accounting Professional Entry'**.

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 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:

1. a 70% average is attained over the student's best **prescribed merit award number of courses** presented for the Degree; and

Where the number of courses which you must complete in order 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

2. 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.

The table below lists the prescribed merit award number of courses for the purposes of condition 1:

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. 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 **www.atax.unsw.edu.au/students/forms**. Maximum exemption for the BTax is for eight courses of 6 units of credit. The policy on advanced standing for BTax can be accessed at **www.atax.unsw.edu.au/study/programs/btax.htm#exemptions**

Program Structure for the Bachelor of Taxation Degree

List of Courses

Courses on offer may be revised throughout the year.

ATAX0001 Basic Tax Law and Process
ATAX0002 Computer Information Systems
ATAX0003 Microeconomics and the Australian Tax System
ATAX0004 Framework of Commercial Law
ATAX0005 Accounting 1
ATAX0006 Tax Administration
ATAX0008 Principles of Capital Gains Taxation
ATAX0009 Law of Companies, Trusts and Partnerships
ATAX0010 Accounting 2
ATAX0011 Macroeconomics, Government and the Economy
ATAX0013 Taxation of Companies, Trusts and Partnerships
ATAX0014 Tax Policy Framework
ATAX0015 Intermediate Financial Accounting
ATAX0016 Critical Perspectives and Ethics
ATAX0017 Tax Accounting Systems
ATAX0018 Tax Litigation
ATAX0020 Introduction to Australian International Taxation
ATAX0022 Goods and Services Tax: Design and Structure
ATAX0023 Principles of Goods and Services Tax Law
ATAX0053 Accounting for Complex Structures and Instruments
ATAX0055 Taxation of Property Transactions
ATAX0056 Tax Collection and Transfers
ATAX0057 Business Finance
ATAX0058 Quantitative Analysis
ATAX0059 Management Accounting
ATAX0060 Auditing and Assurance Services
ATAX0605 Taxation of Trusts
ATAX0607 Taxation of Corporate Finance
ATAX0610 Taxation of Superannuation
ATAX0614 Selected Problems in Stamp Duty
ATAX0615 Taxation of Specific Industries
ATAX0625 Taxation of Employee Remuneration
ATAX0626 Tax and Investment Regulation in China

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 Goods and Services Tax: Design and Structure
ATAX0023 Principles of Goods and Services Tax 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

Selection of Courses

Overview of General Requirements for all Bachelor of Taxation Students

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.

The following sixteen courses are compulsory:

ATAX0001 Basic Tax Law and Process
ATAX0002 Computer Information Systems
ATAX0003 Microeconomics and the Australian Tax System
ATAX0004 Framework of Commercial Law
ATAX0005 Accounting 1
ATAX0006 Tax Administration
ATAX0008 Principles of Capital Gains Taxation
ATAX0009 Law of Companies, Trusts and Partnerships
ATAX0010 Accounting 2
ATAX0011 Macroeconomics, Government and the Economy
ATAX0013 Taxation of Companies, Trusts and Partnerships
ATAX0014 Tax Policy Framework
ATAX0015 Intermediate Financial Accounting
ATAX0016 Critical Perspectives and Ethics
ATAX0017 Tax Accounting Systems
ATAX0018 Tax Litigation

Two of the following **special category courses** must be completed:

ATAX0020 Introduction to Australian International Taxation
ATAX0022 Goods and Services Tax: Design and Structure
ATAX0023 Principles of Goods and Services Tax Law
ATAX0053 Accounting for Complex Structures and Instruments

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 groups within UNSW or at other universities. Some of these courses have lower credit value and workload than ATAX courses.

Finally, **four** of the following **elective courses** must be studied:

ATAX0022 Goods and Services Tax: Design and Structure
ATAX0023 Principles of Goods and Services Tax Law
ATAX0055 Taxation of Property Transactions
ATAX0057 Business Finance
ATAX0058 Quantitative Analysis
ATAX0059 Management Accounting
ATAX0060 Auditing and Assurance Services
ATAX0605 Taxation of Trusts
ATAX0607 Taxation of Corporate Finance
ATAX0610 Taxation of Superannuation
ATAX0614 Selected Problems in Stamp Duty
ATAX0615 Taxation of Specific Industries

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.

Particular Requirements for Students Seeking Accounting Professional Entry

Students wanting to gain accounting admission *must* study the following:

ATAX0053 Accounting for Complex Structures and Instruments

Also **one** of the following **three** other special category courses must be chosen:

ATAX0020 Principles of Australian International Taxation
ATAX0022 Goods and Services Tax: Design and Structure
ATAX0023 Principles of Goods and Services Tax Law

Finally, **all of the electives chosen must be accounting courses**. Therefore the following four elective courses must be chosen:

ATAX0057 Business Finance
ATAX0058 Quantitative Analysis
ATAX0059 Management Accounting
ATAX0060 Auditing and Assurance Services

Hence in practice the only decision to be made for students seeking professional accounting entry is between ATAX0020, ATAX0022 and ATAX0023, and in the General Education area.

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/study**

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 also count towards Continuing Professional Education (CPE), Continuing Professional Development (CPD) and Continuing Legal Education (CLE) requirements for Chartered Accountants, Certified Practicing 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 enrols 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 Student Services Office so transitional 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.

A Message from the Dean

It is my pleasure to welcome you to the Faculty of Medicine at the University of New South Wales. My colleagues from the Faculty and I are delighted that you have chosen to begin your professional career with us and we congratulate you upon gaining entry into our Faculty.

You are joining a University community which has depth and breadth in academic enterprise and social opportunity. The University of New South Wales is a robust institution with traditions of educational and investigative excellence coupled with the vitality of an energetic faculty and administration. I encourage you to explore fully the opportunities available to you as you enter our scholarly community. You are joining us at a time of unprecedented change in higher education, scientific discovery and health care delivery across many disciplines. Despite considerable turmoil in the financing of both tertiary education and health care delivery throughout the world, the need for excellence in clinical education, biomedical research and teaching remains a clarion call for institutions of higher learning across the globe – a call to prevail in their quest to succeed in preparing the next generation of professionals. At the University of New South Wales, we look forward to working with you during your time with us as, together, we confront the challenges ahead and turn them into opportunities.

This Faculty takes pride in the values through which we operate:

- We build on the strong foundation laid over the decades since the founding of this Faculty.
- We strive to discover that which is true not simply what is most likely.
- We seek what is best not simply what is possible.
- We aim for durability not expediency.
- We will be worthy of the trust which society places in us to lead in education, research, clinical care and advocacy.

Your educational journey with us will be a series of counterpoints – outward exhilaration and reflective contemplation, energy and fatigue, didactic learning and enquiry-driven self study. All these and many more experiences await you. A talented faculty and dedicated administrative staff stand ready to assist you.

The Faculty also provides a diverse array of opportunities for science students and postgraduate students. Postgraduate programs are offered by both coursework and research. There are many excellent opportunities in these areas throughout the Faculty.

I bid you welcome again and look forward to the many crossings of our paths as you begin your journey with us at the University of New South Wales.

S. Bruce Dowton
Dean
Faculty of Medicine

Faculty of Medicine

Contents

Faculty Information and Assistance

Some People Who Can Help You

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 2004 can be found in alphabetical order by the course code at the back of this Handbook or in the Virtual Handbook at **www.student.unsw.edu.au/handbook**

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 sees 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 has implemented new admissions criteria commencing for entry into the UNSW medicine programs for 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 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.

Admission of Indigenous Students

The Faculty may admit suitably qualified Aboriginal and Torres Strait Islander people. A pre-Medicine program, run from mid January 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 **http://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	1,650
Two coats (1 laboratory, 1 hospital)*	65
Stethoscope	80–300
Ophthalmoscope	180–250
Laboratory Manuals	150
Miscellaneous (papers, pens, kits, diagnostic equipment and aids, etc)	300

**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

The use of information technology in education is no longer novel. It is a standard tool used widely by lecturers and students. Prospective students need to be aware that UNSW is a place where information technology will be integral to their education, and that staff can expect students to have access to and use information technology.

UNSW expects all new students to have off campus access to a standard modern computer with CD drive and internet connectivity (e.g. via a modem). The software on the computer should include:

- a word processor able to import and export RTF files
- a spreadsheet program able to import and export ASCII delimited tables
- a drawing/painting program able to import and export images in widely used formats such as GIF, JPEG, TIFF or PNG
- software able to read PDF and Postscript files*
- a Java 1.1 capable Web browser that supports HTML 2.0 *
- software to enable file transfer using the FTP protocol*
- networking software to enable TCP/IP connection (e.g. via a modem using PPP)*
- email software able to link to a popserver
- anti-virus software*

** UNSW's Division of Information Services is able to provide software of this type with students being charged only for handling and media costs.*

As computers remain expensive items, UNSW will provide limited on-campus computer facilities that meet these standards for students who are unable to obtain off-campus access to such resources.

Attendance at, and Residence in, Hospitals

From Year 1, students attend hospitals for clinical teaching. For each of Years 2-6, students are allocated to a teaching hospital known as their "home hospital". For Years 2 and 3, students are allocated to a large teaching hospital in Sydney. 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 18 months of their final three years in rural hospitals. Other local students may have the option or be required to undertake 18 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 8 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 in order to ensure that students receive the highest possible quality of teaching. 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.

Registration: The Registrar, Medical Board of New South Wales, Gladesville Hospital Campus, off Punt Road, Gladesville, Tel: 9879 6799.

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 any capacity 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 all 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 the UNSW Medicine and new 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/registra2.htm**

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. Student should approach the Student Affairs Coordinator to explain their situation as soon as possible.

1. The Student Affairs Coordinator may require 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 Year Assessment Committee should it need to be considered by the Committee.

3. If special consideration is granted and the student chooses to sit the assessment, the assessment would be marked in the usual way.

4. It 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 Committee and present the case for special consideration.

6. If the Committee 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 Year Assessment Committee.

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 thought 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 and are also used 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.med.unsw.edu.au/medsoc/entrance.htm

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 East Health – South Eastern Sydney Area Health Service

Tel: (02) 9947 9898, Fax: (02) 9947 9891

The South Eastern Sydney Area Health Service provides a range of hospital and community health care services for some 763,000 residents and the many people who transit the area each day.

Three principal teaching hospitals, three speciality referral hospitals and a number of associated teaching hospitals are located in the area. There is predominantly an ageing population. Approximately 32% of residents are born overseas and 67% of those are from non-English speaking countries.

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.

There is a care-by-parent unit providing accommodation for parents and siblings with a Ronald McDonald House providing additional care-by-parent accommodation.

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 Newborn Care Centre provides care to many premature or critically ill newborn infants with complex congenital diseases. It has a strong research focus on lung inflammation. It is the first unit in Australia to use surfactant to help premature babies to breathe.

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). The St George Hospital has built an enviable reputation with areas of expertise including Oncology, Orthopaedics and Women & Children's Health as well as a large research enterprise. 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). Sophisticated diagnostic departments, which include radiology, all branches of pathology and nuclear medicine, support the clinicians of the Hospital. 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.

Research is undertaken in the Garvan Institute of Medical Research, Professorial Departments, the Department of Clinical Pharmacology and the Anxiety Disorders Unit. There are 18 Chairs at the Hospital, which include medicine, surgery, cardiology, endocrinology, immunology, psychiatry and clinical pharmacology. The visiting medical staff numbers 100; there are 80 staff specialists and 130 resident medical officers.

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. The Centre is active in a number of clinical research projects, including the investigation of new pharmacotherapy for opioid dependence, accelerated detoxification and the role of psychiatric morbidity in addictive disorders.

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. Services provided include Colo-rectal Surgery, Ear Nose & Throat Surgery, Gastroenterology, General Surgery, Gynaecology, Specialty Hand Surgery, Neurosurgery, Oral and Faciomaxillary Surgery, Plastic Surgery, Urology, General Medicine and Rehabilitation. It also has a purpose built Day Rehabilitisation and Injury Management Centre.

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.

The Sutherland Hospital Caringbah is staffed by 65 visiting medical staff, 14 staff specialists and 60 resident medical staff.

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 a 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.

War Memorial Hospital also supports an aged care assessment team as well as a number of specialist clinics and services. Other service components of the Hospital include spouse accommodation for country patients and office accommodation for the Waverley Community Team.

The South Western Sydney Area Health Service

The South Western Sydney Clinical School (SWSCS) was established in 1990. It is unique to the UNSW city clinical schools in that it embraces multiple campuses, allowing access to a broad and diverse range of health care services delivered to a large (approximately 800,000 people) and diverse population. The Clinical School offers rotation through various sites for small group learning in the fields of medicine, surgery, obstetrics and gynaecology, pathology, microbiology, anaesthetics, intensive care, adolescent health, mental health, population health, community medicine, health promotion, general practice, rehabilitation, aged care, drug and alcohol services, epidemiology and nursing research. The sites include Liverpool, Bankstown, Fairfield, Campbelltown, Camden and Bowral Hospitals.

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

An active programme is also run at Bankstown-Lidcombe Hospital (400 beds), the second principal referral hospital in SWSAHS. This new hospital 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.

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 heath 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 Illawarra Area Health Service

Tel: (02) 4275 5111, Fax: (02) 4276 1447

The Illawarra Area Health Service covers an area immediately to the south of the Sydney metropolitan area, and comprises the local government areas of Wollongong, Shellharbour, Kiama and Shoalhaven. The estimated total population of the Illawarra is 327,000, which comprises 5.4% of the total NSW population. The Illawarra Area Health Service is a network of integrated community and hospital services which provide both public and personal health care.

The Illawarra Area Health Service also provides a comprehensive psychiatry service for both inpatients and the community. General practitioners throughout the Division of General Practice also have an active role in the integration of community and hospital services and provide excellent training opportunities in general practice.

Psychiatric care is consolidated at Shellharbour Hospital which has 34 acute inpatient beds. Lakeview House, the psychiatric rehabilitation facility for the Area, also located at Shellharbour Hospital, has 20 inpatient beds and provides care for 20 day patients.

In addition, the Illawarra Area Health Service provides health care across the region through the following services:

- Community Health Facilities
- Drug, Alcohol and HIV/AIDS Services
- Illawarra Public Health Unit
- Mental Health Services
- Rehabilitation and Aged Care Services
- Wollongong Diabetes Centre

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. A newly built Clinical Services Block houses all acute emergency, 75 surgical beds, a paediatric unit, 10 ICU & 6 DU beds, 8 operating theatres, birthing facilities, and medical imaging. A large academic unit including teaching facilities and offices for academic staff is part of this complex. The Wollongong and Port Kembla Hospitals provide complimentary services with all acute services located at the Wollongong Hospital.

The Port Kembla Hospital comprises 52 beds for Rehabilitation and Psychiatry Services. The Wollongong Hospital with 240 beds provides a full range of tertiary services including medical imaging; maternal and paediatric services; surgical services including neurosurgery and medical services including a full range of medical subspecialties.

Shellharbour Hospital

The Shellharbour Hospital has 150 beds (5 of which are high dependency). The hospital 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.

The Greater Murray Area Health Service

Wagga Wagga Base Hospital

PO Box 159, Wagga Wagga NSW 2650
Tel: (02) 6938 6666, Fax: (02) 6921 8243

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 Emergency Department has 3 staff specialists and has a major trauma role.

The Base Hospital is a significant teaching hospital boasting registrars in medicine, surgery, orthopaedics, anaesthetics, obstetrics and gynaecology, with a number of resident medical officers and medical students 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. Retrievals are conducted from the hospitals to outlying areas as far as Deniliquin and Corryong. In fulfilling this function, 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 (resident & visiting) including Emergency Medicine, General Medicine, General Surgery, Paediatric Medicine, Rehabilitation Medicine, ENT, Urology, Paediatric Surgery, Oncology, Obstetrics, Intensive Care, Respiratory Medicine, Rheumatology. There are a full range of diagnostic services including Pathology, CT, Nuclear Medicine, Ultrasound, General X-Ray, Mammography. Other Allied Health Services include Physiotherapy, Dietetics, Pharmacy and Aboriginal Health.

The Mid 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
- 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. Port Macquarie is one of the largest health centres of the region boasting some 56 specialist medical staff. 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.

Port Macquarie Base Hospital in the short time it has been opened has received several awards and commendations for its clinical excellence, and also for its excellence in service delivery and quality patient care. In addition to achieving Associated Teaching Hospital status with UNSW, University of Sydney and the University of Newcastle, the hospital has been accredited by the Medical Association/Colleges of Physicians, Surgeons, Obstetrics and Gynaecology, Orthopaedics and Psychiatry.

The Base Hospital is a significant teaching hospital boasting registrars in medical, surgical and orthopaedic, psychiatry obstetrics and gynaecology with a number of medical officers and medical students.

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 is a 106 bed acute general hospital on the mid north coast of NSW. Its facilities consist of: Emergency Department, Intensive Care/Coronary Care Unit, Medical Ward, Surgical Ward, Psychiatric Unit, Rehabilitation Ward, Multi-Purpose Ward, Obstetric Ward, Operating Theatre, Radiology, Day Hospital, Physiotherapy Department, Occupational Therapy Department.

Durri Aboriginal Medical Service, located in the Kempsey CBD, is a new state of the art facility providing primary health care for indigenous people.

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 to otherwise intractable problems. The BMSF has recently been evaluated as a Major Australian Research Facility following a recent survey commissioned by the Commonwealth Department of Industry, Science and Resources (now DEST). 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. The Centre is a collaborative venture between the Faculties of Medicine and Engineering at the University of NSW and works with partners drawn from the public and private health sector industry, government and other academic organisations. 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.

The courses are designed to provide graduates with a theoretical and practical understanding of the role of information and communication technologies in health care to develop the skills needed for the successful integration of such technologies into the health system.

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**

Group for Health Architecture and Planning

The Group for Health Architecture and Planning (GHAAP) was established in 1997 to conduct research and teaching in the areas of capital development and asset management of healthcare facilities. Situated within the School of Public Health and Community Medicine, GHAAP links the world of clinical practice and health service management to the disciplines surrounding the physical design and procurement of health facility buildings. The Centre leads research into the physical environments provided by health facilities and their effect on health outcomes. More information about the group can be found at: **http://sphcm.med.unsw.edu.au/sphcm.nsf/website/aboutus2.centres&units.ghaap**

Centre for Culture and Health

The Centre for Culture and Health (CCH), affiliated with the School of Public Health and Community Medicine, focuses on the impact of culture on the health of individuals and communities. The Centre strives to assist in the development of appropriate health services, policies, practices and systems at an individual, local, regional and global level. The focus of the Centre's research is on (a) multicultural communication, in the patient-practitioner relationship, and within health systems; (b) cultural competence in health care; and (c) a holistic perspective on body, mind and spirit.

The 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. Our staff work in close collaboration with members of the Division of Haematology/Oncology in the hospital. With staff numbers exceeding 100, 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.

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 it 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/nchecr**

National Perinatal Statistics Unit (Australian Institute of Health and Welfare)

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. Facilities at the Centre include a computer network, a Document Archive with an extensive bibliographic database, seminar and conference facilities. 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.

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, including nine staff at professor or associate professor level, and attracts more than $4M p.a. in peer-reviewed funding. 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 neurodegenerative 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**

The 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. The Foundation has five dermatology registrars and a research fellow as well as undergraduate students who attend the dermatology clinics. A broad range of clinics are 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. Both community education and dermatological research are pursued at both centres.

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, affiliated with UNSW and accredited by the National Health and Medical Research Council. 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 restenosis.

The 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 and Course Information

The Faculty of Medicine has introduced an innovative six year undergraduate Medicine program (3802 new Medicine program) that commences for Year 1 students in 2004. Information below is provided both for this new program and for the existing 3801 Medicine program.

3802 New Medicine Program

MB BS

This six year program leads to the award of the degrees of 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 I; 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, 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 see the program description for 3831.

Objectives of the New Medicine Program (3802)

The objectives of the new 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 new 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 (3802)

The duration of the new Medicine program is normally 6 years. In Years 1-3, each year consists of 4 x 8-week modular courses, with the start of module 1 coinciding with the beginning of UNSW Session 1 and the start of module 3 coinciding with the beginning of Session 2. In years 4-6 each year consists of 5 x 8-week modules, with the first usually completed before the commencement of Session 1. 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 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.

The program is organised into three phases. Phase 1 includes an initial Foundations course, followed by 8 x 8-week courses focusing 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 be able to individually 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 Murray Valley 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, students will undertake an Independent Learning Project, comprising 3 x 8-week modules, which may or may not be taken consecutively. 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 undertaken 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 in 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 in 5.5 years.

Rules of Progression 3802

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 at **www.med.unsw.edu.au**

3841 New Arts/Medicine Program

BA MB BS

The new 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. The new 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.

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 this program should contact the Office of the Dean as soon as possible after receiving their offer of a place in the new Medicine program. Selection of students for the new Arts/Medicine program is made approximately two weeks before commencement of Session 1.

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).

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 3.5 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 the BA Honours program 3401. These students will be exempt from undertaking the Independent Learning Project and will thus complete the combined program in 7.5 years.

Students who have completed the combined new 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.

Award of Honours (3802 and 3841)

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 that:

To be eligible for Honours, students must achieve a grade of Credit or better in the Independent Learning Project, unless they have been exempted 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 - 3802

Phase 1	6
Phase 2	4
Phase 3	8
General Education courses	1
Additional courses from other Faculties	1

Relative weighting of phases and other components - 3841

Phase 1	6
Phase 2	4
Phase 3	8
Arts courses (best 24 UOC)	2

3801 Medicine Program

BSc(Med) MB BS

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. This program is not available to Year 1 students in 2004.

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 see the program description for 3831.

Objectives of the Medicine Program (3801)

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 graduate understand professional and ethical principles and to be at all times mindful of the individual's obligations to patients, colleagues and the community.

Supplementary Assessment (3801)

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 (3801).

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 3, 4 and 6 such additional assessment is usually undertaken in December and in Years 1 and 2 in the following January and February. 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.

Program Details (3801)

Year 1 – not offered in 2004

Year 2 – offered for the final time in 2004

Year 2 of the program is conducted in two academic sessions. Teaching in the courses Anatomy 2, Medical Biochemistry and Genetics, and Physiology is integrated and aims to give students a broad knowledge and understanding of human structure and function based on scientific principles, relevant to further study in medicine. In Clinical Studies 2, students make contact with patients and the physical aspects of disease, in order that they may apply their knowledge and understanding to the clinical situation. The strand dealing with human behaviour, which was studied in Year 1, is continued.

		HPW	
		S1	**S2**
1. ANAM2007	Anatomy 2	7	7
2. BIOD2329	Medical Biochemistry and Genetics	4.5	4.5
3. MDSG2001	Clinical Studies 2	2	2
4. PHPM2018	Medical Physiology 1	8	8
5. PSYM2101	Human Behaviour	3	3
	Total	**24.5**	**24.5**

Assessment

Major assessments take place in the November/December assessment period but progressive assessments may take place throughout the year. Details of progressive assessments are provided by the appropriate course authority.

Rules of Progression

Students who pass all courses in Year 2 are eligible to progress to Year 3. Students who do not pass a course are required to repeat the whole course. They are not required to repeat any course in which they have attained a pass. The exception is that they are required to repeat Clinical Studies 2 while they are repeating a Year 2 course or courses, regardless of whether or not they have passed Clinical Studies 2. Where students fail 16 units of credit or less, they are permitted to undertake a course from Year 3 if they have met the prerequisites for that course, and there are no timetable clashes.

Allocation to Hospitals in Year 3

During Session 2, Year 2 students are asked to list their preferences regarding allocation to one of the five Sydney teaching hospitals. For further information, refer to the earlier paragraph 'Attendance at, and Residence in, Hospitals'.

Year 3

Year 3 is conducted in two academic sessions. The principal campus-based courses of the year are Medical Pharmacology, Medical Physiology, Microbiology for Medical Students and Pathology. Clinical Studies 3 continues the clinical program commenced in first year. Students also take the course Medical Ethics and Health Law, which builds on material presented in first year ICBS and second year Human Behaviour. An understanding of Immunology is also required to enable students to deal with the pathogenesis of specific diseases. To facilitate this understanding, a series of introductory lectures in Immunology provide an outline of the structure and function of the immune system, covering the cells and mediators involved in the immune response. The Immunology Program is integrated with the Microbiology course on the response to infectious diseases, and with the Pathology course and is presented in an interdisciplinary fashion, providing a basis for subsequent instruction in the diagnostic and therapeutic aspects of clinical immunology in the later years of the curriculum.

		HPW	
		S1	**S2**
1. CMED3001	Medical Ethics and Health Law	-	1.5
2. MDSG3001	Clinical Studies 3	4	4
3. MICM3228	Microbiology for Medical Students	4	4
4. PATM3101	Pathology	6	4
5. PHPM3014	Medical Physiology 2	4	4
6. PHPM3055	Medical Pharmacology	4.5	4.5
	Total	**22.5**	**22.0**

Assessment

In addition to the end of year assessment, mid-year progress assessments are programmed in some courses.

Rules of Progression

Students who pass all courses in Year 3 are eligible to progress to Year 4. Students who do not pass a course are required to repeat the whole course. They are not required to repeat any course in which they have attained a pass. The exception is that they are required to repeat Clinical Studies 3 while they are repeating a Year 3 course or courses, regardless of whether or not they have passed Clinical Studies 3.

Allocation to Hospitals in Year 4

During Session 2, Year 3 students are asked to list their preferences regarding allocation to a Sydney or rural teaching hospital. For further information, refer to the earlier paragraph 'Attendance at, and Residence in, Hospitals'.

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 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 Community Medicine.

Rules of Progression

Students will be required to pass each of following segments of the assessment: a pass in the Population Medicine assessment, a pass in the Clinical Skills assessment, a pass in the Clinical Studies 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.

Year 5

Year 5 is conducted in four terms, each of nine weeks. In Terms 5:1 to 5:4 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
OBST5001 Obstetrics and Gynaecology
PAED5101 Paediatrics
PSYM5001 Psychiatry

Sequence of Blocks

Group A:

Term 5:1 (9 weeks) Paediatrics
Term 5:2 (9 weeks) Obstetrics and Gynaecology
Term 5:3 (9 weeks) Psychiatry
Term 5:4 (9 weeks) Geriatrics/General Practice/Subspecialties

Group B:

Term 5:1 (9 weeks) Obstetrics and Gynaecology
Term 5:2 (9 weeks) Paediatrics

Term 5:3 (9 weeks) Geriatrics/General Practice/Subspecialties
Term 5:4 (9 weeks) Psychiatry

Group C:

Term 5:1 (9 weeks) Psychiatry
Term 5:2 (9 weeks) Geriatrics/General Practice/Subspecialties
Term 5:3 (9 weeks) Paediatrics
Term 5:4 (9 weeks) Obstetrics and Gynaecology

Group D:

Term 5:1 (9 weeks) Geriatrics/General Practice/Subspecialties
Term 5:2 (9 weeks) Psychiatry
Term 5:3 (9 weeks) Obstetrics and Gynaecology
Term 5:4 (9 weeks) Paediatrics

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 in all four term examinations before progressing to Year 6. Course examiners may, in the time between the sitting of term assessments and the meeting of the Faculty Assessment Review Group, 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.

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 entry for Year 6.

Year 6

The first term in Year 6 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.

3821 Combined Science and Medicine Program

BSc MB BS

Students who, at the end of 2003, have completed at least two years of a medically-oriented Science degree and are successful in transferring to Medicine, may be able to be offered third year of the Science/Medicine program in 2004.

The Science/Medicine program is an alternative program of study, whereby, over a seven-year program, a student may complete the degree of Bachelor of Science, with the Bachelor degrees of Medicine and Surgery.

Program Details (3821)

The Science program is divided up into courses, each of which is assigned units of credit. For the Science degree, a minimum of 144 units of credit in approved science courses is required. Students usually take 48 units of credit in each year.

Year 1 – Not offered in 2004

Year 2 – Not offered in 2004

Year 3 – Offered for final time in 2004

In Year 3, students are required to complete 48 units of credit. Students should undertake a major in Anatomy, Physiology or Biochemistry, or a double major in two of these disciplines. A major may be completed by taking at least 18 units of credit in one discipline area and fulfilling other program requirements specified for that major. Students who do **not** undertake a Biochemistry major **must** complete BIOC3261 (Human Biochemistry). Students in the combined Science and Medicine program are not able to enrol in courses in Pharmacology, Pathology or Immunology.

Year 4 – Offered for final time in 2004

Students usually join Year 3 of the 3801 Medicine program. However, students may apply to take Honours in the discipline of their major before proceeding to the Medicine program. The Honours program is a one-year research project in the school of their major. Details are given in the Science section of this Handbook. Enquiries should be directed to the Head of the appropriate School.

3840 Combined Arts and Medicine Program

BA BSc(Med) MB BS

The Arts/Medicine program is an alternative program of study in which, over seven years, 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 fulfill 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 Details 3840

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 4. A major sequence equals 42 units of credit (usually 12 at Level 1 and 30 at upper level). Details of all Faculty of Arts courses are given in the Arts section of this Handbook.

Year 1, 2004 – not offered

Year 2, 2004

ANAM2007 Anatomy 2
BIOD2329 Medical Biochemistry and Genetics
MDSG2001 Clinical Studies 2
PHPM2018 Medical Physiology 1
PSYM2101 Human Behaviour

Year 3, 2005

CMED3101 Medical Ethics and Health Law
MDSG3001 Clinical Studies 3
MICM3228 Microbiology for Medical Students
PATM3101 Pathology
PHPM3014 Medical Physiology 2
PHPM3055 Medical Pharmacology

Year 4, 2006

Upper level Arts major sequence plus additional Arts courses (48 UOC)

Year 5, 2007

Students join Year 4 of the Medicine program 3802.

Ranking for the Award of Honours (3801, 3821 & 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 Committee 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 2002 was:

Class I Honours

Program Mark: 71.98% – 81.60%
Number of Awards: 21
Percent of graduands: 11.4%

Class II Div. I

Program Mark: 68.80% – 71.13%
Number of Awards: 28
Percent of graduands: 15.1%

Class II Div. II

Program Mark: 66.74% – 68.57%
Number of Awards: 23
Percent of graduands: 12.4%

Table 1. Course Weights Within Years (Six Year Program)

Year 1	Course Weights
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

3831 Bachelor of Science (Medicine) Honours

BSc(Med)Hons

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.

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.

Information concerning this program option is issued to medical students in mid-year. A list of available research projects may be obtained from the Office of the Dean.

Rules for the Award of the Bachelor of Science (Medicine) Degree with Honours – BSc(Med)Hons

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 research project and any problems encountered by student and supervisors.

Assessment Guidelines

1. The BSc(Med)Hons Committee determine 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.

School of Medical Sciences

3850 Bachelor of Science in Health and Sports Science*

*This program is currently under review and may change in 2004. Please refer to the website for further information: **www.sportscience.unsw.edu.au**

Program Authority
Dr Steve Boutcher
Dept Physiology and Pharmacology
Tel: (02) 9385 2877
Email: s.boutcher@unsw.edu.au

Program Officer
Peter Ryan
Tel: (02) 9385 2547
Email: p.ryan@unsw.edu.au

Program Details

This program in Health and Sports Science offers a comprehensive education in the area of health and sports science. Four years of full-time study, or the part-time equivalent, leads to the award of a Bachelor of Science in Health and Sports Science with an Honours program available for students who perform at a Credit level. 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.

Stage 1 introduces students to the core science that will serve as a solid foundation for the following years. Courses in this include chemistry, statistics, biology and psychology. Students will be introduced to the profession of exercise science through two introductory courses during this stage. Stage 2 of the program begins to focus on human physiology and biochemistry, biomechanics, sport psychology and nutrition while building on the scientific principles acquired in Stage 1. Stage 3 of this multidisciplinary program moves the student towards a holistic understanding of health and exercise as it offers increasing complexity of course material: exercise physiology, musculoskeletal physiology and physiology of endurance-based activity, functional anatomy, biomechanics, and motor control and function. Stage 4 continues to develop multidisciplinary expertise through use of specialised courses and electives. Extensive coordinated and structured industry experience is a key component of this final year. Students choose from a selection of courses in their fourth year to aid their graduate employment strategies. Understanding of scientific method is a key component of this course and all students will take a research methods course in Stage 4. General Education is a requirement of all undergraduate courses at this university and may be taken in Stages 2 and 3.

Stage 1		**UOC**
Session 1		
CHEM1011	Fundamentals of Chemistry A	6
CHEM1031	*or* Higher Chemistry C	6
PHPH1501	Introduction to Health & Sports Science A	6
PSYC1001	Psychology 1A	6
BIOS1201	Molecules, Cells and Genes	6
Session 2		**UOC**
CHEM1021	Fundamentals of Chemistry B *or*	6
CHEM1041	Higher Chemistry D	6
ANAT2111	Introductory Anatomy	6
PSYC1011	Psychology 1B	6
PHPH1502	Introduction to Health & Sports Science B	6
	Total	**48**
Stage 2		
Session 1		
BIOC2181	Fundamentals of Biochemistry *or*	6
BIOC2101	Principles of Biochemistry (Advanced)	6
PHPH2501	Physiology for Health & Sport Science A	6
SESC2451	Biomechanics for Sports Scientists	6
GENxxxx	General Education Courses	6
Session 2		
PHPH2502	Physiology for Health & Sport Science B	6
FOOD3330	Nutrition for Sports Science	6
PHPH2503	Exercise Physiology	6
PSYC2126	Sport Psychology	6
	Total	**48**
Stage 3		
Session 1		
ANAT3131	Functional Anatomy 1	6
SESC3451	Human Movement Measurement Methods	6
PHPH3502	Skeletal Muscle in Health and Exercise	6
PHPH3507	Physical Activity and Health	3
GENSxxxx	General Education Course	3
Session 2		
ANAT3141	Functional Anatomy 2	6
PHPH3505	Motor Control and Dysfunction	6
PHPH3506	Principles of Exercise Prescription	3
GENSxxxx	General Education Course	3
Plus a further 6 credit points from:		
PHPH3503	Physiology of Endurance Activity	6
or		
PATH2201	Processes in Disease	6
	Total	**48**
Stage 4		
Session 1		
PHPH4501	Introductory Research Methods	3
PHPH4503	Practicum A	6
PHPH4513	Physical Activity in Special Populations	3
Elective courses totalling		12
Session 2		
PHPH4504	Practicum B	6
GENSxxxx	General Education Courses	6
PATH2201	Processes in Disease*	6
Elective courses totalling		6
	Total (including electives)	**48**

Stage 4 electives

Students must choose from the available electives so as to provide a total of 48 units of credit in Stage 4. The offering of electives is dependent on student numbers

Session 1		
PHPH4502	Principles of Pharmacology	3
PHPH4509	Movement Rehabilitation	6
PHPH4508	Brain Mechanisms in Sensory Motor Integration	3
PHPH4511	Sports Management	3
BIOM9541	Mechanics of the Human Body	6
SESC9400	Ergonomics 1	3
FOOD3440	Advanced Nutrition	6
PAED4560	Paediatric Exercise Science	3
Session 2		
PATH3207	Musculoskeletal Diseases	6
PHPH4505	Research Project	6
PHPH4512	Circadian Rhythms: Sleep Physiology and Pathophysiology	3
CMED9516	Introduction to Public Health	4
ELEC9405	Human Movement Control Topics	6
PHPH4506	Drugs in Sport (Effects & Interaction)	3
SESC9410	Ergonomics II	3

**this course must be taken Session 2, Stage 4, if not completed in Stage 3*

Unit of Credit Distribution

Stage 1, 48; Stage 2, 48; Stage 3, 48; Stage 4, 48.
Total Units of Credit for the Program = 192.
Full-time program load equivalence (EFTSU) = 1.

3860 Bachelor of Science in Prosthetics and Orthotics

Full-time or Part-time Distance Learning

www.pando.unsw.edu.au

Program Details

The Prosthetics and Orthotics program is under review, and there will not be an intake of new students for the 2004 year.

The Bachelor of Science in Prosthetics and Orthotics is a recently introduced four year degree program that teaches the theoretical, technical and clinical skills required by prosthetic and orthotic practitioners. Students will learn to assess patients in clinical settings, with amputations and motor disabilities and learn to design, fabricate, fit and care for artificial limbs (prostheses) and body braces and supports (orthoses).

The orthotist and prosthetist must understand the anatomy, physiology and pathology of the human body and the forces that are applied to joints during movements. They must develop an understanding of the properties of the materials and components from which the devices are fabricated, in order to ensure their safe and effective use in clinical practice. Prosthetists and orthotists also need the clinical skills to assess patients' needs and design appropriate devices to meet their requirements.

The program is predominantly offered in a distance-learning mode, delivered using the Internet and multimedia (web-based) learning materials. Some courses are also available in on-campus mode at our Kensington and Randwick campuses. This format provides greater flexibility for full-time (4 years) or part-time (8 years) study. Lecturer-student and student-student interaction is promoted through discussion boards, the telephone and email. Students get a further opportunity to interact with lecturers and classmates and gain hands-on experience during the face-to-face practical sessions, which form an essential component of each stage of the program.

First year subjects ensure that students have a solid biomedical and scientific foundation on which technical and clinical skills and knowledge can be built. Students also receive their first introduction to prosthetics and orthotics at this stage.

In the second and third year, students begin to focus on more specialised areas such as biomechanics and pathology. They also enhance their understanding and skills in the design and construction of specific prosthetic and orthotic devices and their role in patient rehabilitation.

In the fourth year of the program, students are placed in clinical or industrial settings to gain a more practical understanding of the principles learnt in the earlier years.

Conditions for the Award of the Bachelor of Science in Prosthetics and Orthotics degree

A student must have completed 192 units of credit including 12 units of General Education courses.

Honours is available to suitably qualified students.

The degree must contain a sequence of study as specified in the program description for the distance education subjects. On-site attendance at the face-to-face/practical component of each course is compulsory. Students cannot pass these courses and move onto the next stage, without participation in this component of the course.

Program Outline

Stage 1		**UOC**
Session 1		
CHEM1900	Chemistry for Prosthetics and Orthotics	3
MATH1060	Mathematics for Prosthetics & Orthotics	3
PHYS1103	Physics for the Human Musculoskeletal System	3
PROR1121	Biology for Prosthetics & Orthotics	3
PROR1114	Introduction to Laboratory and Professional Aspects of Prosthetics & Orthotics	6
PROR1116	Overview of Prosthetics & Orthotics	3
GENS	General Education Elective	3
	Total	**24**

Session 2		**UOC**
PROR1205	Anatomy for Prosthetics & Orthotics	3
BIOC1221	Biochemistry for Prosthetics & Orthotics	3
MATS9081	Materials in Prosthetics & Orthotics	3
PROR1220	Physiology for Prosthetics & Orthotics	3
PSYC1126	Psychology for Prosthetics & Orthotics	3
PROR1217	Lower Limb Orthotics I	3
PROR1218	Applied Lower Limb Orthotics I	6
	Total	**24**

Stage 2		
Session 1		
PROR2102	Functional Anatomy for Prosthetics & Orthotics	3
PROR2103	Biomechanics for Prosthetics & Orthotics	3
PROR2101	Pathology for Prosthetics & Orthotics	3
PROR2111	Trans-tibial and Partial Foot Prosthetics	6
PROR2112	Applied Trans-tibial and Partial Foot Prosthetics	6
PROR2115	Medical Conditions for Prosthetics & Orthotics	3
	Total	**24**
Session 2		
PROR2201	Clinical Aspects of Gait Disorders	3
PROR2210	Lower Limb Orthotics II	3
PROR2211	Applied Lower Limb Orthotics II	3
PROR2212	Trans-femoral & Hip Disarticulation Prosthetics	6
PROR2213	Applied Trans-femoral & Hip Disarticulation Prosthetics	3
MATS9082	Materials in Prosthetics & Orthotics II	3
GENSxxxx	General Education Elective	3
	Total	**24**

Stage 3		
Session 1		
PROR3111	Orthopedics for Prosthetics & Orthotics	6
PROR3112	Upper Limb Prosthetics	3
PROR3113	Applied Upper Limb Prosthetics	6
GENSxxxx	General Education Elective	3
	Electives	6
	Total	**24**
Session 2		
PROR3211	Pediatrics for Prosthetics & Orthotics	3
PROR3212	Applied Pediatrics for Prosthetics & Orthotics	3
PROR3213	Spinal Orthotics	6
PROR3214	Clinical Topics for Prosthetics & Orthotics	3
PROR3216	Principles of Ethical, Professional & Management Standards for Prosthetists & Orthotists	3
PROR3217	Limb Amputation, Functional Aspects for Prosthetics & Orthotics (Elective)	3
GENSxxxx	General Education Elective	3
	Total	**24**

Stage 4		
Session 1		
PROR4111	Practicum 1 Lower Limb Prosthetics	6
PROR4112	Practicum 2 Upper Limb Prosthetics	6
PROR4113	Practicum 3 Lower Limb Orthotics	6
PROR4114	Practicum 4 Upper Limb/Spinal Orthotics	3
	Electives	3
Session 2		
PROR4115	Practicum 5 (Elective)	3
PROR4116	Research Methods (Elective)	3
PROR4117	Advanced Prosthetics & Orthotics (Elective)	6
	Elective	12
	Total	**24**

A Message from the Dean

Why science is important to society – and to you

Many governments around the world now recognise the fundamental relationship between scientific and technological leadership and economic development. Technological innovation, based on the creative application of new scientific knowledge, has already transformed all of the major economies of the world. Greater investment in new technology-based industries, new social expectations and growing environmental pressures, have also combined to add to the demand for science graduates with in-depth knowledge and an ability to think outside the square. UNSW is at the forefront of many new developments in science, and is internationally recognized for its leadership in learning and research.

Science is about curiosity, observation and new discovery: asking why things happen as they do. It is about investigating and seeking to understand our surroundings from sub-atomic particles, to genes, and to galaxies beyond our own. A knowledge of how a cell functions helps us to fight disease and improve the quality of life; a knowledge of the interactions between the oceans and the atmosphere allows one to assess and respond to global climate change; a knowledge of how to manipulate single atoms permits us to construct complex and novel devices that are invisible to the naked eye. Our body of scientific knowledge continues to expand at an ever-faster pace, and will continue to do so.

Information contained in 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 provide assistance on administrative matters, course selection and career directions, and to help overcome any difficulties you may be encountering in your studies.

You are encouraged to explore the full diversity of opportunities afforded to you, 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.

The staff of the Faculty wishes you every success at UNSW. We hope that the time that you spend with us, as valued members of the UNSW 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.

Aldo Bagnara
Acting Dean
Faculty of Science

Faculty of Science

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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 'Specialist Degrees'. 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.

Some People Who Can Help You

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 2004 can be found in alphabetical order by the course code at the back of this Handbook or in the Virtual Handbook at: **www.student.unsw.edu.au/handbook**

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. Further information on computing is available through each of the schools' web pages.

Enrolment Procedures

New students will receive enrolment information with their offer of a place in their chosen program.

All students re-enrolling in 2004 should enrol via *NewSouth Student Online* during appropriate appointment periods. Information regarding enrolling online is available from NewSouthQ, Science Student Centre or via the Student Gateway: **www.student.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 2004 or are proceeding to Honours will also need to collect form: SM2004. This enrolment 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 admission requirements for Science programs see the appropriate entry in the current UAC Guide.

Applicants for admission to Science programs should note that a number of new UAC entry codes have been introduced which correspond to specific programs and programs of study. UAC entry codes for Science programs are:

429000 Science

This is applicable to study in a wide range of Science areas in program 3970 as indicated in the majors outlined in Table A.

429003 Science (Communications)

This is applicable to study in a wide range of Science areas in conjunction with a Science Communications stream, in program 3993. The majors available are the same as for 3970.

429004 Science (Media and Communication)

This is applicable to study in a wide range of Science areas, in conjunction with a Media and Communications stream, in program 3994. The majors available are the same as for 3970.

429007 Medical Science

This is applicable to study in the Bachelor of Medical Science (3991) as outlined in the program description.

429008 Environmental Science

This is applicable to study environmental science in program 3988 as outlined in the specialisations under Environmental Science.

429013 Advanced Science

This is applicable to study in areas of biological science, biomedical science, behavioural science, chemistry, mathematics and physics in program 3972 as outlined in the study plan descriptions under Advanced Science.

This is also applicable to study in programs 3973 (Medical Physics) and 3986 (Mathematics and Finance) as outlined in the study plan descriptions under Advanced Science.

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*.

429020 This is applicable to study Food Science and Technology in programs 3060/3065/3070*.

429025 This is applicable to study Optometry in programs 3950/3951*.

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*.

**These specialist degrees are outlined later in this section.*

Table 1: Subject Areas, Programs and Study Plans in Science

Subject Area	Available in Program(s)	UAC Entry Code(s)
Anatomy	3970, 3972	429000, 429013
Applied Mathematics	3972	429013
Aviation	3980	429016
	3981	429017
Biochemistry	3970, 3972	429000, 429013
Biological Science	3970, 3972	429000, 429013
Biomechanics	3970	429000
Biotechnology	3970, 3972	429000, 429013
	3052,	429018,
Chemistry	3970, 3972	429000, 429013
Ecology	3972	429013
Engineering Physics	3972	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, 3972	429000, 429013
Technology	3060, 3065	429020
	3070	
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 Chemistry	3972	429013
Materials Science	3970, 3972,	429000, 429013
	3135,	425001
	3030, 3130,	
	3138, 3128	
Mathematics	3970	429000
Mathematics and Finance	3986	429013
Mathematics and	3972	429013
Computer Science		
Medical Chemistry	3972	429013
Medical Microbiology	3970,3972	429000, 429013
and Immunology		
Medical Physics	3973	429013
Medical Science	3991	429007
Microbiology	3970,3972	429000, 429013
Molecular Biology	3970, 3972	429000, 429013
Nanotechnology	3617	429011
Neuroscience	3972	429013
Optometry	3950, 3951	429025
Pharmacology	3970, 3972	429000, 429013
Philosophy	3970	429000
Physical Oceanography/	3970, 3972	429000, 429013
Meteorology		
Physics	3970, 3972	429000, 429013
Physics and Astronomy	3972	429013
Physics with Computer Science	3972	429013
Physiology	3970, 3972	429000, 429013
Psychology	3970, 3972	429000, 429013
	3432	429026
Pure Mathematics	3972	429013
Safety Science	3970	429000
Science Communications	3993	429003
Science Media and	3994	429004
Communications		
Spatial Information Systems	3970	429000
Statistics	3970, 3972	429000, 429013
Toxicology	3970	429000

Note: Certain majors listed above are also appropriate for programs **3930** (Science/Arts), **3931** (Advanced Science/Arts), **3932** (Environmental Science/Arts), **3451** (Science/Innovation Management), **3529** (Science/Commerce), **3711** (Science/Aeronautical Engineering), **3711** (Science/Mechanical Engineering), **3725** (Science/Electrical Engineering), **3730** (Science/Civil Engineering), **3951** (Science/Optometry), **4075** (Science/Education), **4770** (Science/Law). Students in these courses should consult their program advisor for details.

General Rules and Requirements

1. 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 totaling 12 units of credit plus an additional 56 hours of study which fosters acceptance of professional and ethical action and social responsibility. See 'General Education' within this Handbook for a description of General Education course categories.

1.1 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.

1.2 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.

1.3 Students enrolled in combined degrees are normally exempt from the General Education requirement.

2. 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 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.

3. Credit Transfer

In addition to University rules governing admission with credit for previous studies or attainments, the following provisions apply.

Students admitted to the Science or Advanced Science programs may be granted credit for previous studies and attainments provided that:

3.1 Where students transfer from another tertiary institution, they shall not in general be granted credit superior to that attained at the other institution.

3.2 Students admitted to the Science program who hold a completed or partly completed degree or another award, may be given credit for previous studies and attainments, but in order to qualify for the award of the BSc will be required as a minimum to complete courses equivalent to the requirements for Stage 3 of the program.

3.3 Students admitted to the Honours Year who hold a completed or partly completed degree, may be given credit for previous studies and attainments, but in order to qualify for the Honours program, they will be required as a minimum to complete a sequence of courses or other requirements equivalent to the requirements for Stage 4 of the program.

4. 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 to 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 voluntary courses.

5. 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.

6. 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.

Program and Course Information

Overview of Programs

The main aims of the 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; 3973; 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.

Program Design

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.

The basic rules for the program are set out in the following section under Program Descriptions. The main thing that students in the Science program need to ensure is 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.

Advanced Science Programs (3972; 3973; 3986)

A feature of the design of the Advanced Science programs is the requirement that all students enrol in and complete requirements for a specified study plan. 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). Some courses are only available in the Advanced Science programs. See the relevant study plan for details.

Students are required to fulfill all of the requirements of their particular study plan as specified in the Handbook in the year in which they first enrolled.

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 another specialisation in one of the approved disciplines.

Bachelor of Science (Communications) Program (3993)

Bachelor of Science (Media and Communications) Program (3994)

These are three year Science programs in which students must complete courses in a Communications 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 Programs

In these programs, science is combined with studies in another faculty (eg. 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 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 (see **Program Requirements and Rules** below). 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 Objectives

The Science and the Advanced Science programs have been designed to:

1. develop and sustain an interest in and knowledge of science.

2. develop a working knowledge of scientific methods of investigation.

3. 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.

4. develop an appreciation of scientific criteria and a concern for objectivity and precision.

5. develop confidence and skill in formulating problems and in treating both qualitative and quantitative data.

6. develop the ability and disposition to think logically, to communicate clearly by written and oral means, and to read critically and with understanding.

7. develop the habit of seeking and recognising relationships between phenomena, principles, theories, conceptual frameworks and problems.

8. 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.

9. 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.

10. provide opportunity to study science in combination with other disciplines.

Program Descriptions

Science Program (3970)
Pass Program (3 years)

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*.

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 award of degree.

7. A student must complete a minimum of 84 units of credit from Science Schools*.

8. 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. The Level III requirement for entry into Honours maybe more that the minimum requirements for the major.

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. Major sequences are defined in Table A.

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 defined in Table A, 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.

**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.*

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 Honors specialisation)

Table A: Majors Offered in the 3 Year BSc Program (3970) and Combined 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 years.

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, the proportion of Distinction and High Distinction grades is lower in the corresponding ordinary level course.

(b) MATH2060 may be omitted from this 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.

Major Staff Contact	Stage 1	Stage 2	Stage 3
Anatomy **Dr B Freeman**	BIOS1101, BIOS1201	ANAT2111, ANAT2200, Plus 9 units of credit from: ANATT2210, ANAT2300, ANAT2310,ANAT2600, ANAT2610	Choose 18 units of credit from: ANAT3121 ANAT3131, ANAT3141, ANAT3231, ANAT3411, ANAT3421 Plus 6 units of credit from: Level III Anatomy not already taken *or* 6 units of credit at Level III from Biochemistry, Biological Science, Microbiology, Pathology *or* Physiology
Biochemistry **A/Prof M Edwards**	BIOS1101, BIOS1201 CHEM1011 *or* CHEM1031 CHEM1021 *or* CHEM1041 Plus at least 6 units of credit from: MATH1031, MATH1041	BIOC2101, BIOC2201, Plus 6 units of credit from: BIOS2021 *or* BIOS2621, CHEM2021, CHEM2041, MICR2011	A total of 24 units of credit Choose 12 *or* 18 units of credit from: BIOC3111, BIOC3261, BIOC3271. Choose 0 - 12 units of credit from: BIOC3121, BIOC3281. Choose 0 *or* 6 units of credit from: ANAT3231, BIOT3061, CHEM3021, CHEM3041, MICR3041, PHPH3211, PHPH3221
Biological Science **A/Prof P Adam**	BIOS1201, BIOS1101, CHEM1011, MATH1041	BIOS2011, BIOS2021 (*or* BIOS2621), BEES2041, Plus 6 units of credit from: BIOS2031, BIOS2051, BIOS2061	Choose 24 units of credit from Level III Biological Science courses.
Biomechanics **Dr A McIntosh**	12 units of credit from Level I Mathematics	ANAT2511, SECS2451	BIOM9541, SECS3451 Plus 18 units of credit from: ANAT3131, BIOM9561, PHPH2501, PHPH2502, PHYS2410
Biotechnology **School Office**	BIOS1201, CHEM1011, CHEM1021 MATH1031, MATH1041 Choose 6 units of credit from: BIOS1101, BIOT1011	BIOC2101, BIOC2201, MICR2201 Also recommended: BIOS2021 *or* BIOS2621, MICR2011	BIOT3011, BIOT3021, Choose 6 units of credit from: BIOT3061, BIOT3081 Plus a further 6 units of credit from: BIOC3111, BIOC3121, BIOC3271, BIOC3281, MICR3051, MICR3071, MICR3041 *or* MICR3641*or* MICR3042
Chemistry **Dr G Moran**	CHEM1011 *or* CHEM1031 CHEM1021 *or* CHEM1041 12 units of credit from first year Mathematics, 6 units of credit from first year Physics	18 units of credit from: CHEM2011, CHEM2021, CHEM2031 *or* CHEM2839, CHEM2041 Plus a further 6 units of credit from Level II/III Chemistry (taken in either Stage 2 or Stage 3)	18 units of credit from Level III Chemistry of which 12 units of credit must be from: CHEM3011, CHEM3021, CHEM3031, CHEM3041
Environmental Earth Science **Dr D Cohen** **Dr S Mooney**	GEOS1701, BIOS1101, GEOS1111, GEOS1211	GEOS2181, GEOS2101 *or* GEOS2721, GEOS2811 Plus 6 units of credit from Level II GEOS courses	GEOS3911, GEOS3281 Plus 12 units of credit from Level III GEOS courses and/or MSCI6300
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 units of credit from: FOOD1390, FOOD2330, FOOD2340, FOOD2350 Also recommended: CHEM3811
Genetics **Prof I Dawes** **Dr A Wilton**	BIOS1101, BIOS1201, CHEM1011 *or* CHEM1031 CHEM1021 *or* CHEM1041 MATH1031, MATH1041	BIOS2021 or BIOS2621 Choose 12 units of credit from: BIOC2101, BIOC2201, BEES2041, MICR2011 (BEES2041 *or* an approved COMP or MATH course).	A total of 24 units of credit BIOC3151, BIOC3291 Choose 6 *or* 12 units of credit from: BIOC3121, MICR3021 Choose 0 *or* 6 units of credit from: BIOS3071, BIOT3061

Geography-Physical **Dr S Mooney**	GEOH1601, GEOS1701 MATH1041, GEOS1801	BEES2041 Plus 12 units of credit from level II GEOS courses	Choose 24 units of credit from Level III GEOS Courses
Geography-Human **Dr Bruno Parolin**	GEOH1601, GEOS1701 SLSP1001 *or* MATH1041	SLSP2001 plus 12 units of credit from Level II Geography courses	GEOH3101 *or* GEOH3111 Plus 18 units of credit from Level III GEOH courses
Geology **Dr D Cohen**	GEOS1111, GEOS1211	GEOS2181, GEOS2171, GEOS2291, BEES2041	GEOS3131, GEOS3141 Plus another 12 units of credit from Level III GEOS courses or MSCI6300.
History and Philosophy of Science **Dr A Corones**	Up to 12 units of credit from: HPSC1100, HPSC1200, HPSC1400, HPSC1500	Choose 24 units of credit from Level II History and Philosophy of Science, including at least 12 units of credit from: HPSC2100, HPSC2150, HPSC2200, HPSC2300, HPSC2400, HPSC2500, HPSC2550	Choose 18 units of credit from Level lll History and Philosophy of Science
Marine Science (Marine Biology) **Prof J Benzie**	BIOS1101, BIOS1201	MSCI2001, MSCI6200, BIOS2031, MICR2201	MSCI3001, BIOS3081, BIOS3091, MICR3071
Marine Science (Marine Geology) **A/Prof A Albani** **Dr S Mooney**	GEOS1111, GEOS1211	MSCI2001, MSCI6200, GEOL2101, GEOL2181	MSCI3001, MSCI6300 Plus 6 units of credit from: GEOS3141, GEOS3281, Plus 6 units of credit from Level III GEOS courses.
Marine Science (Physical Oceanography) **Dr M England**	MATH1131 *or* MATH1141, MATH1231 *or* MATH1241, PHYS1121, PHYS1221	MSCI2001, MATH2011, MATH2240, MATH2120, MATH2301	MSCI3001, MATH3121, MATH3241, MATH3261
Materials Science	MATH1131, MATH1231 PHYS1121, PHYS1221	MATS1172, MATS1182, MATS 1242, MATS1262	Choose 21 units of credit of Level III MATS courses including: MATS1031, MATS1093, MATS1213, MATS1414, MATS2013, MATS3443, MATS4013
Mathematics *(See Note 3c above)* **Dr D Trenerry**	MATH1131, MATH1231 MATH1081	MATH2011, MATH2060, MATH2120, MATH2501, MATH2520, MATH2801	18 units of credit from Level III Mathematics
Medical Microbiology and Immunology **Dr M Cooley**	CHEM1011, CHEM1021, BIOS1101, BIOS1201 Plus 6 units of credit from: MATH1031, MATH1041	MICR2201, MICR2011 Plus 6 units of credit from: ANAT2111, ANAT2200, BIOC2101 *or* BIOC2181, BIOC2201, BIOS2021 *or* BIOS2621, BEES2041, PATH2201, PHPH2101, PHPH2201	A total of 24 units of credit Choose at least 18 units of credit from: MICR3041 *or* MICR3641, MICR3051, MICR3061, MICR3081 Choose 0 - 6 units of credit from: MICR3031, MICR3021 *or* MICR3621, PHPH3121, PHPH3151 *or* PHPH3551, BIOC3261, BIOC3271, BIOC3291, PATH3205, PATH3206, PHPH3251
Microbiology **Dr P March**	CHEM1011, CHEM1021, BIOS1101, BIOS1201 Plus 6 units of credit from: MATH1031, MATH1041	MICR2201, MICR2011 Plus 6 units of credit from: BIOS2021 *or* BIOS2621, BIOC2201	MICR3021 *or* MICR3621 Plus 12 units of credit from: MICR3011, MICR3061, MICR3071, MICR3081 Plus 6 units of credit from: MICR3011, MICR3031, MICR3061, MICR3071, MICR3081, GEOG3911, BIOS3071 *or* BIOS3671, BIOT3011 *or* BIOT3611, BIOT3041, BIOT3081, BIOC3121 *or* BIOC3621, FOOD2480, FOOD2490, CHEM3901

Molecular Biology **A/Prof M Edwards** **Dr R Cavicchioli**	CHEM1011 *or* CHEM1031 CHEM1021 *or* CHEM1041 BIOS1101, BIOS1201 Plus 6 units of credit from: MATH1031, MATH1041	MICR2201, MICR2011 *or* MICR2611 BIOC2101, BIOC2201, BIOS2021 *or* BIOS2621	MICR3021 *or* MICR3621, BIOC3121 *or* BIOC3621, BIOC3281 Plus 6 units of credit from: BIOT3061, MICR3011, BIOC3111, BIOC3271 *or* BIOC3671, BIOC3301
Pharmacology **Dr. L. Wakelin**	CHEM1011, CHEM1021, BIOS1101, BIOS1201, Plus 6 units of credit from Level I Mathematics	PHPH2101, PHPH2201 Also highly recommended: BIOC2101, BIOC2201 *or* BIOC2181, BIOC2291	PHPH3151, PHPH3251 Plus 12 units of credit from: PHPH3121, PHPH3131, PHPH3211, PHPH3221 *or* BIOC3261, BIOC3111, BIOC3121 *or* CHEM3021, CHEM3901
Philosophy **Dr M Michael**	6 units of credit from Level I Biology (BIOS1101 preferred) Plus 6 units from Level I Chemistry Plus 6 units of credit from Level I Mathematics	Choose 18 units of credit from Level II/III Philosophy	Choose 24 units of credit from Level II/III Philosophy
Physical Oceanography/ Meteorology **Dr John Middleton**	MATH1131, MATH1231 PHYS1121, PHYS1221, MATH1081	MATH2011, MATH2060, MATH2120, MATH2240, MATH2301, PHYS2810 Plus 3 units of credit from Mathematics *or* Physics	MATH3121, MATH3241, MATH3261
Physics **Ms S Hagon** **A/Prof C Hamer**	MATH1131, MATH1231 PHYS1121, PHYS1221	PHYS2050, PHYS2060, PHYS2040, PHYS2030, Plus 12 units of credit from Level II or Level III Physics Also recommended: MATH2011, MATH2120	Choose 18 units of credit from Level III Physics.
Physiology **Dr L Ulman**	6 units of credit from Level I Biology (BIOS1101 preferred) Plus 6 units of credit from Level I Chemistry Plus 6 units of credit from Level I mathematics.	PHPH2101, PHPH2201 BIOC2101, BIOC2201 (Highly Recommended) *or* BIOC2181, BIOC2291	Choose 18 units of credit from: PHPH3121, PHPH3131, PHPH3211, PHPH3221 Plus 6 units of credit from: any Level III Physiology course not included above: PHPH3151, PHPH3251, BIOC3261, BIOC3271, BIOC3111, BIOC3121, MICR3041, MICR3051, PATH3205, PATH3206, PATH3207 *or* any Level III Anatomy course.
Psychology **Dr M Gleitzman**	PSYC1001, PSYC1011	PSYC2001 Plus 18 units of credit from: PSYC2061, PSYC2071, PSYC2081, PSYC2101	PSYC3001 Plus 18 units of credit from Level III Psychology courses (from at least two elective groups)
Safety Science **Prof J Cross**	SESC1001 Plus 12 units of credit from Level I Mathematics	ANAT2151, MATH2839* SESC2091, IROB2721, **or* any other approved statistics course	SESC3101, SESC3541, SESC3601, SESC4310 Plus additional Level II *or* III SESC courses to total 42 units of credit.
Spatial Information Systems **Dr Shawn Laffan**	GEOS1801, GEOS1701 GEOS1111, BIOS1101 MATH1041	BEES2041, GEOS2811 GEOS2821	GEOS3811, GEOS3821 Plus 2 GEOS courses
Statistics **Dr P J Cooke**	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	BIOC2101 *or* BIOC2181, CHEM2821 BIOC2201 *or* BIOC2291, SESC2091 Recommended BIOS2021, further Level II CHEM PHPH2101, PHPH2201	CHEM3901, PHPH3151 *or* PHPH3551, SESC4820, SESC4850, recommended BIOC3261, Level III CHEM, PHPH3251 *or* PHPH3651, SESC3091, SESC3101, SESC3620, SESC4211

Table B: Minors Offered in the 3 Year BSc Program (3970)

Minor	Stage 1	Stage 2	Stage 3
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 Science** **Comparative Development** **Education** **English** **Environmental Studies** **European Studies** **French** **German Studies** **Greek (Modern)** **History** **Indonesian Studies** **Japanese Studies** **Jewish Studies** **Korean Studies** **Latin** **Linguistics** **Music** **Philosophy of Science** **Politics and International Relations** **Russian Studies** **Social Science and Policy** **Sociology & Anthropology** **Spanish and Latin American Studies** **Theatre, Film and Dance** **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 I courses may be taken from any one school or department.	
Accounting	ACCT1501, ACCT1511	24 Level II or III units of credit in Accounting.	
Aviation	AVIA1100, AVIA1900, AVIA1850	24 units of credit from AVIA2100, AVIA2400, AVIA2500, AVIA2700, AVIA2800, AVIA3101, AVIA3201, AVIA3400, AVIA3600, AVIA3710, AVIA3800, AVIA3810, AVIA3851	
Biomechanics		SESC2451, SESC2511	BIOM9510, SESC3451
Botany	BIOS1101, BIOS1201	BIOS2011, BIOS2051	BIOS3061, MICR3071
Business Economics	ECON1101, ECON1102	24 Level II or III units of credit in Business Economics.	
Business Law and Taxation		24 Level II or III units of credit in Business Law and Taxation	
Business Statistics	ECON1101, ECON1102	24 Level II or III units of credit in Business Statistics.	
Chemical Engineering and Industrial Chemistry	CEIC1020	24 Level II or III units of credit in chemical engineering or Industrial Chemistry	
Civil Engineering	CVEN1023, CVEN1026, CVEN1024	CVEN2023 21 units of credit from CVEN0646, CVEN0656, CVEN2026, CVEN2125, CVEN2126, CVEN2322, CVEN2525, CVEN3126, CVEN3224, CVEN3438, CVEN3448, CVEN3525, CVEN4533, CVEN4722, INDC4120, CEIC0050	
Computing	COMP1011	COMP2811, COMP2011	COMP2021, COMP2041
Economic History		24 Level II or III units of credit in Economic History	
Electrical Engineering & Telecommunications	ELEC1011	ELEC2031, ELEC2032	18 units of credit from one of the following groups: ELEC3004, ELEC3014, ELEC3041; or ELEC3006, ELEC3016; or TELE3013, TELE3010, TELE3018
Finance		24 Level II or III units of credit in Finance	
Surveying and Spatial Information Systems	One of GMAT0411, GMAT0442, GMAT0443	24 Level II or III units of credit in Surveying and Spatial Information Systems	
Human Resource Management		24 Level II or III units of credit in Human Resource Management.	
Industrial Relations		24 Level II or III units of credit in Industrial Relations.	
Information Systems		24 Level II or III units of credit in Information Systems.	
International Business		24 Level II or III units of credit in International Business.	
Law	LAWX1051, LAWX1071, LAWX2140, LAWX7410	24 Level II or III units of credit of LAWS courses, chosen in consultation with Faculty of Law.	
Marketing		24 Level II or III units of credit in Marketing.	
Mechanical and Manufacturing Engineering		MECH2601, MECH2602	MECH3601, MECH3602 or an alternative sequence of 24 units of credit at Level II or III with the approval of the Head of School.
Pathology		PATH2201	PATH3205, PATH3206, PATH3207
Planning	Plan1241, PLAN1042	24 units of credit from Level 2 and 3 in PLAN courses	
Remote Sensing		GEOG2811, GEOG2821	GEOG3811, GEOG3821
Science Communication	SCOM1021	SCOM2021, 18 Level II or III units of credit in Science Communication. Refer to the Science Student Centre or the Science Communications Office for appropriate selection	
Zoology	BIOS1101, BIOS1201	BIOS2031, BIOS2061	12 units of credit from: BIOS3011, BIOS3021, BIOS3081, BIOS3111

Advanced Science Programs (3972; 3973; 3986) & Honours in Advanced Science (4 years)

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 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.

Study Plans Available in Advanced Science

Anatomy
Applied Mathematics
Biochemistry
Biological Science
Biotechnology
Chemistry
Ecology
Engineering Physics
Food Science and Technology
Genetics
Geosciences
Marine and Coastal Studies
Materials Chemistry
Materials Science
Mathematics and Computer Science
Mathematics and Finance
Medical Chemistry
Medical Microbiology and Immunology
Medical Physics
Microbiology
Molecular Biology
Neuroscience
Pharmacology
Physical Oceanography /Meteorology
Physics
Physics and Astronomy
Physics and Computing
Physiology
Psychology
Pure Mathematics
Statistics

Table X

Level I

CHEM1000
LIFE1001
MATH1000
PHYS1000

Level II

LIFE2001

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 or 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; 3973; 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 HECS census date in 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 Year 4 of a combined degree 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)

Study Plans

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. 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, ANAT2200
Choose 9 units of credit from ANAT2210, ANAT2300, ANAT2310, ANAT2600, ANAT2610
Elective courses totalling 24 units of credit
Recommended: Biological Science, Biochemistry, Physiology, Microbiology, Pathology, 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, ANAT3231, ANAT3411, ANAT3421
General Education courses totalling 6 units of credit
Further level III courses from Biological Science, Biochemistry, Microbiology, Pathology, Physiology
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 also is 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 *or* BIOS3621, 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

Stage 1

BIOS1101, BIOS1201
CHEM1011
MATH1041
Elective courses totalling 18 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:

BIOS4511 Essential Skills for Biology
BIOS4521 Special Topics in Biology
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.

Staff Contact: Associate Professor I Suthers

Ecology

Stage 1

BIOS1101, BIOS1201
CHEM1011
MATH1041
LIFE1001
One General Education course totalling 3 units of credit
Elective courses totalling 18 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, BIOS3611, 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:
BIOS4511 Essential Skills for Biology
BIOS4521 Special Topics in Biology
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.

Staff Contact: Associate Professor I Suthers

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 expanded also 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 the year
(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 12 units of credit from:
BIOT3011, BIOT3061, BIOT3021, BIOT3081
Choose elective courses totalling 30 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 Chemical Sciences 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. Alternatively, there is a combined study plan available in materials chemistry.

Stage 1

CHEM1031, CHEM1041*
MATH1131 *or* MATH1141 *or* MATH1011
MATH1231 *or* MATH1241 *or* MATH1021
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*

***Alternative Level II courses from CHEM2821or CHEM2839 may be substituted by permission from the Head of School.*

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
MATH1011 *or* MATH1131 *or* MATH1141
MATH1021 *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 or 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 or biochemistry/molecular biology
PHPH3151 and
PHPH3251 *or* 6 units of credit from other Level III physiology courses
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 are strongly encouraged.

**Students without the assumed knowledge for these courses may substitute CHEM1011 and CHEM1021*

***Alternative Level II courses from CHEM2821or CHEM2839 may be substituted.*

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: BIOS2041 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 I 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 and GEOS1801 or GEOS1111 and GEOS1211
MATH1041
CHEM1011 and PHYS1111
Elective courses totalling 12 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
BEES 4511 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.

** Refer to 'Program Descriptions' section, 'Advanced Science Program'.*

Marine and Coastal Studies

Marine Science programs allow specialisations in selected areas of marine science, yet also include 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: MATH1031, GEOH1601, GEOS1701, CHEM1011, PHYS1201)

Stage 2

MSCI2001, MSCI6200
BIOS2031,
GEOS2101
General Education courses totalling 6 units of credit
Elective courses totalling 18 units of credit
(Recommended: BIOS2011, BEES2041, GEOS2721, GEOS2711, GEOS2811, GEOS2821, GEOS2181, GEOS2291, MICR2201, MSCI2051)

Stage 3

MSCI3001, MSCI6300
BIOS3681, BIOS3091
General Education courses totalling 6 units of credit
Elective courses totalling 18 units of credit
(Recommended: BIOS3671, BIOS3111, GEOS3761, GEOS3731, GEOS3811, GEOH3911, GEOH3921, GEOS3281, MICR3071)

Stage 4 (Honours)

MSCI4003 (Full-Time)
MSCI4009 (Part-Time)

Materials Chemistry

Materials Chemistry is a rapidly developing discipline concerned with the fundamental chemistry, synthesis and characterisation of materials, the understanding and prediction of the properties of materials and the development of new materials for advanced technologies. This study plan is aimed at producing graduates who will enter employment in both industry and research. It brings together the disciplines of Chemistry and Materials Science to provide a Science degree program which is unique in Australia.

Graduates will enter careers in a wide range of fields that involve chemistry, materials development, processing, analysis and manufacturing. Graduates will be eligible for professional membership of the Royal Australian Chemical Institute and the Institute of Materials Engineering Australasia.

Stage 1 consists of core science courses in mathematics, physics, chemistry and materials science.

Stage 2 consists of specialist chemistry and materials courses that focus on the synthesis and characterisation of materials.

Stage 3 includes further development of core areas along with specially designed interdisciplinary courses in materials chemistry.

Stage 4 includes project work totalling 24 units of credit along with further specialist materials chemistry coursework.

Note that students completing Stage 3 but not wishing to proceed to Stage 4 have the option of transferring to the BSc (program 3970) where they will be eligible for a double major in Chemistry and Materials Science.

Note: Some Materials Science courses are only offered in alternate years. Two versions of the study plan are therefore given, to enable this variation in course offerings to be accommodated. Both versions contain the same courses. Some rearrangement of General Education and Advanced Science courses enables the loads to be balanced at Stages 2 and 3. In both plans, these latter courses can be further adjusted between Stages 2 and 3 to facilitate elective choices.

Materials Chemistry

Study Plan A

Stage 1

CHEM1011, CHEM1021
or
CHEM1031, CHEM1041
MATH1131, MATH1231
or
MATH1141, MATH1241
MATS1111, MATS1021
PHYS1121, PHYS1221
or
PHYS1131, PHYS1231
One course from: CHEM1000, PHYS1000, MATH1000, LIFE1001
3 units of General Education

Stage 2

CHEM2011, CHEM2021, CHEM2031
MATS1182, MATS1242, MATS4083
One course from: CHEM1000, PHYS1000, MATH1000, LIFE1001, LIFE2001
9 units of electives in Materials Science
3 units of electives in any area
6 units of General Education

Stage 3

CHEM3021 *or* CHEM3031
MATS2313, MATS3443, MATS3733, MATS4084
CHEM3730
MATS4714 *or* CHEM4710
6 units of electives in Level III Chemistry courses
3 units of electives in Level III Materials Science
3 units of General Education
6 units of electives in any area

Stage 4

CHEM4704

Study Plan B

Stage 1

CHEM1011, CHEM1021
or
CHEM1031, CHEM1041
MATH1131, MATH1231
or
MATH1141, MATH1241
MATS1111, MATS1021
PHYS1121, PHYS1221
or
PHYS1131, PHYS1231
One of CHEM1000, PHYS1000 *or* MATH1000
3 units of General Education

Stage 2

CHEM2011, CHEM2021, CHEM2031
MATS1182 *or* MATS1242
CHEM3730
One of CHEM1000, PHYS1000, MATH1000, LIFE1001, LIFE2001
9 units of electives in Materials Science
3 units of electives in any area
3 units of General Education

Stage 3

CHEM3021 *or* CHEM3031
MATS2313, MATS3443, MATS3733, MATS4083, MATS4084
MATS4714
or
CHEM4710
6 units of electives in Level III Chemistry courses
3 units of electives in Level III Materials Science
6 units of General Education
6 units of electives in any area

Stage 4

CHEM4704

Materials Science

The School of Materials Science and Engineering are offering the following study plan within Advanced Science.

Materials Science

This program is currently under review.

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, MATS1182, MATS1242, MATS1262
MATH2049, MATH2059
CHEM2011 *and* CHEM2021 *or* CHEM2031
PHYS2030
General Education courses totalling 6 units of credit

Stage 3

MATS1013, MATS1093, MATS1213 *or* 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).

Note: In all Mathematics Advanced Science Study Plans, 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 and MATH2430 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 two of: 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: COMP1011 and COMP2811.

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, COMP2021, 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 COMP4914)
General Education courses totalling 6 units of credit

Stage 4 (Honours)

MATH4003 or COMP4914

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, GEOS1000, 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

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.

This program gives 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.

Honours may be awarded. The basis is a suitably weighted performance over the last three stages of this four year advanced science degree.

Medical Physics

Stage 1

BIOS1201, BIOS1101
CHEM1031 *or* CHEM1011
CHEM1041 *or* CHEM1021
MATH1131 *or* MATH1141
MATH1231 *or* MATH1241
PHYS1131, PHYS1231 *or* PHYS1241

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.

Year 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
PHYS2310, 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

MICR3011, MICR3021, MICR3071
Choose 6 units of credit from:
MICR3031, MICR3061, MICR3081, BIOT3081, BIOS3071, BIOT3011, CHEM3901, GEOG3911, 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 program 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

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, PSYC3261)
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 program 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 program. There are special lectures and projects in PHYS1241. The other astronomy courses are PHYS2160 and PHYS3160 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
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 with Computer Science

This program 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, COMP2021
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 15units 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 program 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 of the program 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 1

CHEM1817
COMP1001
MATH1131 *or* MATH1141
MATH1231 *or* MATH1241
PHYS1131, PHYS1231 *or* PHYS1241, PHYS1601, PHYS2630,
One course from: PHYS1000, CHEM1000, MATH1000, LIFE1001
One General Education course totalling 3 units of credit

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

BIOS1101, BIOS1201
CHEM1011, or CHEM1031
CHEM1021 or CHEM1041
Choose at least 6 units of credit from : One of MATH1031, MATH1041, MATH1131, MATH1141
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 units of credit from:
PHPH3121, PHPH3131, PHPH3211, PHPH3221
Choose 6 units of credit from:
Level III Physiology, Level III Anatomy, PHPH3151, PHPH3251, BIOC3261, BIOC3271, BIOC3111, BIOC3121, MICR3041or MICR3641 *or* MICR3042, MICR3051, PATH3205, PATH3206, PATH3207
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

BIOS1101, BIOS1201
CHEM1011 *or* CHEM1031
CHEM1021 *or* CHEM1041
Choose at least 6 units of credit from:
One of MATH1031, MATH1041, MATH1131, MATH1141
Elective courses totalling 12 units of credit
LIFE1001
One General Education course totalling 3 units of credit

Stage 2

PHPH2101, PHPH2201
BIOC2101 and BIOC2201, *or*
BIOC2181 and BIOC2291
LIFE2001
Elective courses totalling 18 units of credit
One General Education course totalling 3 units of credit

Stage 3

PHPH3151, PHPH3251
Choose 12 units of credit from level III Physiology, Biochemistry, Chemistry, Microbiology and Immunology, Anatomy, Pathology, Biotechnology, Biological Science.
Elective courses totalling 18 units of credit
General Education courses totalling 6 units of credit

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.*

Environmental Science

3988 Bachelor of Environmental Science

BEnvSc Full-time

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.

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 4 year (full-time) program. There is also an opportunity for students to combine the BEnvSc with a Bachelor of Arts by taking a 5 year program. Students who are unable to take the complete the BEnvSc may transfer to the 3 year Bachelor of Science and graduate with a BSc with a major in one of the environmental areas.

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 as specified in this Handbook.
- A student must complete at least 36 units of credit and no more than 60 units of credit in Level I courses.
- No student may normally commence Level 2 courses until 24 Level 1 units of credit have been successfully completed, unless approved by the program advisor 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.

Environmental Science Program

Stage 1

ENVS1011
BIOS1101, CHEM1011, GEOS1701
GEOS1211
MATH1041*
Plus 12 units of credit in one *or* more of the discipline specialisations

Stage 2

ENVS2030, ENVS2801, ECON1107
BEES2041 *or* MATH2841 *or* MATH2301
6 units of credit of General Education
18 units of credit in Level 2 courses of the discipline specialisation

Stage 3

BIOS3071, CHEM3901, GEOH3911
6 units of credit of General Education
24 units of credit in Level 3 courses of the discipline specialisation

Stage 4

Either

Environmental Honours A:
48 units of credit Research Project and methodology

or

Environmental Honours B:
24 units of credit Research Project and 24 units of credit of Level 2

or

Level 3 coursework
Please refer to the ENVS course descriptions in the rear of this Handbook for further details.

Discipline Specialisations

Biology

Level 1	BIOS1201
Level 2	BIOS2011, BEES2041, plus at least 6 units of credit from BIOS2031, BIOS2051, BIOS2061
Level 3	BIOS3061, BIOS3071, BIOS3111 plus 6 units of credit of Level 3 Biology

Chemistry

Level 1	CHEM1021 *or* CHEM1041, MATH1031
Level 2	CHEM2041, plus 12 units of credit of CHEM2011, CHEM2021 *or* CHEM2821, CHEM2031
Level 3	CHEM3041, CHEM3311, plus 6 units of credit of CHEM3011, CHEM3021,CHEM3031 and 6 UOC of Level 2 Chemistry

Note: Students who do CHEM3311 will be exempt from CHEM3901

Earth Science
(formerly Geology)

Level 1 GEOS1111
Level 2 18 units of credit from GEOS2101, GEOS2131, GEOS2171, GEOS2181, GEOS2291, GEOS2071
Level 3 GEOS3131, GEOS3281

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 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.

**Students who choose the Oceanography specialisation do not need to take MATH1041.*

Media and Communications

3993 Bachelor of Science (Communications)

BSc(Communications)

The Bachelor of Science (Communications) is a new program 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. The program leads to a 3 year Pass or 4 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.

Conditions governing the award of the Degree

1. A student must complete 144 units of credit including 12 units of credit of General Education.

2. The degree must contain a Communications 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. For entry to Honours a student must complete at least 24 units of credit at Level III in the relevant major sequence and have the permission of the Head of School.

Outline of program

The communications major is under development. For further information please consult the Science Communication Program Office (Biological Sciences Bldg, Rm G05). For details in major and minor sequences in Science, see Table A under the science program 3970.

Stage 1

SCOM1011 Science, Technology and Society
SCOM1021 Introduction to Science Communication
24 units of credit from two Science Schools
Electives totalling 12 units of credit

Stage 2

SCOM2011 The Structure and Politics of Australian Science
SCOM2021 Professional Science Communication
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 6 units of credit of General Education

Stage 3

SCOM3011 Communicating Science – Theory and Practice
SCOM3021 Science Communication Internship
Electives in Communication totalling 6 units of credit*
24 units of credit in a Science major or minors (continued from Stage 2)
Plus 6 units of credit of General Education

Stage 4 (Honours)

For details consult the relevant School

**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.*

3994 Bachelor of Science (Media and Communications)

BSc(Media)

The Bachelor of Science (Media and Communications) program leads to a 3 year Pass or 4 year Honours degree 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.

Conditions governing the award of the Degree

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 I 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 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. For entry to Honours a student must complete at least 24 units of credit at Level III in the relevant major sequence and have the permission of the Head of School.

Outline of program

For details of major and minor sequences in Science, see Table A listed under science program 3970. Students are advised to consult the School of Media and Communications in the Faculty of Arts and Social Sciences for information on the core courses of this degree.

Stage 1

MDCM1000 New Media Technologies A
MDCM1001 New Media Technologies B
24 units of credit from two Science Schools
Electives totalling 12 units of credit

Stage 2

MDCM2000 Media, Technology and Creativity
MDCM2002 Media Production
MDCM2003 Multimedia Production
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 6 units of credit of General Education

Stage 3

MDCM3000 Media Forms
MDCM3002 Advanced Media Production
MDCM3003 Advanced Multimedia in Industry Contexts
24 units of credit in a Science major or minors (continued from Stage 2)
Plus 6 units of credit of General Education

Stage 4 (Honours)

For details consult the relevant School

Medical Science

3991 Bachelor of Medical Science

BMedSc Full-time

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 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. They may have the opportunity to undertake a fourth year that involves a research program leading to an Honours degree.

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 of credit and no more than 48 units of credit in Level 1 courses.
- A student must complete before the end of Stage 3 the two 3 unit of credit courses BSSM1110 and BSSM2220.
- No student may normally commence Level 2 courses until 24 Level 1 units of credit 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.

Stage 1

BIOS1101, BIOS1201
CHEM1011 *or* CHEM1031 *and* CHEM1021 *or* CHEM1041
6 units of credit from: MATH1031, MATH1041, MATH1131, MATH1141;
BSSM1110
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

BSSM2220
Courses totalling at least 36 units of credit from the following: ANAT2111, ANAT2200, ANAT2210, ANAT2600, ANAT2610, BIOC2181 *or* BIOC2101**, BIOC2291 *or* BIOC2201**, MICR2011*, MICR2201, PHPH2101, PHPH2201, PATH2201, BIOS2021 *or* BIOS2621
One General Education course totalling 3 units of credit
Elective courses totalling up to 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 anticipating doing 4th year Honours program should contact the relevant Head of School for advice.

**Students taking MICR2011 are encouraged to enrol in BIOS2021 (or BIOS2621). The prerequisite course, MICR2201 maybe waived with the permission of the course authority.*

***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.*

Stage 3

Courses totalling 42 units of credit from the following subject areas: Anatomy, Biochemistry and Molecular Genetics, Microbiology and Immunology, Pathology, Physiology and Pharmacology, Psychology, Biotechnology.
Students must nominate a major discipline by taking at least 18 units of credit in one of these subject areas and fulfilling other course requirements specified for that major.
General Education courses totalling 6 units of credit

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.

Specialist Degrees

Aviation

3980/3981 Aviation Full-time Program

Bachelor of Aviation BAv

The degree of Bachelor of Aviation is offered by the Faculty of Science with input from the Faculty of Engineering. The aim of the program is to provide an opportunity for students to prepare for a career in the aviation industry in the flying or managerial sectors, and so there are two distinct streams within the Bachelor of Aviation: Flying and Management. Each consists of a core course together with a range of options and electives. The Flying program 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. The Management program offers a selection of courses designed to provide students with a broad base of knowledge in managing the operational aspects of the aviation industry. 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.

A total of 144 units of credit including 12 units of credit of General Education are required for the completion of the Bachelor of Aviation.

3980 Flying Stream

Stage 1

AVEN1310, AVEN1910
AVIA1002, AVIA1321, AVIA1700, AVIA1900
MATH1031
PHYS1149, PHYS1249
SESC1560

Stage 2

AVEN2920
AVIA2003, AVIA2210
MATH1041
General Education courses totalling 6 units of credit
Choose 12 units of credit from:
AVEN2220, AVEN2910, AVEN2930, AVIA2800, AVIA3300, SESC2560
Further electives totalling 6 units of credit

Stage 3

AVEN3220
AVIA3004 or AVIA3101 and AVIA3201 and AVIA3710
General Education courses totalling 6 units of credit
Choose additional units of credit for a Stage 3 total of 48 from:
AVEN3230, AVEN3420, AVEN3610, AVEN3710, AVIA3800, AVIA3851, PHYS2810
Electives up to 6 units of credit

Stage 4 (Honours)

AVIA4001 *or* AVIA4002

3981 Management Stream

Stage 1

AVEN1310, AVEN1910
AVIA1321, AVIA1810, AVIA1850, AVIA1900
MATH1031, MATH1041
PHYS1149
SESC1560
Choose 6 units of credit from PHYS1229, ECON1103

Stage 2

AVEN2920
AVIA1700, AVIA2110, AVIA2210, AVIA2400
General Education courses totalling 6 units of credit
Choose 27 units of credit from:
AVEN2220, AVEN2910, AVEN2930,
AVIA2500, AVIA2800, AVIA3600
IROB2721, PHYS2850, SESC2560
Elective courses totalling 6 units of credit

Stage 3

AVEN3220
AVIA3101, AVIA3201, AVIA3710
General Education courses totalling 6 units of credit
Choose 24 units of credit from:
AVEN3230, AVEN3420, AVEN3610, AVEN3710, AVEN3930
AVIA3300, AVIA3400, AVIA3800, AVIA3851
PHYS2810
Elective courses totalling up to 6 units of credit

Stage 4 (Honours)

AVIA4001 *or* AVIA4002

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 macromolecules 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 protein. Based on this technology, a new generation of biopharmaceuticals, including hormones, vaccines, anti-hypertensive, anti-inflammatory agents and new therapies to treat cancer, 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.

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.

Course Outline

The BSc (Biotechnology) course is four years full-time and awarded with Honours to students who have distinguished themselves in coursework and in the final year project.

Degree Requirements

General Education Requirement

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.

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 the course, or transfer to the Science and Mathematics course (3970), provided that the progression requirements in that course have been met. See also 'General University Rules and Student Information' at the front of this Handbook.

Progression to Stage 4 Honours Program

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 course 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 or 65 or higher in Stage 3 of the course are normally required to transfer to the Science and Mathematics course (3970) and take out the BSc Biotechnology award at Pass level.

3052 Biotechnology Full-time Program

Bachelor of Science BSc

This program in Biotechnology offers a comprehensive education in all aspects of modern applied biology. It leads to the award of a Bachelor of Science degree over four years full-time study, with Honours for students who perform with merit.

Graduates in Biotechnology will be able to find employment in industries and other organisations involved with biopharmaceutical production and food processing, as well as in agricultural and environmental biotechnology.

Stage 1

BIOT1011 Introductory Biotechnology
BIOS1201 Molecules, Cells and Genes
CHEM1011 Fundamentals of Chemistry 1A and
CHEM1021 Fundamentals of Chemistry 1B
MATH1031 Mathematics for Life Sciences and
MATH1041 Statistics for Life and Social Sciences
or one of
MATH1011 General Mathematics 1B
MATH1131 Mathematics 1A
MATH1141 Higher Mathematics 1A
and one of
MATH1021 General Mathematics 1C
MATH1231 Mathematics 1B
MATH1241 Higher Mathematics 1B
plus elective courses totalling 12 units of credit recommended
PHYS1111 Fundamentals of Physics
BIOS1101 Evolutionary & Functional Biology

Stage 2

BIOC2101 Principles of Biochemistry
BIOC2201 Principles of Molecular Biology
BIOS2021 Introductory Genetics or
BIOS2621 Genetics (Advanced Level)

MICR2011 Microbiology 1
MICR2201 Fundamentals of Microbiology and Immunology
plus 12 units of credit from:
BIOS2011 Evolutionary and Physiological Ecology
CHEM2021 Organic Chemistry or
CHEM2041 Chemical & Spectroscopic Analysis
PHPH2101 Physiology 1A
General Education Course(s) totalling 6 units of credit

Stage 3

BIOT3011 Biotechnology A
BIOT3021 Biotechnology B
BIOT3061 Biopharmaceuticals
BIOC3121 Molecular Biology of Nucleic Acids
MICR3041 Immunology 1
or
MICR3641 Immunology I (Advanced)
plus an additional 12 units of credit to be selected from the following:
BIOC3111 Molecular Biology of Proteins
BIOC3271 Molecular Cell Biology
BIOC3281 Recombinant-DNA Techniques and Eukaryotic Molecular Biology
BIOT3081 Environmental Biotechnology
MICR3051 Immunology 2
MICR3071 Environmental Microbiology
General Education Course(s) totalling 6 units of credit

Stage 4

BIOT3071 Commercial Biotechnology
BIOT3091 Professional Issues in Biotechnology
BIOT4053 Research Project

3055 Bioprocess Engineering Full-time Program

Bachelor of Engineering BE

The Bioprocess Engineering program is designed to produce graduates with basic skills for employment in the pharmaceutical, fermentation/food, agro-industrial and environmental/waste treatment industries. In the first three stages, the program combines core chemical engineering with the basic principles of cell biology, microbiology, biochemistry and molecular biology as well as their applications in biotechnology. In Stage 4, students have a broader exposure to modern developments in biotechnology/bioprocess engineering and their commercial application. This is combined with a laboratory-based research project in one of the above areas. The BPE program is fully accredited by the Institute of Chemical Engineers in Australia.

Note: This program in no longer offered to commencing students. The information given below is provided for the guidance of students currently enrolled and graduating in the Bachelor of Engineering program 3055.

Stage 3

BIOT3011 Biotechnology A
BIOT3021 Biotechnology B
CEIC3070 Process Control
CEIC3010 Reaction Engineering
CEIC3110 Thermodynamics
CHEN3021 Systems Modelling and Analysis
CHEN3062 Unit Operations and Pressure Vessels
CHEN3065 Plant & Equipment Design
CHEN3067 Process Design & Economics
CHEN3068 Process Design & Safety
General Education Course(s)

Stage 4

BIOT3061 Biopharmaceuticals or
BIOT3071 Commercial Biotechnology
BIOT4064 Research Project Theory
BIOT4065 Research Project Practice
BIOT4093 Biological Process Engineering
CEIC4120 Management and Plant Operation
CHEN4031 Environmental Management 1
CHEN4061 Design Project

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 in Australia is the largest sector of manufacturing industry. 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. 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 quality and safety of food.

A four year full-time program is offered leading to the award of Bachelor of Science. A six year part-time program leading to the award of the degree of Bachelor of Science (Technology), and a one year full-time Honours program leading to the degree of Bachelor of Science (Honours) are also offered. Graduates of these 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.

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.

Program Outlines

3060 Food Science and Technology Full-time Program

Bachelor of Science (Food Science and Technology)

From 2004 these degrees will be administered by the School of Chemical and Industrial Engineering.

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.

Stage 1

BIOS1201 Molecules, Cells and Genes
CHEM1011 Fundamentals of Chemistry A *or*
CHEM1031 Higher Chemistry C
CHEM1021 Fundamentals of Chemistry B *or*
CHEM1041 Higher Chemistry D
FOOD1120 Introduction to Food Science
FOOD1130 The Food Industry: Professional Perspective and Practice
MATH1031 Mathematics for Life Sciences
MATH1041 Statistics for Life and Social Sciences
PHYS1111 Fundamentals of Physics

Stage 2

BIOC2101 Principles of Biochemistry *or*
BIOC2181 Fundamentals of Biochemistry
BIOC2201 Principles of Molecular Biology *or*
BIOC2291 Fundamentals of Molecular Biology

CHEM2921 Food Chemistry 1
FOOD3220 Nutrition
FOOD1230 Food Choice: Psychology, Preference and Acceptability
MICR2201 Fundamentals of Microbiology and Immunology
General Education (total 12 units of credit)

Stage 3

CHEM3811 Food Chemistry 2
FOOD1360 Food Processing Principles
FOOD1370 Food Preservation: Principles and Applications
FOOD1380 Unit Operations in Food Processing
FOOD1390 Product Design and Development
FOOD2320 Food Microbiology
FOOD2330 Quality Assurance and Control
FOOD2340 Food Safety

Stage 4 Stream A

FOOD1400 Project *or*
FOOD1480 Minor Project
FOOD5400 Industry Liaison

Plus a combination of electives to total 30 or 36 units of credit from the following list.

BIOT3011 Biotechnology A
BIOT3021 Biotechnology B
BIOT3071 Commercial Biotechnology
ECON1103 Microeconomic Principles
ECON1104 Macroeconomic Principles
FOOD1470 Postharvest Technology (Not offered in 2004)
FOOD1490 Advanced Food Chemistry
FOOD2350 Forensic Food Science
FOOD2480 Advanced Food Microbiology
FOOD2490 Analytical Microbiology (Not offered in 2004)
FOOD3440 Advanced Nutrition
FOOD4450 Advanced Food Processing
INFS1603 Business Data Management
IROB2721 Managing People
MARK1012 Marketing Fundamentals
MARK2051 Consumer Behaviour A
MARK2052 Marketing Research
MARK3091 New Product and New Service Development
PHPH2101 Physiology 1A
PHPH2201 Physiology 1B

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.

Stage 4 Stream B: Industry Module Program

FOOD5410 Industry Practicum
FOOD5400 Industry Liaison
Plus electives

During Stages 3 and 4 of the program, excursions are made to various food industries. Detailed reports of some of these visits may be required.

3065 Honours in Food Science Full-time Program

Bachelor of Science (Honours) BSc(Hons)

This program 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.

Compulsory Courses

FOOD9410 Honours Research Project
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.*

3070 Food Science and Technology Part-time Program

Bachelor of Science (Technology) BSc(Tech)

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 program coordinator 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 day-time classes and substantial day-time 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 (3060). Students desiring to proceed to the award of a BSc degree must apply to the Program Coordinator not later than 31 December of the year in which the sixth stage is completed.

Stages 1 and 2

BIOS1201 Molecules, Cells and Genes
CHEM1011 Fundamentals of Chemistry A *or*
CHEM1031 Higher Chemistry C
CHEM1021 Fundamentals of Chemistry B *or*
CHEM1041 Higher Chemistry D
FOOD1120 Introduction to Food Science
FOOD1130 The Food Industry: Professional Perspective and Practice
MATH1031 Mathematics for Life Sciences
MATH1041 Statistics for Life and Social Sciences
PHYS1111 Fundamentals of Physics

Note: Physics, Mathematics and Statistics are usually taken as Stage 1, the other courses as Stage 2

Stage 3

BIOC2101 Principles of Biochemistry *or*
BIOC2181 Introduction to Biochemistry
BIOC2201 Principles of Molecular Biology *or*
BIOC2291 Introduction to Molecular Biology
CHEM2921 Food Chemistry 1
FOOD1230 Food Choice: Psychology, Preference and Acceptability

Stage 4

FOOD3220 Nutrition
MICR2201 Fundamentals of Microbiology and Immunology
General Education (12 units of credit)

Stage 5

CHEM3811 Food Chemistry 2
FOOD2320 Food Microbiology
FOOD2330 Quality Assurance and Control
FOOD2340 Food Safety

Stage 6

FOOD1360 Food Processing Principles
FOOD1370 Food Preservation: Principles and Applications
FOOD1380 Unit Operations in Food Processing
FOOD1390 Product Design and Development

Geography

Geography is the study of the human and physical environment with emphasis on spatial patterns and relationships.

The cultural significance of geography lies in its contribution to an understanding of the total environment. The geographer's skills also find practical application in the conservation and planned development of resources. Increasing numbers of geographers are employed as professionals in these applications. For instance, geomorphologists and biogeographers are undertaking resource inventory surveys and environmental assessment, and human geographers are engaged as urban and regional planners.

Program outlines

The School of Biological, Earth and Environmental Sciences offers a four year full-time program (3010). This program allows specialisations in environmental systems, urban management, resource management, or spatial information technologies.

Themes addressed in the programs include the use and management of scarce resources, the interaction between people and environment, soil conservation, vegetation management, land use conflict, place and identity, and spatial inequalities in economic and social well being.

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. Several units in Geography include laboratory and project work.

The Geographical Society

It is hoped that students taking geography as a degree will participate in the activities organised by the Geographical Society. The Society is open to new ideas and to students who are concerned with fostering an interest in geography outside their formal studies. Informal seminars are organised on topics of interest to geographers. Social activities have always been an important part of the Society and they have provided more than adequate opportunities for students to get to know each other and for students and staff to improve communication.

3010 Geography Full-time Program

This program will not be offered for commencing students in 2004

Normally, most Stage 4 students graduate with Honours. Progression to Stage 4 is subject to achieving at least a credit average in Geography courses contained within Stage 3. A student will not normally be permitted to commence Stage 4 until all previous Stages have been completed.

Stage 1

All of:

GEOH1601 Australian & Global Geographies: Integration & Divergence
GEOS1701 Environmental Systems & Process

And 30 units of credit from the School of Biological, Earth and Environmental Sciences or from available courses that can be selected as elective Level I courses in Science programs.

Stage 2

BEES2041 Data Analysis for Life and Earth Sciences

Select four of:

GEOH2611 Geographies of the Asia-Pacific
GEOH2641 Australian Urban Environments
GEOS2711 Australian Climate & Vegetation
GEOS2721 Australian Surface Environments & Landforms
GEOS2811 Introduction to Remote Sensing
GEOS2821 Introduction to Geographic Information Systems

Select 12 units of credit of Geography or from other disciplines in the School of Biological, Earth and Environmental Sciences, or from the Faculty of Built Environment or from another School with the permission of program advisors.
Select 6 units of credit from General Education courses.

Stage 3

GEOH3101 Advanced Spatial Data Analysis

Select three of:

GEOH3111 Advanced Qualitative Method for Geography
GEOH3621 Place, Identity and Difference
GEOH3641 Regional Australia
GEOH3661 Cities and Urbanism
GEOH3671 Transport, Land Use and Environment
GEOS3711 Biogeography and Human Impact in Australia
GEOS3731 Geomorphology
GEOS3761 Environmental Change
GEOS3811 Advanced Techniques in Remote Sensing
GEOS3821 Remote Sensing and Geographic Information Systems Applications
GEOH3921 Coastal Resource Management

Select 12 units of credit of Geography or from other disciplines in the School of Biological, Earth and Environmental Sciences, or from the Faculty of Built Environment or from another School with the permission of program advisors.
Select 6 units of credit from General Education courses.

Stage 4

GEOS4001 Fieldwork for Consultants
GEOH4301 Professional Practice in Geography
GEOS4404 Thesis in Applied Geography (over 2 sessions)

Select 12 units of credit from:

GEOS4811 Advanced Techniques in Remote Sensing
GEOH4871 Transportation Applications of GIS
GEOS4911 Vegetation Management

Other courses may be included with permission from the program advisor.

Geology

Geology is 'the science of the Earth' and, as such, covers a broad spectrum of knowledge on the constitution and evolution of our planet. Applied Geology involves a specific interest in the use of earth science for the benefit of humanity, including, for example, the search for and evaluation of metallic ore-bodies, accumulations of fossil fuels and groundwater resources or the application of geological knowledge to a range of engineering and environmental problems.

The Student Geological Society (Rock Soc) exists to provide further interaction between students and staff. The society organises a number of events during the year including field trips and an annual dinner.

Program Outlines

A major or minor in Geoscience or Environmental Earth Science is available in the Science degree program (3970). This allows students to combine geology with studies in chemistry (geochemistry), physics and mathematics (geosciences), biological sciences, marine science, geography or environmental systems. These programs are all of three years full-time duration, leading to a BSc at Pass level. An optional fourth year leading to Honours is available for students achieving a good academic standing.

Advanced Science programs are also available in Geoscience and Marine and Coastal Studies. Earth Science can be taken as a specialisation in the Environmental Science degree program.

Fundamental principles of geology are taught through lectures, laboratory work, projects and field tutorials. At the same time students gain the practical skill and knowledge of geological applications necessary for employment in research, industry or government.

Graduates are prepared by these programs to enter any branch of the geological profession or to undertake further studies leading to a higher degree. They are also well equipped to change their field of employment as different opportunities arise.

3000 Applied Geology Full-time Program

Bachelor of Science BSc

Note: This program in no longer offered to commencing students. Students who are currently enrolled in this program should contact the School of Biological, Earth and Environmental Sciences about their enrolment.

Materials Science and Engineering

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, nanomaterials and advanced composites.

The School of Materials Science and Engineering provides education and training for students to prepare them for significant and important careers 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 Bachelor of Engineering program (3135) with four different plans, and related five year full-time combined degree programs leading to BE/MCom (3128) and BE/MBiomedE (3138). In addition, six year part-time Bachelor of Science (Technology) programs are also offered in ceramics (3030) and metallurgy (3130).

Bachelor of Engineering Full-time Programs and Plans

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 (BE/MCom). 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).

Industrial Experience

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.

3135 Bachelor of Engineering 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
CHEM1021	Fundamentals of Chemistry 1B
MATH1131	Mathematics 1A
MATH1231	Mathematics 1B
MATS1021	Computing in Materials Science
MATS1111	Materials Science 1
MECH0130	Engineering Drawing & Descriptive Geometry
MECH0440	Engineering Statics
PHYS1121	Physics 1A
PHYS1221	Physics 1B
	Total (48 UOC)

Stage 2 of all plans

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
MATS1152	Materials Engineering 1B
MATS1172	Physical Properties of Materials
MATS1182	Thermodynamics and Phase Equilibria
MATS1232	Materials Engineering 1A
MATS1242	Crystallographic and Microstructural Characterisation
MATS1262	Mechanical Properties of Materials
	General Education (6 UOC)
	Total (48 UOC)

Stage 3 of all plans

MATS1013	Diffusion and Kinetics
MATS1093	Thermodynamics of Materials 2
MATS2013	Ceramic Materials
MATS3443	Polymer Science and Engineering
MATS4013	Physical Metallurgy
MATS5013	Materials Processing
MATS5323	Modelling in Materials Engineering 1
	Professional Electives (15 UOC)
	Technical Electives (6 UOC)
	General Education (3 UOC)
	Total (48 UOC)

Stage 4 of all plans

MATS1244	Materials Industry Management A
MATS1354	Design Project
MATS1464	Professional Communication and Presentation
MATS3524	Materials Engineering Project
	Professional Electives (15 UOC)
	Technical Electives (6 UOC)
	General Education Course (3 UOC)
	Total (48 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
MATS1354	Design Project
MATS1464	Professional Communication and Presentation
MATS3524	Materials Engineering Project

Physical Metallurgy Plan

Plan MATSE13135
BE in Physical Metallurgy

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 (eg 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:		**UOC**
MATS1214	Welding and Other Joining Processes	3
MATS1414	Surface Treatments and Wear	3
MATS3064	Composite Materials	3
MATS4064	Thermomechanical Processing	3
MATS4084	Specialty Alloys	3
MATS5424	Modelling in Materials Engineering 2	3
NANO3420	Fabrication of Nanostructured Devices	3

Process Metallurgy Plan

Plan MATSG13135
BE in Process Metallurgy

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 course, 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:		**UOC**
INDC3070	Instrumentation and Process Control	3
FUEL0040	Fuel Engineering for Materials Processing	3
MATS5253	Metallurgical Reaction Engineering	3
MATS5394	Pollution Control in Materials Processing	3
MATS5424	Modelling in Materials Engineering 2	3
MATS5524	Pyrometallurgy 2	3
MINE3800	Mineral Processing	3

Materials Engineering Plan

Plan MATSH13135
BE in Materials Engineering

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:		**UOC**
MATS1414	Surface Treatments and Wear	3
MATS2294	Thermal and Mechanical Properties of Ceramics	3
MATS2314	Glass-Based Ceramics	3
MATS3064	Composite Materials	3
MATS3574	Polymer Engineering	3
MATS5424	Modelling In Materials Engineering 2	3
NANO3420	Fabrication of Nanostructured Devices	3

Ceramic Engineering Plan

Plan MATSJ13135
BE in Ceramic Engineering

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:		**UOC**
FUEL0040	Fuel Engineering for Materials Processing	3
MATS2203	Physico-Chemical Ceramics Laboratory	3
MATS2263	Sintering of Ceramics	3
MATS2294	Thermal and Mechanical Properties of Ceramics	3
MATS2314	Glass-Based Ceramics	3
MATS5394	Pollution Control in Materials Processing	3
MATS5424	Modelling in Materials Engineering 2	3
NANO3420	Fabrication of Nanostructured Devices	3

Technical Electives in all four plans should be selected from the elective courses offered in Physical Metallurgy, Process Metallurgy, Materials Engineering and Ceramic Engineering.

Bachelor of Science (Technology) Part-time Programs

BSc(Tech)

Programs 3030 and 3130 are designed for students who are employed in the ceramic or metallurgical industries respectively. They extend 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 BSc(Tech) programs cover the same courses as the first three years of the corresponding full-time plans in BE program 3135. Programs 3030 and 3130 are identical in the first four years of study and correspond to the first two years of program 3135. Stages 5 and 6 of 3030 ceramics program are the same as the third year of the 3135 program ceramic engineering plan, while stages 5 and 6 of the 3130 program are the same as either the physical metallurgy plan or the process metallurgy plan in program 3135.

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.

3030 Ceramics Part-time Program

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 & Descriptive Geometry
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
MATS1182	Thermodynamics and Phase Equilibria
	General Education (3 UOC)
	Total (24 UOC)

Stage 4

MATS1152	Materials Engineering 1B
MATS1232	Materials Engineering 1A
MATS1242	Crystallographic and Microstructural Characterisation
MATS1262	Mechanical Properties of Materials
	General Education (3 UOC)
	Total (24 UOC)

Stage 5

MATS1013	Diffusion and Kinetics
MATS1093	Thermodynamics of Materials 2
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*

3130 Metallurgy Part-time Program

Stages 1 to 4

The same as Stages 1 to 4 of program 3030 ceramics.

Stage 5

MATS1013	Diffusion and Kinetics
MATS1093	Thermodynamics of Materials 2
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.*

3138 Bachelor of Engineering Master of Biomedical Engineering Program

BE MBiomedE

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 maxilliofacial 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 Outline

The BE component of the program consists of one of the following four plans: Process Metallurgy, Physical Metallurgy, Ceramic Engineering, or Materials Engineering. 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. The first two years of all plans are identical and the third, fourth, and fifth 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. Courses pertaining to the MBiomedE component of the program are done in each of the 5 stages of the program.

Stage 1 of all plans

BIOM1001 Professional Biomedical Studies
BIOM9010 Biomedical Engineering Practice
CHEM1011 Fundamentals of Chemistry 1A
CHEM1021 Fundamentals of Chemistry 1B
MATH1131 Mathematics 1A, *or*
MATH1141 Higher Mathematics 1A
MATH1231 Mathematics 1B, *or*
MATH1241 Higher Mathematics 1B
MATS1021 Computing in Materials Science
MATS1111 Materials Science 1
PHYS1121 Physics 1A
PHYS1221 Physics 1B

Stage 2 of all plans

BIOM9420 Clinical Laboratory Science
CHEM2718 Physical Chemistry for Materials Science & Engineering
MATH2049 Mathematics and Statistics for Materials Science
MATH2059 Mathematics for Materials Science
MATS1152 Materials Engineering 1B
MATS1182 Thermodynamics and Phase Equilibria
MATS1232 Materials Engineering 1A
MATS1242 Crystallographic and Microstructural Characterisation
MATS1262 Mechanical Properties of Materials
MECH0130 Engineering Drawing & Descriptive Geometry
MECH0440 Engineering Statics

Stage 3 of all plans

ANAT2511 Fundamentals of Anatomy
MATS1013 Diffusion and Kinetics
MATS1092 Materials and Design 1
MATS1093 Thermodynamics of Materials 2
MATS1172 Physical Properties of Materials
MATS2013 Ceramic Materials
MATS3443 Polymer Science and Engineering
MATS4013 Physical Metallurgy
MATS5013 Materials Processing
MATS5323 Modelling in Materials Engineering 1
Professional Electives (9 UOC)
Technical Electives (3 UOC)

Stage 4 of all plans

MATS3524 Project, *or*
BIOM5910 Thesis A (6 UOC, S1), *and*
BIOM5911 Thesis B (6 UOC, S2)
PHPH2101 Physiology 1A
PHPH2201 Physiology 1B
MATS1354 Design Project
MATS1464 Professional Communication and Presentation
Professional Electives (9 UOC)
Technical Electives (3 UOC)
General Education Courses (6 UOC)

Elective Components (Stage 4)

The following courses have particular objectives, but specific topics are chosen by students for study and research.

MATS1354 Design Project
MATS1464 Professional Communication and Presentation
MATS3524 Materials Engineering Project

Stage 5 of all plans

BIOM9332 Biocompatibility
BIOM9410 Regulatory Requirements for Biomedical Technology
BIOM9913 Masters Project
MATS1244 Materials Industry Management A
Biomedical Engineering Electives (18 UOC)

Elective Components (Stage 5)

The following courses have particular objectives, but specific topics are chosen by students for study and research.

MATS1244 Materials Industry Management A

Academic Plans of the BE/MBiomedE Program

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.

3128 Bachelor of Engineering Master of Commerce Program

BE MCom

This full-time program provides the opportunity to obtain two professional degrees within five years of study. It allows students to add the degree Master of Commerce (program 8404, Faculty of Commerce and Economics) to the degree 3135 Bachelor of Engineering (Physical Metallurgy, Process Metallurgy, Materials Engineering, or Ceramic Engineering) and fulfil an increasing need of the materials, ceramic, mineral and metallurgy industries for engineering based graduates with qualifications in the commerce disciplines. Fast-tracking of the double degrees is possible because three elective courses in Stage 4 of program

3135 can be taken as part of the requirement for the MCom program, and MATH2049 Mathematics and Statistics for Materials Science (program 3135) fulfils the requirements of ECON5203 Statistics for Business (program 8404).

The conditions governing award of the double degrees are the same as those which apply to program 3135 BE (Physical Metallurgy, Process Metallurgy, Materials Engineering, or Ceramic Engineering) as outlined in the Science section of this Handbook and program 8404 Master of Commerce as outlined in the Faculty of Commerce and Economics section of the Postgraduate Handbook. Students electing for the double degrees will initially enrol in program 3135. For transfer to program 8404, students must satisfy the following requirements:

- Complete stages 1-3 in program 3135 at a weighted average of 65% or more.
- Elect to enrol in the "fast track" double degree program 3128 before entry into Stage 4 of program 3135.
- Complete courses: ACCT5901 Accounting: A User Perspective, ECON5103 Business Economics, and a core Commerce elective during Stage 4 of Program 3128.
- Complete the remaining requirements of program 3128 as outlined in the Science section of this Handbook (program 3135).
- Elect to enrol in the Master of Commerce program 8404 for Stage 5 at the end of Stage 4 of the program 3135.

Awarding of Honours in the BE component of program 3128 will include performance in the three Commerce courses taken in Stage 4 of program 3128.

Program 3128 will be administered within the Faculty of Science and program 8404 will be administered within the Faculty of Commerce and Economics.

Stage 1 to Stage 3

Same as program 3135
Total units of credit, 48 each stage

Stage 4

ACCT5901	Accounting: A User Perspective
MATS1464	Professional Communication and Presentation
MATS3524	Materials Engineering Project
ECON5103	Business Economics
	Core Commerce Elective (6 UOC)
	Professional Electives (12 UOC)
	Technical Electives (3 UOC)
	Total (48 UOC)

Elective Components (Stage 4)

The above mentioned courses have particular objectives, but specific topics are chosen by students for study and research.

MATS1464	Professional Communication and Presentation
MATS3524	Materials Engineering Project

Stage 5

Commerce elective courses totalling 48 units of credit to be taken according to the requirements of program 8404, Faculty of Commerce and Economics

Nanotechnology

3617 Nanotechnology Full-time Program

BSc Nanotechnology

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.*

Graduates may expect to find employment in new, high-technology companies which seek to harness the remarkable properties of materials in a nanostructural form. However, the multidisciplinary nature of this degree will provide graduates with very marketable skills in more traditional science-based industries. Graduates would also be well qualified to take higher research degrees.

**Students may leave the program after successful completion of Stage 3. These students will be awarded a BSc with a major in Nanotechnology. Only students enrolled in program 3617 will be eligible to obtain a major in Nanotechnology.*

Stage 1

CHEM1011	Fundamentals of Chemistry 1A *or*
CHEM1031	Higher Chemistry 1C
CHEM1021	Fundamentals of Chemistry 1B *or*
CHEM1041	Higher Chemistry 1D
MATH1131	Mathematics 1A *or*
MATH1141	Higher Mathematics 1A
MATH1231	Mathematics 1B *or*
MATH1241	Higher Mathematics 1B
PHYS1121	Physics 1A *or*
PHYS1131	Higher Physics 1A
PHYS1221	Physics 1B *or*
PHYS1231	Higher Physics 1B
MATS1111	Materials Science 1
NANO1001	Nanotechnology 1
BIOS1201	Molecules, Cells and Genes

Stage 2

PHYS2020	Computational Physics
CHEM2828	Organic and Inorganic Chemistry
CHEM2041	Chemical and Spectroscopic Analysis
NANO2002	Nanotechnology 2
PHYS2030	Laboratory A
PHYS2040	Quantum Physics
PHYS3310	Physics of Solid State Devices
PHYS2410	Biophysics 1
MATS1112	Phase Equilibria
MATS1142	Crystallography and X-ray Diffraction
BIOC2201	Principles of Molecular Biology (Advanced) *or*
BIOC2291	Fundamentals of Molecular Biology

6 units of credit of General Education

Stage3

NANO3410	Chemistry of Surfaces
NANO3003	Nanotechnology 3
PHYS3080	Solid State Physics
NANO3420	Fabrication of Nanostructured Devices
BIOC3121	Molecular Biology of Nucleic Acids

Electives totalling 24 units of credit*
6 units of credit of General Education

Stage 4

MATS1464	Professional Communication
NANO4004	Nanotechnology Project

Electives totalling 9 units of credit*

**Recommended Electives: NANO3440, BIOC3111, CHEM3011, CHEM3041, MATS1002, MATS1162, MATS1343, MATS1013, MATS4023, MATS4333, MATS4113, MICR2201, PHYS2630, PHYS3040, PHYS3320, PHYS3410, POLY3011, POLY3012.*

Optometry

3950 Optometry Full-time Program

Bachelor of Optometry BOptom

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.

Degree Program

Stage 1

BIOS1401	Biology (Optometry)
CHEM1819	Biological Chemistry for Optometry A
CHEM1829	Biological Chemistry for Optometry B
OPTM1105	Optics and the Eye 1
OPTM1201	Ocular and Visual Science 1
OPTM1202	Clinical Optometry 1
OPTM1205	Optics and the Eye 2
OPTM1207	Foundations of Hygiene and Infectious Disease in Optometric Practice
PHYS1199	Physics (Optometry)

Stage 2

OPTM2101	Ocular and Visual Science 2A
OPTM2102	Clinical Optometry 2A
OPTM2105	Optics and the Eye 3
OPTM2201	Ocular and Visual Science 2B
OPTM2202	Clinical Optometry 2B
OPTM2206	Pathology for Optometry
PHPH2121	Principles of Physiology A
PHPH2221	Principles of Physiology B
	General Education courses totalling 6 units of credit

Stage 3

OPTM3102	Clinical Optometry 3A
OPTM3108	Ocular Disease
OPTM3203	Clinical Optometry 3B
OPTM3204	Clinical Optometry 3C
OPTM3209	Environmental Optometry
PHPH3302	Pharmacology for Optometry
PSYC3516	Psychology for Optometry
	General Education courses totalling 6 units of credit

Stage 4

MEDM8001	Principles of Medicine for Optometry Students
OPTM4114	Optometry and the Professional Environment A
OPTM4210	Research Project
OPTM4214	Optometry and the Professional Environment B
OPTM4311	Clinical Optometry 4A
OPTM4312	Clinical Optometry 4B
OPTM4313	Clinical Optometry 4C

3951 Combined Science and Optometry Program

BSc BOptom

Conditions for the combined program leading to the award of the degrees of BSc BOptom:

1. Undergraduates* of the University of New South Wales who have satisfied the examiners in at least the first two stages of the Optometry degree program may be admitted to the Science degree program with advanced standing for the purpose of qualifying for the award of the two degrees of BSc BOptom. Such undergraduates' performance shall have been of a high standard and their admission shall be subject to the approval of the Dean of the Faculty of Science.

2. In order to qualify for the award of the degree of BSc, students so admitted shall be required to complete the appropriate general studies courses and no less than 21 units of credit of either Level II or Level III and a further 21 units of credit from other Level III courses, in accordance with the Science and Mathematics program regulations. The courses submitted for the award of the Bachelor's degree under these regulations must include at least 21 units of credit from Level III courses chosen from related disciplines in accordance with the Science program regulations.

3. In order to qualify for the award of the degree of BOptom, students so admitted shall complete the requirements of the Optometry degree program.

**In Rule 1, the word 'undergraduates' includes graduands, i.e. persons may be admitted under these rules if they have met all requirements for a first degree which has not yet been conferred and admission under these rules shall be no bar to the subsequent award of the first degree.*

Psychology

3432 Psychology Full-time Program

Bachelor of Psychology BPsychol

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.

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.

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. 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.

Degree Program

Stage 1

PSYC1001, PSYC1011 and PSYC1021
Courses from Science schools totalling 12 units of credit
18 elective units of credit selected from:
Arts and Social Sciences, Commerce and Economics, and Science or other approved.

Stage 2

PSYC2001, PSYC2061, PSYC2071, PSYC2081, and PSYC2101
12 Level II units of credit following on from
one of the Level I non-psychology courses
6 units of credit of General Education

Stage 3

PSYC3001, and PSYC3011
Select one course from each of the following three elective groups and two other Level III Psychology courses:
Advanced Perceptual/Cognitive – PSYC3151, PSYC3211, PSYC3221, PSYC3311, PSYC3321;
Advanced Biological – PSYC3051, PSYC3241, PSYC3251, PSYC3261;
Advanced Social – PSYC3121, PSYC3271, PSYC3281.*
6 units of credit of General Education

Stage 4

PSYC4053 and PSYC4063

**Note: Not all level III Psychology elective courses are necessarily offered each year.*

General Education Requirement

Students must complete 12 units of credit of General Education courses plus an additional 56 hours of study which fosters acceptance of professional and ethical action and social responsibility. Of the 12 units of credit for General Education

1. 6 units of credit from the mainstream courses may be substituted for General Education with approval of the Head of School of Psychology,

and

2. A maximum of 6 units of credit of General Education may be counted from any faculty except the Faculty of Science

Students should also consult the section on General Education of this Handbook for further information.

Prerequisites

Before enrolling in any course (or equivalent units of a course) the student shall have attended the classes, and shall have satisfied the examiners, in all relevant prerequisite courses. Prerequisites are specified in course descriptions and a student without a necessary prerequisite for a course will be blocked from enrolment in that course.

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.

Progression and Exclusion

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 1, 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.

Students not on good academic standing will be notified by the Registrar. Notified students will be assessed in accordance with the University's procedures. Failure to respond accordingly to notification will result in exclusion from the degree. Student should also consult the section on academic standing in the front section of this Handbook for further information.

Award of the Degree

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.

Combined Degree Programs

Combined Programs including Science

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.

Combined Programs including Advanced Science

Students seeking to complete the Science component of a combined degree program at Advanced level would normally be expected to complete the full Honours program for the Science study plan in which they are enrolled, in addition to a minimum of 96 units of credit in relevant Science courses at Levels I–III. In practice, it may be difficult to undertake some plans as part of combined degree structures. Subject to timetable constraints, students may undertake the science component of most approved combined degree program involving science, at Advanced level. In general, students will be restricted in the number of science courses that they can undertake in such combined degrees. Where these are insufficient to allow the student to complete the recommended study plan as outlined in the Advanced Science section of this Handbook, students are advised to consult the relevant Head of School.

Combined Programs with Arts and Social Sciences

3930 Combined Science and Arts
3931 Combined Advanced Science and Arts

BSc BA

The combined degree of BSc BA normally requires an additional stage of study and enables students to complete a major sequence from those available in Table A for Science (see Program 3970 – Philosophy and History and Philosophy of Science may not be included) and in a school, department, or program of the Faculty of Arts and Social Sciences. 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.

For admission to the program, students must satisfy the entry requirements to Science or Advanced Science as well as to the Faculty of Arts and Social Sciences. In addition to the requirements of the BSc program being undertaken, students must complete a minimum of 84 units of credit in courses offered by schools, departments or programs within the Faculty of Arts and Social Sciences, including an approved major sequence of 42 units of credit (refer to Lists A and B of the Faculty of Arts and Social Sciences rules in the Arts Faculty section of the Handbook).

Students should enrol in at least 24 Level I units of credit and no more than 36 Level I units of credit within either the Science or the Arts component of the program. For the Arts component, 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.

3935 Combined Science and Social Science
3936 Combined Advanced Science and Social Science

BSc BSocSc

In addition to the minimum requirements of the BSc program (84 units of credit), students must complete 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:

		UOC
SLSP1000	Social Science and Policy	6
or		
SLSP1002	Introduction to Policy Analysis	6
and		
SLSP1001	Research and Information Management	6
SLSP2000	Economy and Society	6
SLSP2002	Policy Analysis Case Studies	6
SLSP3000	Social Theory and Policy Analysis	6
SLSP2001	Applied Social Research 1	6
SLSP3001	Applied Social Research 2	6
SLSP3002	Social Science and Policy Project	6

and an additional 36 units of credit from an approved sequence in a particular social science discipline (List **F** of the Faculty of Arts and Social Sciences rules in the Arts Faculty section of the Handbook).

Students may complete a major (42 units of credit) in a social science discipline from List **F** in the Arts and Social Sciences Faculty by completing an additional elective course as part of the remaining 24 units of credit required for the program.

This degree is administered by the Science Student Centre

3932 Combined Environmental Science and Arts

Bachelor of Environmental Science and Bachelor of Arts BEnvSc BA

This combined degree requires a minimum of 5 years to complete. To satisfy requirements for Environmental Science, a student must complete the coursework in the ENVS core and a discipline specialisation, as well as a 24 UOC 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 schools, departments or programs within the Faculty of Arts and Social Sciences, including an approved major sequence of 42 units of credit (refer to Lists A and B of the Faculty of Arts and Social Sciences rules in the Arts Faculty section of the Handbook). Students should enrol in at least 24 Level I units of credit and no more than 36 Level I 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.

4075 Science Education Program

Bachelor of Science Bachelor of Education BScBEd

This four year double degree requires the completion of a BSc degree with a major and minor in two HSC teaching subjects, plus at least one semester of first year level courses in another two teaching disciplines. Additionally Education Theory courses are commenced in the first year (two courses), with an additional theory course in second year. In third year, practice teaching is done along with a teaching method course. In fourth year, a full complement of teaching method, practice teaching, professional courses and two educational theory courses are completed.

A) Students intending to become **science teachers, or wishing to graduate in the natural sciences (excluding mathematics)**, will be required to complete:

i) A major in one of the teaching disciplines – Physics, Chemistry, Biological Sciences, Earth and Environmental Sciences (54 units of credit). This will include at least 42 units of credit at Level II and III of the discipline, of which 18 units of credit must be from Level III. The major sequence excludes the upper level General Education courses offered in the disciplines.

ii) A minor in one of the teaching disciplines – Physics, Chemistry, Biological Sciences, Earth and Environmental Sciences (36 units of credit). The minor sequence excludes the upper level General Education courses offered in the disciplines.

iii) At least 6 units of credit at Level 1 in each of the main teaching disciplines – Physics, Chemistry, Biological Sciences, Earth and Environmental Sciences – and at least 12 units of credit at Level 1 in either Chemistry or Physics. That is a total of 12 units of credit beyond those first year units completed in the major and minor disciplines. The Level I Physics course can be 'Physics for Health and Life Scientists'.

iv) Completion of 78 units of credit in education. The normal pattern is two courses in first year (12 units of credit); one course in second year (6 units of credit); and three courses in third year (18 units of credit) which include: one theory elective, introductory teaching methods and teaching experience; and 42 units of credit in fourth year which include educational theory, practice teaching, teaching method and professional courses.

v) Completion of 6 or 12 (depending on choice of major) other units of credit from any university discipline, at Levels I, II or III.

Note: (a) Upper level Physics and Chemistry courses require completion of at least 12 units of credit of first year Mathematics. Some Level III Physics courses require a further 6 units of credit of Level II mathematics. For students doing a major or minor in Physics or Chemistry, the Mathematics prerequisites will need to come out of these 12 or 18 'other' units of credit.

(b) Students majoring in Physics complete only 72 units of credit in Education, standardly they would do no Education course in second year.

(c) For entry to Honours (fourth year) in one of the science disciplines, at least 24 units of credit need to be taken at Level III in the discipline, and approval needs to be obtained from the head of the relevant science school.

(d) In fourth year, there is the opportunity to do Computer Studies Method if 12 units of credit of computing have been completed.

B) Students wishing to become **mathematics teachers, or graduate in mathematics**, will be required to:

i) Complete 72 units of credit in Mathematics. These Mathematics courses must be chosen so as to fulfil 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) Completion of at least 6 units of credit of computing courses, which can be taken from a variety of different schools in the university.

iii) Completion of 78 units of credit in Education. The normal pattern is two courses in the first year (12 units of credit); one course in second year (6 units of credit); and two courses- teaching method (6 units of credit); and introductory teaching experience (6 units of credit) in third year; and 48 units of credit in fourth year, which include educational theory, practice teaching, teaching method, and professional courses.

iv) Completion of the balance of 192 units of credit by taking courses from any school that offers either a major or minor in Science.

Note: (a) All prospective Mathematics teachers need to do the BScBEd combined degree. They can no longer (from 2000) do the BABEd degree.

(b) In fourth year, there is the opportunity to do Computer Studies Method if 12 units of credit of computing have been completed.

Combined Programs with Engineering

Bachelor of Engineering Bachelor of Science BE BSc

For details of the Combined Science and Engineering programs refer to the appropriate schools in the Faculty of Engineering section of this Handbook.

3711 Combined Science/Aerospace Engineering
3042 Combined Science/Chemical Engineering
3730 Combined Science/Civil Engineering
3726 Combined Science/Computer Engineering
3725 Combined Science/Electrical Engineering
3735 Combined Science/Environmental Engineering
3102 Combined Science/Industrial Chemistry
3711 Combined Science/Manufacturing Engineering and Management
3711 Combined Science/Mechanical Engineering
3711 Combined Science/Mechanotronic Engineering
3142 Combined Science/Mining Engineering
3711 Combined Science/Naval Architecture
3655 Combined Science/Photovoltaics and Solar Energy
3651 Combined Science/Software Engineering
3746 Combined Science/Surveying and Spatial Information Systems
3641 Combined Science/Telecommunications

Combined Programs with Commerce and Economics

3529 Combined Commerce and Science

Bachelor of Commerce Bachelor of Science BCom BSc

For details of the Combined Science and Commerce Programs refer to the Faculty of Commerce and Economics section of this Handbook.

Combined Programs with Law

4770 Combined Science and Law

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.

Combined Programs with Innovation Management

3451 Combined Science and Innovation Management

Bachelor of Science Diploma in Innovation Management BSc DipInnovMan

The Diploma in Innovation Management program is open to all students commencing second year of a four year science based degree or combined degree. Students are assessed for admission based on their past leadership and entrepreneurial activities, enthusiasm and academic achievement. The diploma aims to encourage an entrepreneurial mind-set and provide students with the knowledge and skills needed for developing business opportunities based on scientific innovation. The Diploma has a focus on life sciences and is taught concurrently over the student's final three 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 workplace component is normally undertaken following the completion of the student's Honours program or 4th year of study.

Course material covers areas such as creativity in enterprises, lateral thinking, business principles, basic business planning and 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 (in conjunction with Young Achievement Australia) 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 professionals.

The Diploma is primarily directed at empowering future R&D scientists with an entrepreneurial education that will allow them to recognise, evaluate, develop, finance and exploit commercial opportunities in their work. Graduates with the combined qualification will also be more competitive for all employment opportunities whether they are in academia, research or administration and will have a wide 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 sector; government regulation and administration; and bioscience sales and marketing.

The Diploma in Innovation Management Study Plan

Stage 2		**UOC**
INOV2100	The Innovation Process (X2)	3
INO2110	YAA Business Skills (S2)	3
Stage3		
INOV3100	Strategic Communication (X1)	3
INOV3110	Technical Publications (S2)	3
BIOT3071	Commercial Biotechnology (S1)	6
BIOT3091	Professional Issues in Biotechnology (S2)	6
Stage 4		
INOV4001	The Bioentrepreneurial Process (X1)	6
INOV4101–4401	Innovation in Practice	6–18

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.

Undergraduate Course Descriptions

ACCT1501
Accounting and Financial Management 1A
School of Accounting
Staff Contact: School Office
UOC6 HPW3.5 S1 S2

This is the first course in a sequence of courses dealing with the profession and practice of accounting and the literature associated with it. 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. In so doing it introduces students to the practice of literature evaluation.

ACCT1511
Accounting and Financial Management 1B
School of Accounting
Staff Contact: School Office
UOC6 HPW3.5 S1 S2
Prerequisite/s: 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
Staff Contact: H Mahama
UOC6 HPW3 S1
Prerequisite/s: 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 focussing 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.

ACCT2532
Management Accounting: Process Improvement and Innovation (Honours)
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: ACCT1511;
Excluded: ACCT2522.

The content of this course includes that of ACCT2522 Management Accounting: Process Improvement and Innovation as well as additional and more advanced work in management accounting.

ACCT2542
Corporate Financial Reporting and Analysis
School of Accounting
Staff Contact: School Office
UOC6 HPW3.5 S2
Prerequisite/s: 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.

ACCT2552
Corporate Financial Reporting and Analysis (Honours)
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3.5 S2
Prerequisite/s: ACCT1511;
Excluded: ACCT2542.

The content of this course includes that of ACCT2542 Corporate Financial Reporting and Analysis as well as additional and more advanced work in corporate financial reporting and accounting theory.

ACCT3563
Issues in Financial Reporting and Analysis
School of Accounting
Staff Contact: School Office
UOC6 HPW3.5 S1 S2
Prerequisite/s: ACCT2542;
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
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW4 S1
Prerequisite/s: ACCT2552;
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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ACCT2522;
Excluded: ACCT3593.

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 lable of 'management accounting' constrains and enables processes of stakeholder value mangement . The course will draw upon a variety of readings and cases to explore these issues.

ACCT3585
E-Business: Strategy & Processes
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3.5 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3.5 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: Admission to BCom Degree at Honours level majoring in Accounting.

ACCT4809
Current Developments in Auditing Research
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: 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.

ACCT4820
Management Accounting Issues and International Best Practice
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s or Corequisite/s: ACCT3583 or ACCT3593.

This course examines a series of contemporary challenges to management accounting and the required responses to achieve international best practice. Topics include: performance measurement and reward system design; profit and investment centre evaluation; transfer pricing; the role of management accounting in managing human resources and environmental issues; advanced cost estimation; capacity management; design of cost management systems and advanced cost analysis. A particular focus is placed on these issues in multinational organisations.

ACCT4851
Current Developments in Accounting Research - Financial
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: 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.

ACCT4867
Special Topic in Accounting
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2
Prerequisite/s: ACCT4897

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.

ACCT4897
Seminar in Research Methodology
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: 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.

ACCT4898
Project Seminar
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2

ACCT8691
Industrial Training 1
School of Accounting
Staff Contact: School Office
UOC18 S1

ACCT8692
Industrial Training 2
School of Accounting
Staff Contact: School Office
UOC18 S2

ACCT8693
Industrial Training 3
School of Accounting
Staff Contact: School Office
UOC18 S1

ACCT8694
Business Internship (Type A)
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC6 S1 S2
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/s: Available only to Study Abroad students.

ACCT8695
Business Internship (Type C)
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC12 S1 S2
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/s: Available only to Study Abroad students.

ACCT9003
Introduction to Accounting Principles
School of Accounting
Staff Contact: School Office
UOC3 HPW2 S1
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
Staff Contact: School Office
UOC6 HPW3 S2

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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ACTL1001

Students consider the practical application of the fundamental principles of actuarial studies in an industry environment.

ACTL3001
Actuarial Statistics
Actuarial Studies Unit
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S2

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 comparisions.

ACTL3100
Industrial Training 2 (Co-op)
Actuarial Studies Unit
Staff Contact: School Office
UOC15 HPW3 S2
Prerequisite/s: ACTL2100

Students study, in depth, the application of actuarial principles in an industry environment.

ACTL4000
Thesis (Actuarial Studies)
Actuarial Studies Unit
Staff Contact: School Office
Enrolment requires School approval
UOC24 HPW6 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2
Prerequisite/s: 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 and, 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
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2
Prerequisite/s: Admission to BCom(Hons) in Actuarial Studies

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) (P/T)
Actuarial Studies Unit
Staff Contact: School Office
Enrolment requires School approval
UOC24 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC15 HPW3 S1
Prerequisite/s: ACTL3100

Students study, in depth, the application of actuarial principles in an industry environment.

AERO3101
Aerospace Design 1A
School of Mechanical and Manufacturing Engineering
Staff Contact: J Page
UOC3 HPW3 S1
Corequisite/s: 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
Staff Contact: J Page
UOC3 HPW3 S2
Prerequisite/s: AERO3101
Corequisite/s: 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
Staff Contact: D Kelly
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: N Ahmed
UOC6 HPW6 S2
Prerequisite/s: MECH2612, MECH2712 or MECH8200

Inviscid conservation relations. Potential flow source, sink, doublet and point vertex; 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, propellors, rotors and fans.

AERO3620
Flight Dynamics and Systems
School of Mechanical and Manufacturing Engineering
Staff Contact: Z Vulovic
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: J Page
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: J Page
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: D Kelly
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: D Kelly
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: N Ahmed
UOC6 HPW6 S1
Prerequisite/s: AERO3610

One-dimensional gas flow. Thermodynamic and sonic speed relations; Mach number, isentropic variable area flow, Prandtle 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 Systems
School of Mechanical and Manufacturing Engineering
Staff Contact: T Barber
UOC6 HPW6 S2
Prerequisite/s: 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, optimisation 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.

ANAM2007
Anatomy 2
School of Medical Sciences
Staff Contact: E Tancred
UOC7 HPW7 S1 S2
Prerequisite/s: ANAM1006

Objectives: To gain knowledge and understanding of the gross and microscopical structure of the internal organs and the brain; to be able to correlate embryonic development with the structure of normal organs and tissues and with the establishment of the anatomical relationships in the body; to correlate function and structure in the organ systems; to acquire basic understanding of the clinical relevance of the anatomical structures studied.Instruction is organised according to the organ systems and includes the cardiovascular, respiratory, alimentary, urinary, genital, endocrine, lymphatic and nervous systems. In all instances the clinical relevance of the anatomical structures is emphasised. The course consists of three subsections, each having separate lectures and tutorials: Gross Anatomy, Histology and Embryology, and Neuroanatomy. Gross Anatomy is taught in Session 1, Neuroanatomy is taught in Session 2 and Histology and Embryology are taught in both Sessions 1 and 2. Neuroanatomy covers the basic organisation and function of the brain and spinal cord with particular reference being made to the sensory and motor systems. Assessment: Apart from continuous assessment tests and practical examinations there are separate examination papers for Histology and Embryology (S1 and S2), Gross Anatomy (S1) and Neuroanatomy (S2). Students must pass each component to pass the whole course.

ANAT2111
Introductory Anatomy
School of Medical Sciences
Staff Contact: B Freeman
UOC6 HPW6 S1 S2
Prerequisite/s: BIOS1101, BIOS1201 or PHPH1502

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.

ANAT2151
Introductory Functional Anatomy
School of Medical Sciences
Staff Contact: K Ashwell C Winder
UOC3 HPW3 S1 S2

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, or on campus if enrolments are sufficient.

ANAT2200
Basic Histology
School of Medical Sciences
Staff Contact: P De Permentier
UOC3 HPW3 S1
Prerequisite/s: BIOS1101, BIOS1201

The course provides an overview of the structure of mammalian cells and their organisation into tissues. Topics include the use of the light microscope, the preparation of tissues and the recognition of artefacts. Morphology of epithelial, connective, muscular and nervous tissues will be compared with emphasis on the practical recognition of cell types and the correlation or structure and function.

ANAT2210
Systems Histology
School of Medical Sciences
Staff Contact: P De Permentier
UOC3 HPW3 S2
Prerequisite/s: ANAT2200 or ANAT2511

The course includes the histological examination of the major body systems: cardiovascular, respiratory, lymphatic, integumentary, digestive, endocrine, urinary, reproductive, and nervous systems. Emphasis is on integrating the microscopic structure of organs with their function and with abnormalities, which occur in common disease processes.

ANAT2300
Vertebrate Development A
School of Medical Sciences
Staff Contact: M Hill
UOC3 HPW3 S1
Corequisite/s: ANAT2200, ANAT2111

This course will cover the morphological and molecular mechanisms of segmentation and patterning responsible for organising the vertebrate 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.

ANAT2310
Vertebrate Development B
School of Medical Sciences
Staff Contact: M Hill
UOC3 HPW3 S2
Prerequisite/s: ANAT2300

The course will cover 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 in development. 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
Staff Contact: E Tancred
UOC6 HPW6 S2
Excluded: ANAT2111, ANAT2151, ANAT2200

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.

ANAT2600
Biological Anthropology A: Primates and Early Humans
School of Medical Sciences
Staff Contact: D Curnoe
UOC3 HPW3 S1
Prerequisite/s: BIOS1101, BIOS1201 or PHPH1502

This course introduces the study of primate biology and human and primate evolution. It overviews the Order Primates: distingishing features of primate anatomy and behaviour, primate adaptations, and diversity and biological relationships. It considers the place of humans in nature and relationships to our primate relatives, and anatomical and behavioural similarities and differences. Human evolution from our earliest ancestors to the emergence of modern humans is considered. The course draws on evidence from anatomy, palaeoanthropology and palaeontology, evolutionary biology, ecology, genetics and geology in reviewing evidence for our evolution. This course is a companion to ANAT2610 but may be taken independently.

ANAT2610
Biological Anthropology B: Modern Humans
School of Medical Sciences
Staff Contact: D Curnoe
UOC3 HPW3 S2
Prerequisite/s: BIOS1101, BIOS1201 or PHPH1502

This course focuses on the study of biological aspects of living and recent prehistoric humans within an anthropological framework. It covers topics in recent human evolution and cultural change, such as the Neolithic Revolution and human variation, especially in blood groups, stature, body proportions, pigmentation and hair form, the nature/nurture problem and the concept of race. Human growth, development and physique, and relationships to function, disease and behaviour in the present and past are examined. Human ecology and adaptability are studied by considering human biological responses to the physical environment, nutritional stress and infectious disease among living and prehistoric peoples and the present challenges of modernisation. This course is a companion to ANAT2600 but may be taken independently.

ANAT3121
Visceral Anatomy
School of Medical Sciences
Staff Contact: C Hardman
UOC6 HPW5 S2
Prerequisite/s: ANAT2111

A detailed study of the visceral system, including autonomic nervous system, head and neck regions, and the cardiovascular, respiratory, gastrointestinal, and genitourinary systems. Laboratory classes include clinical cases and surface and radiological anatomy.

ANAT3131
Functional Anatomy 1
School of Medical Sciences
Staff Contact: D Tracey
UOC6 HPW4 S1
Prerequisite/s: ANAT2111

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
Staff Contact: D Tracey
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: M Hill
UOC6 HPW4 S1 S2
Prerequisite/s: ANAT2200

To develop an understanding of the anatomy and biology of the cell. Cell biology combines traditional anatomical methods with recent cell and molecular biology techniques. Key concepts will include developmental differentiation of the cell, its polarity, motility, cytoskeleton, signal tranduction mechanisms, and outcomes. An introduction to concepts of cell and extracellular matrix interactions will also be covered. Session in which course will run to be determined.

ANAT3411
Neuroanatomy
School of Medical Sciences
Staff Contact: E Tancred
UOC6 HPW6 S1
Prerequisite/s: 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
Staff Contact: P Carrive
UOC6 HPW3 S2
Prerequisite/s: ANAT3411 or PHPH3531

Focuses on selected areas of contemporary neuroscience research interest. Includes: brain development and axon guidance, peripheral nerve regeneration, spinal cord injury, pain pathways, central control of cardiovascular function, cortical plasticity, brain imaging, mechanisms of learning and memory, motor systems 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.

ANAT3531
Functional Anatomy 1 (Adv)
School of Medical Sciences
Staff Contact: School Office
UOC6 HPW4
Prerequisite/s: ANAT2111

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; students will also carry out their own dissections of the upper limb. This course will include an assessable detailed dissection program, incorporating submission of a report based on drawings of the student's work and a review of literature within the subject area.

ANAT3541
Functional Anatomy 2 (Adv)
School of Medical Sciences
Staff Contact: School Office
UOC6 HPW4
Prerequisite/s: ANAT3531

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; students will also carry out their own dissections of the lower limb. This course will include an assessable research affiliation program, incorporating discussion and evaluation of a research project, and submission of a research report based on literature within the subject area.

ANAT3631
Cell Biology (Adv)
School of Medical Sciences
Staff Contact: School Office
UOC6 HPW4
Prerequisite/s: ANAT2200

To develop an understanding of the anatomy and biology of the cell. Cell biology combines traditional anatomical methods with recent cell and molecular biology techniques. Key concepts will include developmental differentiation of the cell, its polarity, motility, cytoskeleton, signal tranduction mechanisms and outcomes. An introduction to concepts of cell and extracellular matrix interactions will also be covered. This course will include an assessable research affiliation program, incorporating discussion and evaluation of a research project, and submission of a research report based on literature within the subject area. Session in which course will run to be determined.

ANAT4508
Anatomy 4
School of Medical Sciences
Staff Contact: C Hardman
Enrolment requires school approval
UOC24 S1 S2

An Honours program consisting of the preparation of a research thesis and participation in School seminars.

ARCH1102
Architectural Design Workshop 1
Architecture Program
Staff Contact: A Quinlan
UOC8 HPW6 S2

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. See ARCH1122, ARCH1172, ARCH1142.

ARCH1121
Architectural History and Theory 1
Architecture Program
Staff Contact: P Hogben
UOC4 HPW3 S1

A general introduction emphasising 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
Staff Contact: C Rice
UOC4 HPW3 S2

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
Staff Contact: A Macklin
UOC4 HPW3 S2

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
Staff Contact: P Murray
UOC9 HPW5 S1

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
Staff Contact: P Murray
UOC8 HPW5 S2

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
Staff Contact: M Gusheh
UOC8 HPW6 S1

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
Staff Contact: P Graham
UOC8 HPW6 S2
Prerequisite/s: BENV1101, ARCH1102;
Corequisite/s: 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
Staff Contact: P Kohane
UOC4 HPW3 S1

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
Staff Contact: Y Xu
UOC3 HPW2 S2
Prerequisite/s: BENV1101, ARCH1121, ARCH1102, ARCH1122;
Corequisite/s: 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
Staff Contact: A Macklin
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: P Murray
UOC6 HPW4 S1
Prerequisite/s: 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
Staff Contact: P Murray
UOC4 HPW3 S2
Prerequisite/s: 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
Staff Contact: R Samuels
UOC3 HPW2 S2

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
Staff Contact: D Alic
UOC8 HPW6 S1
Prerequisite/s: ARCH1201, ARCH1202;
Corequisite/s: 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
Staff Contact: D Alic
UOC9 HPW6 S1 S2
Prerequisite/s: 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
Staff Contact: J Lang
UOC3 HPW2 S1
Prerequisite/s: ARCH1222, ARCH1202;
Corequisite/s: ARCH1301.

Module 1: Theory: Design and human behaviour. Provides an understanding of behaviour-environment theory and its relevance to environmental design and raises questions concerning contemporary values and understandings in architecture. Lectures include 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. Module 2: Theory: Urban theory and practice. Deals with architecture and the city, especially as it relates to the nature of the design task. Aims to bring students' attention to our current understanding of urban design and the roles architects have in shaping the city. Explicit in this analysis will be a redefinition of functionalism in architectural and urban design.

ARCH1371
Architectural Technologies 5
Architecture Program
Staff Contact: P Graham
UOC4 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: G Bell
UOC3 HPW2 S2

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
Staff Contact: G Bell
UOC3 HPW2 S2

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
Staff Contact: S Peter
UOC6 S1 S2
Prerequisite/s: ARCH1282.

Introductory project on a topic area selected by the student in accordance with his or her field of specialisation. 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
Staff Contact: S Peter
UOC9 S1 S2
Prerequisite/s: ARCH1398.

Advanced project on a topic area selected by the student in accordance with his or her field of specialisation. This project represents the culmination and integration of knowledge and skill gained in the student's field of specialisation, 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
Staff Contact: P Johnson
UOC9 HPW6 S1 S2
Prerequisite/s: 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 specialisations 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 UNSW. 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
Staff Contact: P Johnson
UOC9 HPW6 S1 S2
Prerequisite/s: 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 specialisations 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 UNSW. 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
Staff Contact: S King
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: S Peter
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: ARCH1399.

This project represents a major research-based investigation into a subject related to the student's area of specialisation. 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/s: Students must seek approval from Program Coordinator to enrol in this course.

ARCH1499
Honours Project 2
Architecture Program
Staff Contact: S Peter
UOC24 S1 S2
Prerequisite/s: ARCH1498.

This project represents a major research-based investigation into a subject related to the student's area of specialisation. 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/s: Students must seek approval from Program Coordinator to enrol in this course.

ARCH1501
Investigation Workshop
Architecture Program
Staff Contact: M Tawa
UOC9 S1 S2
Prerequisite/s: 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 specialisations 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
Staff Contact: M Tawa
UOC9 S1 S2
Prerequisite/s: ARCH1371, ARCH1501, ARCH1583.

Design development of the project defined in Investigation Workshop. Further elaboration of the project framework, content, criteria and parameters through elective specialisation. 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
Staff Contact: G Bell
UOC6 HPW4 S1 S2
Prerequisite/s: 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 organisation of an architectural office. Aspects of company and partnership law and insurance. Business principles and management procedures relevant to an architectural practice. This course will examine the production of architecture as a social event and analyse the relationships between society and space, looking at both Asian and Western cultures as examples. It will focus on issues such as: the role of economics and politics, urban administration, cultural difference, social theory etc, to architecture. Questions will be addressed 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? 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
Staff Contact: G Bell
UOC24 S1 S2
Prerequisite/s: 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 24 weeks of activity with the minimum single period of approved activity being 8 weeks. The preferred activity is to work under the supervision of a registered Chartered Architect for the 24 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. 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.

ARTS1100
Culture and Tradition
Faculty of Arts and Social Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2

An advanced interdisciplinary seminar course, open by invitation to Arts and Social Science students who have shown a high level of academic excellence achieving a high UAI score or equivalent. It is designed to encourage discussion of topics in the Humanities and Social Sciences relevant to most Schools in the Faculty. Begins with an overview of the course and ends with a full day seminar. Topics include the concept of culture, culture and tradition, cultural and revolutionary change, high and low culture, print and oral cultures, culture and nature and multiculturalism.

ARTS2000
Arts and Social Sciences Internship
School of Social Science and Policy
Staff Contact: C Healy
Enrolment requires School approval
UOC6 HPW3 S1 S2 X1 X2
Prerequisite/s: 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/s: 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
Staff Contact: B Johnson
UOC6 HPW3 S1
Prerequisite/s: 48 units of credit;
Excluded: THFI2020.

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/s: Offered jointly by the Schools of English and Theatre, Film and Dance.

ARTS3002
Making Histories and Historians: Ethics, Scholarship and Public Roles
School of History
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: 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/s: 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
Staff Contact: P Maplestone
UOC6 HPW3 S1
Prerequisite/s: 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/s: Offered by the School of Social Work.

ARTS3006
Corruption and Integrity in Public Life
School of Politics and International Relations
Staff Contact: H Pringle
UOC6 HPW3 S2
Prerequisite/s: 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/s: Offered by the School of Politics and International Relations.

ARTS3007
East Asian Values and Identities
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
UOC6 HPW3 X1
Prerequisite/s: 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/s: 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
Faculty of Arts and Social Sciences
Staff Contact: F Lovejoy
UOC6 HPW3 X1
Prerequisite/s: 48 units of credit

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/s: Offered jointly by the School of Sociology and the School of Social Work.

ASIA1000
World History 1: From the Ancient World to 1500
School of History
Staff Contact: N Doumanis
UOC6 HPW3 S1
Prerequisite/s: Enrolment in program 3413 or 3414 or 3416 or 4766 or 4767 or 4769;
Excluded: HIST1016, HIST1017, INST1000

Covers the main features of human history from the Upper Palaeolithic through to the eve of the modern period. Topics include: human origins, foraging societies, the agricultural revolution, and the emergence of states and empires. Societies to receive special attention include: Mesopotamia, Ancient Egypt, Han China, the Roman Empire, Islamic civilisation, the Mongol Empire, the Aztecs and Incas, medieval India and Renaissance Europe.

ASIA1001
Introduction to Contemporary Asia
Department of Chinese & Indonesian Studies
Staff Contact: D Reeve
UOC6 HPW3 S2

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.

ATAX0001
Basic Tax Law and Process
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

This course provides insight into the Australian taxation system by exploring legal process. Early modules provide an introduction to the legal system illustrated mainly by reference to taxation. Later comes more intensive study of important income and deductions cases, which are thoroughly analysed to impart excellent case and statutory interpretation skills, as a foundation in all law studies. In addition, students gain substantive knowledge of the subject area. The final module places these substantive and legal process issues in the context of the policy of taxation. The course also covers the principles of good legal writing and effective legal research.

ATAX0002
Computer Information Systems
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

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
Staff Contact: School Office
UOC6 S1

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
Staff Contact: School Office
UOC6 S2

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
Staff Contact: School Office
UOC6 S1

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
Staff Contact: School Office
UOC6 S1

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 penalities. 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
Staff Contact: School Office
UOC6 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 S2
Prerequisite/s: ATAX0005

This course addresses financial accounting practice in the context of the contemporary Australian institutional and regulatory environment. It builds upon the introduction to accounting provided in ATAX0005 Accounting 1. It examines both traditional accounting rationale and the regulation of accounting practice. Against this background students prepare and analyse accounting reports (including the Profit & Loss Statement, Balance Sheet and Statement of Cash Flows), and are exposed to issues and controversies related to these reports. This course also introduces the student to management practices and the use of computer based spreadsheets.

ATAX0011
Macroeconomics, Government and the Economy
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

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
Staff Contact: School Office
UOC6 S1
Prerequisite/s: 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 Ralph proposals for a unified entities regime highlight the divergences. 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. 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
Staff Contact: School Office
UOC6 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 S1
Prerequisite/s: ATAX0005, ATAX0010

This course is concerned with external reporting and reporting practices and, in particular, the accounting and reporting practices of listed companies. 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, 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, its development and recent developments with the conceptual framework.

ATAX0016
Critical Perspectives and Ethics
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1
Prerequisite/s: ATAX0001

This course requires students to evaluate critically key aspects of Australia's tax system especially relating to tax avoidance. It demands students 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 concludes with a review of why rules are obeyed and explores whether formal sanctions at the legal or professional level lead to ethical conduct.

ATAX0017
Tax Accounting Systems
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 S2
Prerequisite/s: ATAX0001
Recommended prior knowledge: ATAX0022

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.

ATAX0053
Accounting for Complex Structures and Instruments
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2
Prerequisite/s: ATAX0015

This course examines the accounting and reporting issues posed by business combinations and various financial arrangements. Topics covered include: the preparation of consolidated financial statements amd accounting for associates, joint ventures, diversified operations, foreign currency transactions, offshore operations and derivative financial instruments.

ATAX0055
Taxation of Property Transactions
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 S1
Prerequisite/s: ATAX0003, ATAX0010

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. Specific topics to be covered include: financial mathematics, security valuation, techniques for capital investment decisions, financial decision making under uncertainty (portfolio theory and capital market theory), 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
Staff Contact: School Office
UOC6 S2

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
Staff Contact: School Office
UOC6 S1
Prerequisite/s: ATAX0010

Management accounting systems provide managers in all types of organisations with information to assist them in decision making, planning and control. Students having completed this course will, understand the fundamentals of management accounting; be competent in a variety of product costing systems and appreciate their uses and limitations; understand the role of budgets in organisational functioning and be able to prepare a set of operating and a master budget; and be able to prepare budget reports for assessing cost performance.

ATAX0060
Auditing and Assurance Services
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2
Prerequisite/s: 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. It aims 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
Staff Contact: School Office
UOC6 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 S2
Prerequisite/s: 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 Innovative Financial Products. This course complements ATAX0303/0403 Taxation of Entities.

ATAX0610
Taxation of Superannuation
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 S2
Prerequisite/s: 48 units of credit completed and a cumulative weighted average of at least 65

This course provides a general knowledge of Australian stamp duty, identifying the common themes and important areas of divergence across the various states. Students get time to focus on aspects of importance within their own jurisdiction. The course critically analyses the concepts behind stamp duties in Australia, covering the main rules and problem areas ,and examines stamp duty on conveyances, transfers of dutiable property, leases, transfers, dutiable transactions and trusts. Although the course has a broad focus, stamp duty rules in NSW, Victoria, Western Australia and Queensland are specifically covered.

ATAX0615
Taxation of Specific Industries
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2
Prerequisite/s: 48 units of credit completed and a cumulative weighted average of at least 65

Many important sectors of the Australian economy, such as primary production, superannuation, films and mining, have special tax rules and incentives for persons or entities operating in those industries. Industry generally has access to important tax incentives to encourage research and development or acquisition of industrial or intellectual property, so as to increase its competitiveness. This course provides students with comprehensive technical knowledge of special income tax rules that apply to taxpayers operating in specific industries and other tax concessions aimed at industrial development, including specific applications of the uniform capital allowance regime. Coverage includes a critical analysis of why special rules exist and the desirability and effectiveness of using the tax system to achieve or encourage government industry policy.

ATAX0625
Taxation of Employee Remuneration
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 S1
Prerequisite/s: 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 and Hong Kong and Macau.

ATAX0921
Fieldwork Research Project
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1 S2

This course must be completed within the session for which the student enrols 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.)

AUST1001
Australia: Representations, Identities and Difference
Aboriginal Research and Resource Centre
Staff Contact: S Green
UOC6 HPW3 S2

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
Staff Contact: R Frances
UOC6 HPW3 S1

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
Aboriginal Research and Resource Centre
Staff Contact: S Green
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit in Arts and Social Science courses;
Excluded: 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.

AUST2005
Aboriginal Australia: The Post-Colonial Experience
Aboriginal Research and Resource Centre
Staff Contact: S Green
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit in Arts and Social Science courses;
Excluded: 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.

AUST2007
Institutions and Policy: Re-evaluating Australian Politics
School of Politics and International Relations
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: POLS2044

With the Centenary of Federation behind us, a re-evaluation of Australia's position in the world seems to be occurring. Some have argued Australia is undergoing an increasing integration of our political system with 'global' norms, and that this differs from Australia's institutional heritage and ideals. Allows students to compare the historical foundations and formation of some key political institutions with new norms, expectations and challenges. Developments within Australia will be examined in the context of struggles over power, and over time.

AUST2008
In the Firing Line: Australians at War
School of History
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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 History
Staff Contact: C Gibson
UOC6 HPW4 S2
Prerequisite/s: 36 units of credit;
Excluded: ENVS2020, GEOG2641

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, poulation 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 Informations Systems (GIS) workshops.

AUST2010
Society and Environmental Process: Botany Bay
School of History and Philosophy of Science
Staff Contact: P Brown
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: F Lovejoy
UOC6 HPW3 X1
Prerequisite/s: 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
Aboriginal Research and Resource Centre
Staff Contact: S Green
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: 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.

AUST2017
Labour History
School of History
Staff Contact: D Fieldes
UOC6 HPW3 S2
Prerequisite/s: 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 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
Staff Contact: R Cashman
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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'.

AUST2022
Urban Legends: The History of Sydney
School of History
Staff Contact: G Karskens
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: HIST2100

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.

AUST2023
Regional Australia: Geographies of Uneven Development
School of History
Staff Contact: C Gibson
UOC6 HPW4 X2
Prerequisite/s: 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
Public Policy Making
School of Politics and International Relations
Staff Contact: E Thompson
UOC6 HPW3 S2
Prerequisite/s: 18 units of credit in POLS at 70% or SLSP2000 at 70%;
Excluded: POLS2008

The problems of administering government and the problems of decision-making in the modern State. Models of organisations are discussed, as are problems of participation and implementation. The role of the State and the impact of economic rationalism and managerialism are examined. Students may choose to participate in a parliamentary internship as a component of this course.

AUST2025
Sex, Human Rights and Justice
School of Politics and International Relations
Staff Contact: H Pringle
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: POLS2020, 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.

AUST2026
Music of Aboriginal Australians
School of Music and Music Education
Staff Contact: G Stubington
UOC6 HPW3 S1
Prerequisite/s: 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 Theatre, Film and Dance
Staff Contact: J McCallum
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: 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
School of Theatre, Film and Dance
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: FILM2002

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.

AUST2029
Cities: Experiencing Sydney
School of Sociology
Staff Contact: D Olsberg
UOC6 HPW3 S1
Prerequisite/s: 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
Faculty of Arts and Social Sciences
Staff Contact: J Mendelssohn
UOC6 HPW3 S1
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 identitity 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 History
Staff Contact: C Gibson
UOC6 HPW6 S1
Prerequisite/s: 36 units of credit;
Excluded: GEOG2071, GEOG3181, 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 History
Staff Contact: C Gibson
UOC6 HPW4 S1
Prerequisite/s: 36 units of credit;
Excluded: 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.

AUST2033
Australian Masculinities: Reading Gender, Sex and Culture
School of English
Staff Contact: E McMahon
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: ENGL3470, WOMS2008

Explores the construction of masculinities through the study of a range of Australian texts. Beginning with an examination of key theoretical readings in the area of gender, sex and masculinity, the course will move on to analyse these issues in a number of texts from various genres, both fictional and non-fictional, and various media, including literature, film and television.

AUST2108
Gender and Frontier
School of History
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: HIST2034, HIST2035.

Sexuality, 'race', land and environment are investigated by examining the mythology of the Australian frontier which was largely a cultural creation heavily influenced by the myth of the West in United States historical writing, literature and film. To deconstruct this mythology, a more historically complex picture of the colonisation of the Australian continent will be explored. The themes of sexuality, race, gender and class inform this course throughout.

AUST4500
Combined Australian Studies Honours (Research) F/T
School of History
Staff Contact: R Frances
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 42 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) P/T
School of History
Staff Contact: R Frances
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 42 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
Staff Contact: T Furukawa
UOC3 HPW2 S1

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
Staff Contact: J Page
UOC3 HPW2 S1

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
Staff Contact: J Page
UOC3 HPW2 S2

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
Staff Contact: Z Vulovic
UOC3 HPW2 S2

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
Staff Contact: T Barber
UOC3 HPW2 S2

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
Staff Contact: N Ahmed
UOC3 HPW2 S2

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
Staff Contact: N Ahmed
UOC3 HPW2 S1

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
Staff Contact: Z Vulovic
UOC3 HPW2 S1

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
Staff Contact: D Kelly
UOC3 HPW2 S1

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
Staff Contact: N Ahmed
UOC3 HPW2 S1

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
Staff Contact: R Casey
UOC3 HPW2 S1

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 condtion monitoring, surge, engine re-starting.

AVEN3930
Aircraft Evaluation and Design Appraisal
School of Mechanical and Manufacturing Engineering
Staff Contact: J Page
UOC3 HPW2 S2

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
Staff Contact: G Clynick
UOC12 HPW8 S1 S2
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/s: Restricted to program 3980 Flying Stream.

AVIA1321
Foundations of Aviation
Department of Aviation
Staff Contact: School Office
UOC6 HPW4 S1
Excluded: AVIA1300

This course provides a foundation for the range of courses provided fro the BAv, and includes a general description of the aviation industry. Topics will be 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 and operation, navigation; international and organisational cultures, human factors and aviation safety. This course will be taught in an interactive context, developing library research skills and written, oral and presentation communication skills.

AVIA1700
Aviation Safety Management 1
Department of Aviation
Staff Contact: School Office
UOC3 HPW2 S1 S2
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
Staff Contact: School Office
UOC3 HPW2 S1 S2
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
Staff Contact: School Office
UOC3 HPW4 S1 S2

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
Staff Contact: R Robertson
UOC3 HPW4 S1 S2
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
Staff Contact: G Clynick
UOC18 HPW12 S1
Prerequisite/s: AVIA2003;
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/s: Restricted to program 3980 Flying Stream.

AVIA2110
Aviation Human Factors 1
Department of Aviation
Staff Contact: School Office
UOC3 HPW2 S1
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
Staff Contact: School Office
UOC3 HPW2 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC3 HPW2 S1
Excluded: AVIA2403

This course 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
Staff Contact: School Office
UOC3 HPW2 S1

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
Staff Contact: School Office
UOC3 HPW2 S1
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
Staff Contact: School Office
UOC3 HPW2 S1

This course covers a broad range of the management decisions faced by the airlines. It 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
Staff Contact: G Clynick
UOC24 HPW16 S2
Prerequisite/s: 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/s: Restricted to program 3980 Flying Stream.

AVIA3101
Airline Management
Department of Aviation
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: AVIA1900, AVIA2003 or AVIA2400;
Corequisite/s: AVIA2700;
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
Staff Contact: School Office
UOC6 HPW4 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC3 HPW2 S2
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
Staff Contact: School Office
UOC3 HPW2 S1 S2
Prerequisite/s: 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
Staff Contact: G Clynick
UOC3 HPW2 S1 S2
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
Staff Contact: G Braithwaite
UOC6 HPW4 S1 S2
Prerequisite/s: AVIA2700;
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
Staff Contact: School Office
UOC3 HPW2 S1

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
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 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 - F/T
Department of Aviation
Staff Contact: G Braithwaite
Enrolment requires School approval
UOC24 S1 S2

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 - P/T
Department of Aviation
Staff Contact: G Braithwaite
Enrolment requires School approval
UOC48 S1 S2

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 & Environmental Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC6
Notes: Individually designed project course available only to overseas students

BEES0006
Special Program in Biological, Earth and Environmental Sciences - Undergraduate
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC6 S1

BEES0007
Special Program in BEES
School of Biological, Earth & Environmental Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC12
Note/s: Individually designed project courses generally available only to overseas students.

BEES0008
Special Program UG in BEES
School of Biological, Earth & Environmental Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC18
Note/s: Individually designed project courses generally available only to overseas students.

BEES2041
Data Analysis for Life and Earth Sciences
School of Biological, Earth & Environmental Sciences
Staff Contact: R McMurtrie
UOC6 HPW5 S1
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 will be 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.

BEES4511
Professional Skills
School of Biological, Earth & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC6 HPW4 S1 S2

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.

BEES4521
Literature Review
School of Biological, Earth & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC6 S1 S2

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 will be taken in conjunction with an Honours research project in the School and the topic area will be decided in consultation with an Honours supervisor and will be related to the topic area of the research project.
Note/s: 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.

BENV1022
Designing as a Discursive Practice
Faculty of the Built Environment
Staff Contact: P Johnson
UOC6 HPW3 S2
Prerequisite/s: ARCH1321

This course questions certain assumptions made by architects, namely: that technology is a generative force which has the power to shape an architecture appropriate to the spirit of the age (Zeitgeist); that accepting the Zeitgeist privileges the new over the old and throws doubt on building preservation and contextual fit as serious contemporary concerns. The course examines designing as a mediative and reflexive practice and explores the hermeneutical understanding of the world and its architectural equivalent wherein the designer is seen as embedded in the design process and not standing apart from it. Material is presented as lectures and seminars, supplemented by readings from architectural theory, literary theory and philosophy.

BENV1041
Manual Rendering Techniques
Faculty of the Built Environment
Staff Contact: Y Xu
UOC6 HPW3 S1 S2 X1

This course provides opportunities for students to heighten their skills and techniques in architectural presentation and graphic documentation. Students are required to demonstrate and evaluate their skill and technical capabilities in the accurate representation, visualisation and modelling of specific assemblies, processes and projects. Assessable projects both in studio and in the environment will be carried out and form the basis of a portfolio of sketches. Assessment and student evaluation occurs through formal peer assessment and staff feedback on the basis of assignments and student journals.In this course, students will be required to participate in regular field work, drawing from life in locations on campus, at Centennial Park, the CBD and eastern suburbs beaches.

BENV1042
World Wide Web in Presentation and Communication
Faculty of the Built Environment
Staff Contact: S Peter
UOC6 HPW3 S1
Prerequisite/s: BENV1141.

Website: 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
Faculty of the Built Environment
Staff Contact: D Utian
UOC6 HPW3 S1 S2
Prerequisite/s: BENV1141.

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
Faculty of the Built Environment
Staff Contact: D Prasad
UOC6 HPW3 S2

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
Staff Contact: D Prasad
UOC6 HPW3 S2
Prerequisite/s: ARCH1371

This course develops a greater focus on holistic and sustainable approaches to design. Issues such as demand and supply of energy and water, and the generation of waste, will be covered. Principles of Reduce, Reuse and Recycle will be reiterated. Predominant emphasis will be on practical strategies directly applicable in design. Material is presented as lectures and seminars.

BENV1074
Conceptual Structural Design
Faculty of the Built Environment
Staff Contact: P Murray
UOC6 HPW3
Prerequisite/s: 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
Faculty of the Built Environment
Staff Contact: P Murray
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: B Brito
UOC8 HPW7 S1

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/s: BArch and BScArch students must take this course concurrently with ARCH1121, BENV1141 and ARCH1171.

BENV1141
Computers and Information Technology
Faculty of the Built Environment
Staff Contact: J Plume
UOC3 HPW3 S1

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
Staff Contact: M Parry J Plume
UOC3 HPW3 S1 S2

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
Staff Contact: S Peter
UOC3 HPW3 S1
Prerequisite/s: BENV1242;
Excluded: BENV2401.

An exploration of computer graphic techniques for visualising design proposals. Information can be found on the website: 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
Faculty of the Built Environment
Staff Contact: School Office
UOC3 HPW2 S1

Issues of social responsibility and professional ethics explored via the analysis of case studies, seminars, discussion and debate.

BENV1404
Workshop Construction
Faculty of the Built Environment
Staff Contact: M Tawa
UOC6 HPW4 S1
Prerequisite/s: ARCH1302.

Introduction to woodworking and metalworking workshops, processes, techniques and safety. Design development, detailing and preparation ofworking and shop drawings. Experience with hand tools, portable tools, wood and metal working equipment, in a supervised workshop environmentat the UNSW Randwick campus. Prefabrication of 3 plywood and steel joinery units to house Indigenous art works and craft, destined for the remote community of Patjarr, Western Australia, and to be housed in the Patjarr Art Gallery, to be built by staff and students in 2002. Weekly 4 hour workshop sessions, followed by 3 full days during the mid year recess.

BENV1405
Site Construction
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW4
Prerequisite/s: ARCH1302.

Construction of a small art gallery for the remote Indigenous community of Patjarr, Western Australia. Students will join colleagues from the University of SA on a 2 week construction camp planned for late July 2002. Activities will include planning and packing prefabricatedcomponents for transport from Sydney, travel to Patjarr, and 2 weeks on site assembling and erecting the building. Work will include carrying out the internal fitout of the gallery, fixing linings, installing joinery units, preparing and pouring coloured concrete floor panels. Experience with hand and portable power tools, managing the building process and working in small teams under supervision. Return travel by bus, and camping accommodation in transit and on site. Costs, including travel, food and accommodation for the 3 week period are estimated at around $800 per person. There will be up to 6 briefing and planning sessions at UNSW prior to departure.

BENV2101
Adaptive Re-Use
Faculty of the Built Environment
Staff Contact: S Serle
UOC3 HPW2 S1

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.

BENV2103
Environmental Planning
Faculty of the Built Environment
Staff Contact: L Corkery
UOC3 HPW2 S2

Students will be introduced to broad concepts and issues related to environmental planning at the local, state and national levels, through readings, lectures and case studies. They will become familiar with basic methods and techniques of resource data collection and analysis, leading to sound decision making for sustainability.

BENV2106
Landscape Design 9: Integrated Studio
Faculty of the Built Environment
Staff Contact: L Corkery
UOC3 HPW6 S1
Prerequisite/s: 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
Faculty of the Built Environment
Staff Contact: L Corkery
UOC9 HPW6 S1
Prerequisite/s: 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.

BENV2108
Environmental Systems and Technology
Faculty of the Built Environment
Staff Contact: School Office
UOC3 HPW3

This elective will develop an understanding of traditional building materials such as stone, copper, zinc, iron, steel, stale, timber, glass and concrete. Students will visit a stoneyard, a blacksmith's workshop, a copper workshop and learn techniques from traditional craftspeople. Skills in paint analysis and traditional painting methods will be taught. Students will prepare a study of a traditional building material, examining its history, manufacture, current use and conservation.

BENV2112
Landscape Design for Well Being
Faculty of the Built Environment
Staff Contact: L Corkery
UOC6 S1

This course will explore restorative and therapeutic landscapes for a varietty 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.

BENV2114
International Design Study Experience
Faculty of the Built Environment
Staff Contact: School Office
UOC3

This elective aims to introduce students to the International Design world through a series of projects that will culminate in a study tour of major international manufacturers and exhibitions. After completion of this course students willl have a greater knowledge and understanding of different design companies who are successfully manufacturing and producing products in Europe. They will discover the complexities of bringing in to being products that contribute to the world in which we live. They will gain experience in managing and working within a team as well as having to consult with industry. They will learn how to work wiithin a budget and integrate management skills with team work.

BENV2117
Visual Resource Analysis & Management
Faculty of the Built Environment
Staff Contact: School Office
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.

BENV2121
Introduction to Classical Design Principles
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3
Prerequisite/s: ARCH1201 or ARCH1202

This course provides an appreciation of the classical foundations of western architectural tradition connected to practical skills and knowledge in manipulating classical principles to produce an original design. Lectures cover classicism from ancient Greece to the present and seminars include freehand sketching, a field excursion to a classical building and the design of a hypothetical classical project. Assessment by projects.

BENV2122
Modelling Sustainable Design
Faculty of the Built Environment
Staff Contact: D Prasad
UOC6 HPW3 S1

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. It 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
Faculty of the Built Environment
Staff Contact: D Prasad
UOC6 HPW3 S2

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 experments. The course is run jointly with the Photovoltaics Research Centre.

BENV2126
Re-thinking Rome
Faculty of the Built Environment
Staff Contact: D Luscombe
UOC6 X1

This course will involve analysis of the urban fabric of Rome through sketching and measured drawing, and design for the adaptive re-use of some historical monuments, or modernist buildings in the centre of the city. This course will take place in Rome. Students will need to self fund their travel arrangements in co-ordination with the Head of the Architecture Program.

BENV2201
Twentieth-century Australian Architecture
Faculty of the Built Environment
Staff Contact: S Fung
UOC3 HPW2 S1

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
Faculty of the Built Environment
Staff Contact: S Fung
UOC6 HPW3 S2

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, Seijima, Yamamoto, Takasaki, Takamatsu and others. Material is presented as electronic seminars.

BENV2205
Classical Architecture
Faculty of the Built Environment
Staff Contact: School Office
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
Faculty of the Built Environment
Staff Contact: School Office
UOC3 HPW2

The ontological basis and the antinomical qualities of form in the causal sense, reflected in nature, art and architecture. Practical investigation of the antinomical 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 as two-hour lectures.

BENV2209
Theorising Architectural Practices
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3

The notion of theory as a conceptual setting for strategic design practices. Reading theory and architectural design as parallel and critical practices are examined for theorising practice and practicing theory. The implications and efficacy of theoretical contexts and thematics for various aspects of architectural design practice - including design processes and tactics; community, gender, culture and ethics; spatial and temporal articulation; technology, materiality, and assemblage. Studies and readings of selected texts in philosophy, cultural studies and fiction - as well as architectural theories and precedents. Material is presented as lectures and seminars.

BENV2210
Architecture and Music: Parallels and Practice
Faculty of the Built Environment
Staff Contact: M Tawa
UOC6 HPW3 S1

This course examines musical composition as metaphor for architectural design. It studies musical characteristics and motifs such as tonality, rhythm, harmonics, dynamics, sonority and timbre, order, harmony and articulation in musical composition. Themes of whole and part, fragment, limits, interval, alterity and representation will be explored. Architectural implications for geometry, space and spatial dynamics, tectonics, assemblage and materiality will be developed and explored. Material will be presented as lectures and developed in occasional seminars and design workshops. Projects may include one or more of the following activities: readings of selected texts in philosophy, architecture and music theory; listening to and analysing various kinds of music; preparing analytical drawings, process models, visual essays and audio-visual presentations.

BENV2211
Criticism and Evaluation
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3

Architectural criticism is as much about a discourse of ideas as it is about the attempt to clarify for the writer and reader the successes and failures of a particular building/built environment. The purpose of this course is to encourage students to think critically about the nature of criticism, particularly as it is affected by broader cultural criteria. Can criticisms give us useful information about a buildings functional and symbolic achievements and its capacity to enhance the environment? What might a built environment and critique of it tell us about our society, about the values endorsed by the critic, and about our own criteria for excellence? How have visual artists engaged in critiques about the built environment? It seems that no two critics agree on the criteria for evaluating the built environment and it is anticipated that in the classroom evaluative criteria will be equally contested. For an informed discussion to take place it is necessary to know the current literature and debates. A bibliography has been prepared from which approximately two items have been selected as recommended reading for each class. All students are expected to have read something for each class and to substantiate their claims by keeping a critical diary of all items read. Material is presented as two-hour seminars in which all students are expected to participate actively. Assessment will include individual and group work.

BENV2212
Architecture and Culture
Faculty of the Built Environment
Staff Contact: S Fung
UOC6 HPW3 S2
Prerequisite/s: 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 out 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
Faculty of the Built Environment
Staff Contact: School Office
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.

BENV2216
Interior Theory
Faculty of the Built Environment
Staff Contact: S Serle
UOC6 HPW3 S2

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
Faculty of the Built Environment
Staff Contact: S Serle
UOC6 HPW3 S2

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
Faculty of the Built Environment
Staff Contact: C Evans
UOC3 HPW2 S2

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
Faculty of the Built Environment
Staff Contact: L Corkery
UOC3 HPW2 S2

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
Faculty of the Built Environment
Staff Contact: C Evans
UOC3 HPW2 S1

Students are introduced to the philosophy of nature as a continuous thread in the history of ideas. Concepts of 'culture' and 'nature' are critically reviewed against the production of designed landscapes. Skills in philosophical analysis, essay writing and the formal presentation of seminar papers are extended.

BENV2221
State of the Art: Contemporary Landscape Design
Faculty of the Built Environment
Staff Contact: J Weirick
UOC3 HPW2 S1

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
Faculty of the Built Environment
Staff Contact: C De Lorenzo
UOC2 S1 S2

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
Faculty of the Built Environment
Staff Contact: C De Lorenzo
UOC3 S1 S2

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
Faculty of the Built Environment
Staff Contact: C De Lorenzo
UOC6 S1 S2

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
Faculty of the Built Environment
Staff Contact: S Fung
UOC6 HPW3 S1

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
Faculty of the Built Environment
Staff Contact: School Office
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
Faculty of the Built Environment
Staff Contact: H Stephens
UOC3 HPW2 S2

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
Staff Contact: S Fung
UOC6 HPW3 S1

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
Faculty of the Built Environment
Staff Contact: S Fung
UOC6 HPW3 S1
Prerequisite/s: 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 Seijima and Tadao Ando.

BENV2233
Architectural Images
Faculty of the Built Environment
Staff Contact: C Rice
UOC6 HPW3 S2

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
Faculty of the Built Environment
Staff Contact: S Fung
UOC6 HPW3 S2
Prerequisite/s: 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.

BENV2238
Modern Architecture in India & Middle East
Faculty of the Built Environment
Staff Contact: School Office
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
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3

This course promotes an understanding of 20th-century architecture interms 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
Faculty of the Built Environment
Staff Contact: School Office
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
Faculty of the Built Environment
Staff Contact: S Fung
UOC6 HPW3 S2

This course looks at the relation between some of the common materials of building construction as they exits 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.

BENV2242
Suzhou
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3

This elective is a study tour focussing on Suzhou. Selected aspects of Shanghai will be explored for comparison. Two studies will be carried out in Suzhou: (1) a study of the principal gardens of Suzhou using photographic and collage techniques, and (2) a study of selected texts about the gardens specially translated from classical Chinese into English for this tour.

BENV2243
Tokyo
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3

This elective is a two-week study tour of Tokyo focusing on its metropolitan condition and the architectural responses to it. Participants will engage in a program of structured group activities as well as an individual or small-group investigation upon a relevant question of their own choice. The program of activities will include lectures and interviews with key architects and critics; and tours of significant buildings, neighbourhoods, and landscapes. The individual investigations will involve defining an area and methodology of practical investigation, with a presentation and report forming the basis of assessment. Participants will be encouraged to be exploratory in their use of media and methodology in their individual investigations.

BENV2244
Materials and Their Symbolism
Faculty of the Built Environment
Staff Contact: S Serle
UOC3 HPW3 S1
Prerequisite/s: 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
Faculty of the Built Environment
Staff Contact: S Serle
UOC6 HPW3 S2
Prerequisite/s: 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
Faculty of the Built Environment
Staff Contact: S Fung
UOC6 S1

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
Faculty of the Built Environment
Staff Contact: S Fung
UOC6 S2

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.

BENV2251
Cinema and Architecture: Parallels and Practices
Faculty of the Built Environment
Staff Contact: M Tawa
UOC6 HPW3 S2

An analysis of spatial framing, composition and dynamics in cinema practice leading to the development of useful parallels and implications for design practice in the built environment. Lecture topics include narrative construction; subject, object and the cinematic gaze; form and atmosphere; mimetic, representational and presentational strategies; cinematic representations of nature, culture, the individual, place and technology; compositional and editing tactics in cinema; spatial organisation and framing; spatial dynamics; dialogue, music, soundtrack and sound context; parallels between cinematic and design practice and their implications for landscape, urban and architectural design. Case studies of the work of selected directors including Antonioni, Godard, Hartley, Lynch, Pasolini, Roeg and Visconti. Lectures include close readings of excerpts from selected films. Assignments include regular film reviews/analyses, and an end of session project consisting of either a 2500 word essay, or a three dimensional interpretative spatial model, based on a selected film or film excerpt.

BENV2252
Chinese Architecture
Faculty of the Built Environment
Staff Contact: Y Xu
UOC6 HPW3 S1

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
Faculty of the Built Environment
Staff Contact: A Macklin
UOC6 HPW2 S1 S2

This is a practical course in acrylic painting techniques in relationship to design and architecture. The course concentrates on colour 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 colour, 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 course 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
Faculty of the Built Environment
Staff Contact: Y Xu
UOC6 HPW3 S1 S2

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 course involving intensive, practical, hands-on exercises taught simultaneously with visual theory. Ultimately seeks 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
Faculty of the Built Environment
Staff Contact: S Serle
UOC3 HPW2 S2

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 and Interior Architects
Faculty of the Built Environment
Staff Contact: H Stephens
UOC6 HPW3 S1

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 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
Exhibition
Faculty of the Built Environment
Staff Contact: A Quinlan
UOC3 S1 S2
Prerequisite/s: ARCH1402

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
Faculty of the Built Environment
Staff Contact: Y Xu
UOC6 S2

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
Faculty of the Built Environment
Staff Contact: M Tawa
UOC6 S1

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 persue 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 focuses 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 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
Faculty of the Built Environment
Staff Contact: M Tawa
UOC6 S1
Prerequisite/s: 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 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
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3 S1

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.

BENV2315
Architectural Model-Making
Faculty of the Built Environment
Staff Contact: Y Xu
UOC6 S1 S2

This elective aims to develop students model making skills, and to develop an understanding of the significant role/function of models within the design process - not just as communication tools, but also as conduits for exploring ideas. Students will gain knowledge of different model types and their uses within the design process, including: conceptual/ sketch/diagram, site/contour/context, design development, block, space, structural, fagade, section, detail/connections, interior, presentation, exhibition, urban/city, full-sized prototypes. Model making practices will be explored in terms of craft, but also in terms of their relation to design themes, processes, analysis, decision making and issues informing the real building process. Aspects to be considered include spatial formation and quality, tectonic assembly, abstraction, representation, scale, materials, joints and finishes. Tasks may include keeping a research dossier/journal of measured drawings and details of precedents; exploration of modelling possibilities; defining an individual modelling project; planning the modelling process to select methods and materials; and producing a final model to exhibition standard.

BENV2316
Architectural Sketching and Free-hand Drawing
Faculty of the Built Environment
Staff Contact: Y Xu
UOC6 S1 S2

This course will help students develop skills in interpretative architectural sketching and free-hand drawing. It will involve intensive hands-on exercises, supported by intermittent group discussion, review and short lectures. Exercises will be carried out first on pre-selected locales of different kinds, and then on the locales self-selected by students. A series of assessable drawings will be produced by each student, using a range of media - including pencil, ink-pen, charcoal, charcoal-pencil, colour pen and pencil, on white or coloured A3-sized paper.

BENV2401
Digital Design Techniques
Faculty of the Built Environment
Staff Contact: S Peter
UOC6 HPW3

Website: www.fbe.unsw.edu.au/courses/benv/2401/. This course is intended for students who have not done BENV1242 and BENV1341. The course is an exploration of the techniques that can be used to present designs digitally, including 2D and 3D CAD, modelling, animation and image editing. Assessment is based on a small number of simple exercises and one larger project (presenting a design). Students who have completed IDES3231 (or BENV1242 and BENV1341) cannot enrol in this course.

BENV2402
Design Modelling – Time-Based Visualisation
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 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
Faculty of the Built Environment
Staff Contact: School Office
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
Faculty of the Built Environment
Staff Contact: J Plume
UOC6 HPW3 S1
Prerequisite/s: 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
Faculty of the Built Environment
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 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
Faculty of the Built Environment
Staff Contact: V Lin
UOC6 HPW3 S2
Prerequisite/s: BLDG3282

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
Faculty of the Built Environment
Staff Contact: D Utian
UOC6 HPW3 S1 S2
Prerequisite/s: BENV1043

Website: 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
Faculty of the Built Environment
Staff Contact: S Peter
UOC6 HPW3 S2
Prerequisite/s: BENV1042

Website: 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.

BENV2414
Advanced Digital Graphic Communications
Faculty of the Built Environment
Staff Contact: C Walsh
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
Faculty of the Built Environment
Staff Contact: A Sit
UOC3 HPW3 S1 S2

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.

BENV2418
Design Presentation Workshop
Faculty of the Built Environment
Staff Contact: J O'Callaghan
UOC6 X1

An intensive 2 week course refining visual presentation techniques; presentation layout and output, photoshop/illustrator techniques for presentation, model making and montage. Tailored particularly to the needs of Interior Architecture and other design students entering 2nd year, this course will act as an introduction to communications techniques explored in Year two. For all others the course will consolidate and extend individual capabilities and techniques of visual presentation.

BENV2603
Lightweight Structural Design
Faculty of the Built Environment
Staff Contact: P Murray
UOC6 HPW3 S2

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
Faculty of the Built Environment
Staff Contact: P Murray
UOC6 HPW3 S2

Building upon a typical introductory structures course (such as Technology1) 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.

BENV2605
Case Studies in Architectural Structures
Faculty of the Built Environment
Staff Contact: School Office
UOC6
Prerequisite/s: ARCH1371

Case studies are an essential prerequisite to any architectural design process.This course aims to fill a need for a computer-based systemised approach to in-depth study of remarkable buildings, in particular into their technological aspects such as structural form, system and behaviour, their construction, fabric and material. Students choosing to elect the course will be introduced to a proven and well documented approach to investigation and understanding of structural and constructional aspects of buildings and will apply this approach to selective cases. Data generated will be edited and placed into an international database of case studies where they will become a resource for design which will be accessible to a wider student audience. Thus, your work will benefit others, as well as the work of others will benefit you in your current and future study.

BENV2701
Advanced Building Materials (Ceramics)
Faculty of the Built Environment
Staff Contact: P Murray
UOC6 HPW3 S2

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)
Faculty of the Built Environment
Staff Contact: P Murray
UOC6 HPW3 S2

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)
Faculty of the Built Environment
Staff Contact: P Murray
UOC6 HPW3 S2

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
Faculty of the Built Environment
Staff Contact: A Kreisler
UOC3 HPW2 S1 S2

A review of recent developments, current trends and possible future directions in building design, construction systems, detailing and documentation. Case studies, projects, seminars.

BENV2705
Spatial Construction Studies
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3

This course is a rigorous and disciplined examination of skilfully (ie. artfully) designed works of architecture. The course will require students to investigate the physical (spatial and constructional) orders of two buildings with the aim of interpreting/understanding what these orders are and why they are the way they are. The investigations will be based on drawings and models of the chosen buildings (to be made by the students), on appropriate texts and on lectures given during the session. The selection of buildings will be partly based on the availability of good documentation and critical writings. These are necessary in order to achieve the desired level of rigour. Students will be divided into two groups, each group focussing on one of the buildings. A comparison of the two buildings is an important means of initiating discussion and will be one of the aims of the investigation. Material is presented as a mix of lectures and tutorials.

BENV2707
Advanced Landscape Engineering
Faculty of the Built Environment
Staff Contact: School Office
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
Faculty of the Built Environment
Staff Contact: W MacMahon
UOC6 HPW3 S2
Prerequisite/s: 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)
Faculty of the Built Environment
Staff Contact: School Office
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
Faculty of the Built Environment
Staff Contact: P Forsythe
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
Faculty of the Built Environment
Staff Contact: School Office
UOC6

This course looks at 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
Faculty of the Built Environment
Staff Contact: S Serle
UOC3 HPW3 S1
Prerequisite/s: INTA2102 or equivalent Year 1 Design Studio.
Excluded: INTA1211.

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
Faculty of the Built Environment
Staff Contact: S Serle
UOC3 HPW3 S2

A guided research-based course concerned with the design and manufacture of furniture and fitments for mainly commercial applications. A research project and practical design assignment will focus on specific case studies.

BENV2715
Textiles in Interior Architecture
Faculty of the Built Environment
Staff Contact: S Serle
UOC3 HPW3 S2
Prerequisite/s: 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.

BENV2718
Construction Technology 4 (Industrialisation & Technological Change)
Faculty of the Built Environment
Staff Contact: V Lin
UOC3 HPW2 S1

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
Faculty of the Built Environment
Staff Contact: P Forsythe
UOC3 HPW2 S2

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
Faculty of the Built Environment
Staff Contact: P Murray
UOC4 HPW2 S1

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
Staff Contact: G Bell
UOC6 X2

Sttudents 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 in a workshop before erecting it into a prepared site near the Oval. 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 cute, tropical building which we will assess the performance of in Sydney and compare to Simon Scally's in Darwin.

BENV2803
Facility Planning
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3

Facility planning is the practice of coordinating the physical workplace with its business objectives. It strategically integrates the principles of business administration, interior architecture and the behavioural and engineering sciences. This course covers material associated with facility, strategic and tactical planning with regard to: accommodation, occupational health and safety and security; environmentally sustainable design in the context of the workplace; space planning systems; integration of services and telecommunications within the office. Contemporary strategies for the design of the modern office.

BENV2804
Construction Planning and Management
Faculty of the Built Environment
Staff Contact: G Bell
UOC3 HPW2 S1

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 organisation, individual group behaviour, motivation techniques, planning, organising, directing and control.

BENV2805
Project Management and The Design Process
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3

The nature of projects. Definition of project phases. The impact of procurement process on project outcomes. Project risk analysis and project organisational design. Client needs determination and managing the design process. Scope management.

BENV2806
Organisational Behaviour
Faculty of the Built Environment
Staff Contact: School Office
UOC3 HPW3

Organisational design. Types of organisations and fitting organisational structure to environment. Leadership. Reward processes. Expectancy Theory. Organisational change.

BENV2807
Management 7 (Marketing)
Faculty of the Built Environment
Staff Contact: School Office
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.

BENV2808
Law for Builders 3
Faculty of the Built Environment
Staff Contact: School Office
UOC3 HPW3
Prerequisite/s: BLDG3272

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 a valuer, which establish valuation principles; understand the major objectives of principal NSW Acts dealing with real estate or interests therein.

BENV2812
Documentation Techniques for Major Buildings
Faculty of the Built Environment
Staff Contact: A Kreisler
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
Faculty of the Built Environment
Staff Contact: School Office
UOC3 HPW2 S1

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
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3 S1

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 NSW Acts dealing with real estate or interests therein. Judicial valuation, legal precedent, land titles and rights.

BENV2815
Construction Management 4A (Project Management & Design Process)
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3 S1

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
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3 S2

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
Faculty of the Built Environment
Staff Contact: School Office
UOC3 HPW2 S1
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
Faculty of the Built Environment
Staff Contact: School Office
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
Faculty of the Built Environment
Staff Contact: J Lang
UOC6 HPW3 S2

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
Faculty of the Built Environment
Staff Contact: School Office
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.

BENV2905
Multivariate Analysis for Planning
Faculty of the Built Environment
Staff Contact: School Office
UOC3 HPW3
Prerequisite/s: PLAN1052

The use of multivariate techniques to analyse medium to large survey-based data sets. The specific techniques covered in a given year depend in part on the data sets available for analysis, but will focus in any event on multiple regression, including approaches to the analysis of non-linear relationships, and on factor analysis.

BENV2923
Images of Sydney
Faculty of the Built Environment
Staff Contact: R Zehner
UOC3 HPW2 S2

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 are supplied with disposable cameras and images are critiques 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
Faculty of the Built Environment
Staff Contact: R Freestone
UOC6 HPW4 S1
Prerequisite/s: PLAN3032

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
Faculty of the Built Environment
Staff Contact: R Freestone
UOC6 HPW4 S2

This course aims to provide an introductory understanding of the role of transport planning as a tool that can be used to achieve positive planning outcomes in the urban built form. It explains the role of transport planning policy in the context of urban governance, explores specific elements of transport planning theory, and demonstrates the nature of the inter-relationships between transport and urban land use. Instruction involves a mix of lectures, guest lectures, class discussion and fieldwork. It is intended that the lectures will provide an introduction to ideas and a context for further class discussions.

BENV2939
Asian Urbanisation
Faculty of the Built Environment
Staff Contact: R Freestone
UOC6 HPW4 S1

This course explores the main dimensions of the urbanisation process in Asia in the last 40 years. The main focus is the examination of the impact of increasing globalisation on major urban centres.The implications of these changes are examined through reference to the major urban planning challenges that are emerging in the policy areas of spatial planning, economic development and metropolitian governance. The main aims of the course are to Introduce the main demographic, economic and social features of Asian urbanisation, analyze the main impacts of globalisation on Asian urban centres, and investigate the major policy challenges to urban planning in Asian urban centres. Format is weekly lectures, group discusssions and oral and written presentations.

BENV2942
Rural Planning
Faculty of the Built Environment
Staff Contact: R Freestone
UOC6 HPW4 S1

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 will undertake a rural planning exercise with practical application for a local Council.

BENV2943
Heritage Planning
Faculty of the Built Environment
Staff Contact: S Harris
UOC6 S2
Prerequisite/s: PLAN0081

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
Faculty of the Built Environment
Staff Contact: R Freestone
UOC6 X1
Prerequisite/s: 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.

BENV2984
World Case Studies in Urban Design
Faculty of the Built Environment
Staff Contact: A Segal
UOC6 S1 S2

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
Faculty of the Built Environment
Staff Contact: C Warren
UOC6 S2

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
Staff Contact: J Kim
UOC6 HPW3 S1

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.

BINF1001
Bioinformatics 1
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW5 S2
Prerequisite/s: 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.

BINF2001
Bioinformatics 2
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW6 S2
Prerequisite/s: BINF1001

Examines key issues in bioinformatics from a biological perspective - the unique conflux of complexity, uncertainty and unity in biology creates a set of grand challenges for computer scientists. Specific topics include metabolic simulations; inference of genetic control networks; determination and modelling of biomolecular structures; and rational drug design. Practical work will investigate current approaches to these challenges, the state of progress and directions for future expansion.

BINF3001
Bioinformatics 3
School of Computer Science and Engineering
Staff Contact: B Gaeta
UOC6 HPW5 S2
Prerequisite/s: BINF2001, COMP2041, COMP3121.

This hands-on course will focus on advanced algorithms and machine learning techniques for searching, classifying, analysing and modeling DNA, RNA and protein sequence data. It will also introduce techniques for analysing other kinds of genomics information such as data obtained from "gene chips". Techniques covered will include fast string searching, pairwise alignment, Bayesian learning methods, multiple alignment, simple Markov models, hidden Markov models, neural nets, decision trees, inductive logic programming, and support vector machines. Lab: Programming assignments involving modification and implementation of techniques covered in the lectures.

BIOC1221
Biochemistry for Prosthetics and Orthotics
School of Biotechnology and Biomolecular Sciences
Staff Contact: I McFarlane
UOC3 HPW3 S2
Prerequisite/s: CHEM1900,PROR1121
Excluded: BIOC1319, BIOC2101, BIOC2181, GENB1002, GENS6012

Topics include amino acids and enzymes and enzyme kinetics; introduction to metabolism; fat structure and metabolism; protein metabolism; membranes and aerobic generation of ATP; glycogen and gluconeogenesis; carbohydrate and fat metabolism; hormones and whole body metabolism

BIOC2101
Principles of Biochemistry (Advanced)
School of Biotechnology and Biomolecular Sciences
Staff Contact: I McFarlane
UOC6 HPW6 S1
Prerequisite/s: 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/s: 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 Sciences
Staff Contact: H Shoory
UOC6 HPW6 S1
Prerequisite/s: 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/s: 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 Sciences
Staff Contact: V Murray
UOC6 HPW6 S2
Prerequisite/s: 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/s: 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 plan.

BIOC2291
Fundamentals of Molecular Biology
School of Biotechnology and Biomolecular Sciences
Staff Contact: H Shoory
UOC6 HPW6 S2
Prerequisite/s: 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/s: 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 Sciences
Staff Contact: G King
UOC6 HPW6 S1
Prerequisite/s: 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 Sciences
Staff Contact: N Whitaker
UOC6 HPW6 S1
Prerequisite/s: 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 Sciences
Staff Contact: A Wilton
UOC6 HPW6 S1
Prerequisite/s: BIOS2021or BIOS2621

This course will develop 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 will present 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 will be explored. Issues such as race, development, genetics of cancer, quantitative traits, genetic disease, gene mapping ethics, eugenics and forensics will be addressed. Lecturers will be reinforced with discussion groups and computer and other exercises.

BIOC3261
Human Biochemistry
School of Biotechnology and Biomolecular Sciences
Staff Contact: M Edwards
UOC6 HPW6 S2
Prerequisite/s: 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 to amplify the lectures.

BIOC3271
Molecular Cell Biology
School of Biotechnology and Biomolecular Sciences
Staff Contact: L Lutze-Mann
UOC6 HPW6 S2
Prerequisite/s: 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 Biology
School of Biotechnology and Biomolecular Sciences
Staff Contact: N Whitaker
UOC6 HPW6 S2
Prerequisite/s: 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, eg 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 Sciences
Staff Contact: A Wilton
UOC6 HPW6 S2
Prerequisite/s: BIOS2021or 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 Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC6 S1 S2

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/s: 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 Sciences
Staff Contact: N Whitaker
UOC6 HPW6 S1
Prerequisite/s: BIOC2101, BIOC2201;
Excluded: BIOC3121.

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 described above 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; nulceic 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 will also be used to enhance the theoretical and practical aspects of the syllabus.

BIOC3671
Molecular Cell Biology (Advanced)
School of Biotechnology and Biomolecular Sciences
Staff Contact: L Lutze-Mann
UOC6 HPW6 S2
Prerequisite/s: BIOC2101, BIOC2201;
Excluded: BIOC3271.

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 of cells from single cell to whole organism. The theoretical coverage willl 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 careeers in molecular cell biology or related disciplines.

BIOC4109
Genetics Honours (PT)
School of Biotechnology and Biomolecular Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC12 S1 S2

BIOC4318
Biochemistry 4 Honours F/T
School of Biotechnology and Biomolecular Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1 S2

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 F/T
School of Biotechnology and Biomolecular Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1 S2

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.

BIOD2329
Medical Biochemistry and Genetics
School of Biotechnology and Biomolecular Sciences
Staff Contact: P Little
UOC4 HPW4.5 S1 S2
Prerequisite/s: BIOD1319

To acquire knowledge of biochemical aspects of the functions and control mechanisms of the major body systems in humans; to understand the regulation of the adaptive responses of body function to different forms of stress; to understand those biochemical processes which are of particular relevance to clinical practice and a study of pharmacology; to gain experience in problem-solving approaches to the biochemical aspects of normal and disease states; to introduce students to those aspects of modern molecular biology relevant to humans; to provide a basis for the study of human genetics and ethics.Lectures, computer based learning modules and clinical demonstrations deal with endocrine systems, lipid metabolism, connective tissue, neurochemistry; purine, pyrimidine and nucleic acid metabolism, recombinant DNA procedures, The role of DNA analysis in medicene, gene probes, pedigree analysis, inborn errors of metabolism, X- and Y- linked inheritance, human cytogenetics. Clinical material illustrates the principles being studied and underlines the relevance of the course to the study of medicine. Assessment: Examinations are held mid-year and end of year, and include the contents of lectures, computer exersices and written assigments

BIOM1001
Professional Biomedical Studies
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC3 HPW1 S1

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.

BIOM1001
Professional Biomedical Studies
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC3 HPW1

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
Staff Contact: School Office
UOC3 HPW2 S2

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
Staff Contact: School Office
UOC3 HPW6 S1 S2

For BE(Mech)/MBiomedE students only. To be taken in the year of completing the BE(Mech)/MBiomedE degree course.

BIOM5001
Thesis Part A
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 S1

Thesis topic for BE(Mech)/MBiomedE students only.

BIOM5002
Thesis Part B
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC9

Thesis topic for BE(Mech)/MBiomedE students only.

BIOM5910
Thesis Part A
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 HPW8 S1 S2

Thesis topic for BE(Elec)/MBiomedE students only.

BIOM5911
Thesis Part B
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 HPW8 S1 S2

Thesis topic for BE(Elec)/MBiomedE students only.

BIOM5920
Thesis A (Comp UG)
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC3 HPW7 S1 S2
Prerequisite/s: Enrolment in program 3728;
Excluded: BINF4910, COMP4910, SENG4910.

BIOM5921
Thesis B (Comp UG)
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC15 HPW14 S1 S2
Prerequisite/s: BIOM5920.

BIOM5930
Research Project A
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 S1 S2

Thesis topic for BE(Chem)/MBiomedE students only.

BIOM5931
Research Project B
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC9 S1 S2

Thesis topic for BE(Comp)/MBiomedE students only.

BIOM9012
Biomedical Statistics
Graduate School of Biomedical Engineering
Staff Contact: S Sadler
UOC6 HPW3 S2

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.

BIOM9027
Medical Imaging
Graduate School of Biomedical Engineering
Staff Contact: C Bertram
UOC6 HPW3 S2

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.

BIOM9050
Microprocessors and Circuit Design for Biomedical Engineers
Graduate School of Biomedical Engineering
Staff Contact: A Avolio
UOC6 HPW4 S2

Examination of the fundamental digital and analogue circuits commonly found in medical applications. Emphasis is given to project-oriented practical experience involving aspects of biological signal acquisition by microcomputers. Fundamentals of microprocessor hardware and software.
Note/s: Students should NOT have a digital electronics background.
Assumed Knowledge: BIOM9501, BIOM9040 or equivalents.

BIOM9060
Biomedical Systems Analysis
Graduate School of Biomedical Engineering
Staff Contact: S Sadler
UOC6 HPW3 S1

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 date, the optimum design of experiments, and methods of control.
Note/s: Mathematics background required.

BIOM9311
Mass Transfer in Medicine
Graduate School of Biomedical Engineering
Staff Contact: R Odell
UOC6 HPW3 S2

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
Staff Contact: School Office
UOC6 HPW3 S2

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
Staff Contact: School Office
UOC6 HPW3 S1

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.

BIOM9410
Regulatory Requirements of Biomedical Technology
Graduate School of Biomedical Engineering
Staff Contact: R Simmons
UOC6 HPW3 S2

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
Staff Contact: B Milthorpe
UOC6 HPW3 S1

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
Staff Contact: A Avolio
UOC6 HPW3 S1

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.

BIOM9440
Biomedical Practical Measures
Graduate School of Biomedical Engineering
Staff Contact: C Bertram
UOC6 HPW3 S2

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/s: Limited number of places - contact School Office.

BIOM9450
Clinical Information Systems
Graduate School of Biomedical Engineering
Staff Contact: N Lovell
UOC6 HPW3 S2

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/s: Limited number of places - contact School Office.

BIOM9501
Computing for Biomedical Engineers
Graduate School of Biomedical Engineering
Staff Contact: N Lovell
UOC6 HPW3 S1

Algorithm design and documentation; programming in Java and in JBuilder; object oriented program design; event driven programming in a graphical environment.
Note/s: 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
Staff Contact: B Milthorpe
UOC6 HPW3 S1

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
Staff Contact: B Milthorpe
UOC6 HPW2 S2

Statics and dynamics of the musculoskeletal system: mathematical modelling and computer simulation, analysis of pathological situations.

BIOM9551
Biomechanics of Physical Rehabilitation
Graduate School of Biomedical Engineering
Staff Contact: B Milthorpe
UOC6 HPW2 S2

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/s: This course is not offered on a regular basis.
Assumed Knowledge: BIOM9541.

BIOM9561
Mechanical Properties of Biomaterials
Graduate School of Biomedical Engineering
Staff Contact: B Milthorpe
UOC6 HPW3 S2

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
Staff Contact: A Avolio
UOC6 HPW3 S1

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 (e.g. bedside ECG monitor).
Note/s: 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
Staff Contact: School Office
UOC6 S1

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
Staff Contact: School Office
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/s: Basic electronics and mathematics background required.

BIOM9701
Dynamics of the Cardiovascular System
Graduate School of Biomedical Engineering
Staff Contact: C Bertram
UOC6 HPW3 S1

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/s: Some mathematics background desirable.

BIOM9913
Project Report
Graduate School of Biomedical Engineering
Staff Contact: B Milthorpe
UOC12 S1 S2

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.

BIOS1101
Evolutionary and Functional Biology
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
UOC6 HPW5 S2

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/s: Practical seat assignments must be obtained at the BEES Student Office (Rm G27 Biological Sciences Bld) BEFORE Session 2 starts. The Course Guide is available for purchase at the same time.

BIOS1201
Molecules, Cells and Genes
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
UOC6 HPW5 S1

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 Sciences 53-100, or Biology 53-100, or 3 unit Science 90-150, or 4 unit Science 1-50.
Note/s: 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. Practical and tutorial seat assignments must be obtained at the Biology Enrolment Centre on the day of enrolment. The course guide is available for purchase during enrolment week. Equipment required for practical classes is listed in the Course Guide and must be purchased before session starts. Students must consult it for details of the course and assessments. The course commences in Week 1.

BIOS1401
Biology (Optometry)
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
UOC4 HPW4 S1

The course covers the basic principles of cellular and animal biology. Includes practical work.
Note/s: Available only to students in Optometry programs 3950 and 3951.

BIOS2011
Evolutionary and Physiological Ecology
School of Biological, Earth & Environmental Sciences
Staff Contact: R Brooks
UOC6 HPW5 S1

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
Note/s: Students should consult the school of Biological, Earth and Environmental Sciences website for laboratory registration details (www.bees.unsw.edu.au)

BIOS2021
Genetics
School of Biological, Earth & Environmental Sciences
Staff Contact: W Sherwin
UOC6 HPW5 S2
Excluded: BIOS2621

Genome structure and life cycles in prokaryotes and eukaryotes: DNA, gene mapping, cytogenics. 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, CHEM1011 or CHEM1101
Note/s: Students should consult the School of Biological, Earth and Environmental Science website for laboratory registration details (www.bees.unsw.edu.au)

BIOS2031
Biology of Invertebrates
School of Biological, Earth & Environmental Sciences
Staff Contact: P Greenaway
UOC6 HPW5 S2

A comparative study of morphology, taxonomy, functional biology and evolutionary relationships of invertebrates. Emphasis on major phyla and marine forms. Practical work includes anatomy of living and preserved specimens (including dissections), the pragmatic use of identification keys and how animals adapt to the environment.
***Assumed Knowledge*:** BIOS1101 and BIOS1201
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. There is a compulsory field camp during the mid session break and personal expenses will be incurred.

BIOS2051
Flowering Plants
School of Biological, Earth & Environmental Sciences
Staff Contact: S Bonser
UOC6 HPW5 S2

Basic plant biology including cell structure, plant morphology and anatomy, water and sugar transport, seed structure and physiology, plant growth and development arborescence, leaves and photosynthesis, roots, micro-organisms and nutrition, evolution of land plants and plant taxonomy. Practical work: plant anatomy and light microscopy; plant identification.
***Assumed Knowledge*:** BIOS1101 and BIOS1201
Note/s: Students should consult the School of Biological, Earth and Environmental Science website for laboratory registration details (www.bees.unsw.edu.au)

BIOS2061
Vertebrate Zoology
School of Biological, Earth & Environmental Sciences
Staff Contact: P Banks
UOC6 HPW5 S1

Comparative study of the Chordata, with particular reference to the vertebrates, including morphology, systematics, evolution and natural history, with reference to selected aspects of physiology and reproduction. Practical work to supplement lectures.
***Assumed Knowledge*:** BIOS1101 and BIOS1201
Note/s: Students should consult the School of Biological, Earth and Environmental Sciences website for laboratory registration details (www.bees.unsw.edu.au). Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective. Field excursions are compulsory and will involve expense to individual students.

BIOS2621
Genetics (Advanced Level)
School of Biological, Earth & Environmental Sciences
Staff Contact: W Sherwin
UOC6 HPW6 S2
Excluded: BIOS2021

Genome structure and life cycles in prokaryotes and eukaryotes: DNA, gene mapping, cytogenics. 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/s: Available to students in 3990 (Advanced Science, Life Sciences) and, subject to availability of places, to other high performing students. Students should consult the School of Biological, Earth and Environmental Sciences website for laboratory registration details (www.bees.unsw.edu.au)

BIOS3011
Animal Behaviour
School of Biological, Earth & Environmental Sciences
Staff Contact: R Brooks
UOC6 HPW5 S2

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.

BIOS3021
Comparative Animal Physiology
School of Biological, Earth & Environmental Sciences
Staff Contact: A Beal
UOC6 HPW5 S1

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.

BIOS3061
Plant Ecosystem Processes
School of Biological, Earth & Environmental Sciences
Staff Contact: G Hyde
UOC6 HPW5 S1

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.

BIOS3071
Conservation Biology and Biodiversity
School of Biological, Earth & Environmental Sciences
Staff Contact: W Sherwin
UOC6 HPW5 S1
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. Field excursions are compulsory and will involve expense to individual students.
***Assumed Knowledge*:** BIOS1101 and BIOS1201
Note/s: Students should consult the School of Biological, Earth and Environmental Sciences website for laboratory registration details (www.bees.unsw.edu.au)

BIOS3081
Ocean Biology and Fisheries
School of Biological, Earth & Environmental Sciences
Staff Contact: I Suthers
UOC6 HPW5 S1
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 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.
***Assumed Knowledge*:** BIOS2031 and BIOS2041
Note/s: A compulsory field trip will be held during the mid-session break.

BIOS3091
Marine and Aquatic Ecology
School of Biological, Earth & Environmental Sciences
Staff Contact: A Poore
UOC6 HPW5 S2

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.

BIOS3111
Population and Community Ecology
School of Biological, Earth & Environmental Sciences
Staff Contact: R McMurtrie
UOC6 HPW5 S2
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.

BIOS3161
Life in Arid Lands
School of Biological, Earth & Environmental Sciences
Staff Contact: School Office
UOC6 HPW5 S2

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, salination 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/s: 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 & Environmental Sciences
Staff Contact: R McMurtrie
UOC3 HPW3 S2

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/s: Restricted to Environmental Engineering programs.

BIOS3601
Advanced Field Biology
School of Biological, Earth & Environmental Sciences
Staff Contact: P Banks
UOC6 HPW45 S1

An advanced practical training in diversity, systematics, biology and identification of terrestrial animals and plants. The course is run principally as an intensive 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*:** BIOS2041 or BEES2041 and familiarity with principles of systematics
Note/s: Available to students in Advanced Science, with unfilled places available to students in Environmental Science, Biological Environments, Biological Science and Ecology Majors with a Credit average.

BIOS3671
Conservation Biology and Biodiversity (Advanced Level)
School of Biological, Earth & Environmental Sciences
Staff Contact: W Sherwin
UOC6 HPW6 S1
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/s: Available to students in 3990 (Advanced Science, Life Sciences) and, subject to availability of places, to other high performing students. Students should consult the school of Biological, Earth and Environmental Science website for laboratory registration details (www.bees.unsw.edu.au)

BIOS3681
Ocean Biology and Fisheries (Advanced Level)
School of Biological, Earth & Environmental Sciences
Staff Contact: I Suthers
UOC6 HPW6 S1
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(BIOS2041)
Note/s: 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.

BIOS4513
Biological Science Honours A (P/T)
School of Biological, Earth & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC10.5 S1 S2

A major research project in Biological Science.
Note/s: Plus BIOS4511. If enrolment for Stage 4 is part-time, students must complete the course work requirements in year 1. 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.

BIOS4514
Biological Science Honours B
School of Biological, Earth & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC24 S1 S2

A 24UOC research project in Biological Science, to be completed within a single session.
Note/s: Plus BIOS4511, BIOS4521 and 12UOC biology 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 & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC18 S1 S2

A 18UOC research project in Biological Science, to be taken in combination with BIOS4518, to total 24UOC over 2 sessions.
Note/s: Plus BIOS4511, BIOS4521 and 12UOC biology 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 & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC12 S1 S2

A 12UOC research project in Biological Science taken for two sessions to total 24UOC.
Note/s: Plus BIOS4511, BIOS4521 and 12UOC biology 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 & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC6 S1 S2

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/s: Plus BIOS4511, BIOS4521 and 12UOC biology 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.

BIOS4523
Botany Honours A (P/T)
School of Biological, Earth & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC10.5 S1 S2

A major research project in Botany.
Note/s: Plus BIOS4511. If enrolment for Stage 4 is part-time, students must complete the course work requirements in year 1. 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 & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC24 S1 S2

A 24UOC research project in Botany, to be completed within a single session.
Note/s: Plus BIOS4511, BIOS4521 and 12UOC biology 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 & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC18 S1 S2

A 18UOC research project in Botany, to be taken in combination with BIOS4528, to total 24UOC over 2 sessions.
Note/s: Plus BIOS4511, BIOS4521 and 12UOC biology 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 & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC12 S1 S2

A 12UOC research project in Botany taken over two sessions to total 24UOC.
Note/s: Plus BIOS4511, BIOS4521 and 12UOC biology 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 & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC6 S1 S2

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/s: Plus BIOS4511, BIOS4521 and 12UOC biology 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.

BIOS4533
Zoology Honours A (P/T)
School of Biological, Earth & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC10.5 S1 S2

A major research project in Zoology.
Note/s: Plus BIOS4511. If enrolment for Stage 4 is part-time, students must complete the course work requirements in year 1. 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 & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC24 S1 S2

A 24UOC research project in Zoology, to be completed within a single session.
Note/s: Plus BIOS4511, BIOS4521 and 12UOC biology 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 & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC18 S1 S2

A 18UOC research project in Zoology, to be taken in combination with BIOS4538, to total 24UOC over 2 sessions.
Note/s: Plus BIOS4511, BIOS4521 and 12UOC biology 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 & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC12 S1 S2

A 12UOC research project in Zoology taken for two sessions to total 24UOC.
Note/s: Plus BIOS4511, BIOS4521 and 12UOC biology 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 & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC6 S1 S2

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/s: Plus BIOS4511, BIOS4521 and 12UOC biology 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.

BIOS4543
Ecology Honours A (P/T)
School of Biological, Earth & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC10.5 S1 S2

A major research project in Ecology.
Note/s: Plus BIOS4511. If enrolment for Stage 4 is part-time, students must complete the course work requirements in year 1. 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 & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC24 S1 S2

A 24UOC research project in Ecology, to be completed within a single session.
Note/s: Plus BIOS4511, BIOS4521 and 12UOC biology 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 & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC18 S1 S2

A 18UOC research project in Ecology, to be taken in combination with BIOS4548, to total 24UOC over 2 sessions.
Note/s: Plus BIOS4511, BIOS4521 and 12UOC biology 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 & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC12 S1 S2

A 12UOC research project in Ecology, taken for two sessions to total 24UOC.
Note/s: Plus BIOS4511, BIOS4521 and 12UOC biology 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 & Environmental Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC6 S1 S2

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/s: Plus BIOS4511, BIOS4521 and 12UOC biology 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 Sciences
Staff Contact: P Doran
UOC6 HPW4 S2

This course will focus on the overview of the impact of biotechnology in the achievement of contemporary objectives in the field of medicine, plant and animal science, in food, marine and environmental sciences and draw comparisons with conventional technologies. The concepts of bioethics, patenting and other regulatory issues will also be 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 Sciences
Staff Contact: D Glenn
UOC6 HPW6 S1
Prerequisite/s: 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 Sciences
Staff Contact: C Marquis
UOC6 HPW6 S2
Prerequisite/s: BIOT3011
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 antobiotics, 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 Sciences
Staff Contact: S Mahler
UOC6 HPW6 S2
Prerequisite/s: 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 Sciences
Staff Contact: P Gray
UOC6 HPW4 S1

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 theraputic goods; regulatory procedures for biotechnology derived therapeutics, process validation. Marketing, licencing and business studies.

BIOT3081
Environmental Biotechnology
School of Biotechnology and Biomolecular Sciences
Staff Contact: L Foster
UOC6 HPW5 S2

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 Sciences
Staff Contact: P Gray
UOC6 HPW4 S2

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 Department as well as visiting lecturers.

BIOT3100
Fundamentals of Biotechnology
School of Biotechnology and Biomolecular Sciences
Staff Contact: L Foster
UOC3 HPW2 S2

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/s: Restricted to programs 3055, 3100 and 3040.

BIOT3611
Biotechnology A (Advanced)
School of Biotechnology and Biomolecular Sciences
Staff Contact: D Glenn
UOC6 HPW6 S1
Prerequisite/s: 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 multidiscplinary perspectives of processes using microbial and other cell types.

BIOT3621
Biotechnology B (Advanced)
School of Biotechnology and Biomolecular Sciences
Staff Contact: C Marquis
UOC6 HPW6 S2
Prerequisite/s: 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 Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC18 HPW18 S1 S2
Prerequisite/s: 144 units of credit

The experimental investigation of some aspects of biotechnology.
Note/s: Restricted to programs 3052.

BIOT4073
Biotechnology Honours F/T
School of Biotechnology and Biomolecular Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1 S2

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/s: Restricted to program 3990.

BLDG1050
Structures 1
Building Construction Management program
Staff Contact: X Zou
UOC6 HPW4 S2

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
Staff Contact: School Office
UOC6 HPW4 S1

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
Staff Contact: P Forsythe
UOC6 HPW4 S1

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
Staff Contact: P Forsythe
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: T Uher
UOC6 HPW3 S1

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
Staff Contact: School Office
UOC3 HPW2 S1

Law, including a brief outline of sources of law in NSW 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
Staff Contact: M Brand
UOC3 HPW2 S2
Prerequisite/s: BLDG1281.

Commercial Law; Corporations; Trade Practices; Consumer Protection; Torts; Remedies; Succession; Local Government; Real Property; Administrative Law.

BLDG1302
Construction Economics
Building Construction Management Program
Staff Contact: X Chang
UOC6 HPW3 S2

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
Staff Contact: X Zou
UOC6 HPW4 S1

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
Staff Contact: School Office
UOC6 HPW4
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: V Lin
UOC6 HPW4 S1
Prerequisite/s: BLDG1260.

History of Industrial Relations in Australia. Enterprise agreements. Restructuring Federal and NSW 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
Staff Contact: J Kim
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: P Marsden
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: M Brand
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: X Zou
UOC6 HPW5 S1
Prerequisite/s: BLDG2101.

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
Staff Contact: X Zou
UOC6 HPW5 S2
Prerequisite/s: BLDG3101.

Specialised construction techniques employed on major projects including the selection of plant, equipment and various construction systems: excavation; shoring; ground anchorage; underpinning; piling; formwork; cranage; 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
Staff Contact: T Uher
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: T Uher
UOC6 HPW3 S2

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
Staff Contact: P Marsden
UOC6 HPW4 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3
Prerequisite/s: 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
Staff Contact: X Chang
UOC3 HPW2 S2

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
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: BLDG2264.

Nature of claims, remedies, alternative dispute resolution, mediation, expert appraisal, litigation, moot arbitration.

BLDG4285
Professional Practice & Procedure
Building Construction Management Program
Staff Contact: School Office
UOC6 HPW3 S1 S2

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
Staff Contact: P Marsden
UOC6 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: P Marsden
UOC6 HPW3 S1
Prerequisite/s: 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.

BLDG4314
Building Economics 3
Building Construction Management Program
Staff Contact: School Office
UOC6 HPW3
Prerequisite/s: ACCT9002

The business environment; business structures; taxation, depreciation; operating costs; economics of building plant and materials handling systems; financial control in the erection, management and demolition of buildings.

BLDG4315
Business & Financial Control
Building Construction Management Program
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: P Marsden
UOC3 HPW3 S1

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
Staff Contact: School Office
UOC6 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC9 S1 S2
Prerequisite/s: BLDG4501.

Thesis: for Honours Degree. Results of research on selected thesis topic: survey of the literature on the chosen topic; develop an hypothesis; collect information and data, effectively process and document the research results and draw reasoned conclusions from them. Project: for Pass Degree. An in depth structured study or state of the art study of a technical topic. It should rely strongly on recent authoritative information and should synthesise the knowledge embodied in the technical literature in a well structured manner seeking to address a significant technical question with rigour.

BLDG9998
Quantity Surveying Industry Program
Building Construction Management Program
Staff Contact: P Marsden
UOC12 S1 S2

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 dairy, report and a completed form from the employer.

BLDG9999
Building Industry Program
Building Construction Management Program
Staff Contact: P Marsden
UOC12 S1 S2

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.

BSSM1110
Perspectives in Medical Science 1
Faculty of Science
Staff Contact: P Hardy
UOC3 HPW2 S2

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 by written work and participation, open-book class test. For information regarding this course, please contact the School of History and Philosophy of Science.

BSSM2220
Perspectives in Medical Science 2
Faculty of Science
Staff Contact: J Carmody
UOC3 HPW2 S2

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 BSSM1110, 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.

BSSM4013
Combined Geology Physics Honours F/T
Faculty of Science
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1 S2

Combines Geology and Physics in program 0100, made by arrangement with the Heads of the two Schools.

CEIC0010
Mass Transfer and Material Balances
School of Chemical Eng and Industrial Chemistry
Staff Contact: M Brungs
UOC3 HPW3 S1
Prerequisite/s: CHEM1101, CHEM1201, CIVL2505

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 Eng and Industrial Chemistry
Staff Contact: P Crisp
UOC3 HPW3 S1
Prerequisite/s: CHEM1101, CHEM1201 or CHEM1011 and CHEM1021 or CHEM1031 and CHEM1041

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.

CEIC1010
Introduction to the Chemical Industry
School of Chemical Eng and Industrial Chemistry
Staff Contact: F Lucien
UOC3 HPW3 S1

Introduction to basic Chemical Engineering and Industrial Chemistry concepts, design, flow sheets, safety and environmental issues. The profession, ethics and careers, Laboratory, Pilot Plant and Industry visits. Case studies of the chemical process industry. Introduction to computing and the student computing facilities, including the use of word processing and spreadsheets within the profession.

CEIC1020
Introduction to Chemical Engineering
School of Chemical Eng and Industrial Chemistry
Staff Contact: F Lucien
UOC6 HPW6 S2

Introduction to material and energy balances. Basic calculations associated with chemical process operations. Units, stoichiometry, composition, pressure, ideal gases, equations of state, phase equilibria, thermal properties, steam tables. This material is in addition to MECH0330 Engineering Mechanics.MECH0330 Engineering Mechanics: Composition and resolution of forces, laws of equilibrium. Friction, static s 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.

CEIC1030
Communication & Business Skills
School of Chemical Eng and Industrial Chemistry
Staff Contact: F Lucien
UOC6 S2

Experience is gained in business practices including: company types, structure and organisation, company financing and operation, personnel management, accounting, company law, industrial relations and trade union practices, marketing. A Business Plan is written and company liquidation is undertaken. Product development and quality management issues are covered. Oral and written communication skills are developed.

CEIC2011
Instrumental Analysis - Theory
School of Chemical Eng and Industrial Chemistry
Staff Contact: M Brungs
UOC3 HPW3 S1

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 Eng and Industrial Chemistry
Staff Contact: M Brungs
UOC3 HPW3 S2
Prerequisite/s: CEIC2011

Development of laboratory skills with a range of analytical instruments which includes: Selective ion electrode, polarography, potentiometric titrations, UV/Visible spectrophotometery, X-Ray Fluorescence and Diffraction, Gas and Ion chromatography.

CEIC2020
Introduction to Numerical Methods
School of Chemical Eng and Industrial Chemistry
Staff Contact: T Pham
UOC3 HPW3 S1 S2
Prerequisite/s: CEIC1020, MATH1231 or MATH1241, PHYS1169 or PHYS1111.

Computing for scientific and chemical engineering applications using Pascal. Brief review of basic computer concepts. The Pascal 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 Eng and Industrial Chemistry
Staff Contact: D Wiley
UOC3 HPW3 S1
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: R Amal
UOC3 HPW3 S1
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: R Sheikholeslami
UOC3 HPW3 S2

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 Eng and Industrial Chemistry
Staff Contact: N Foster
UOC4 HPW3 S2
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: J Bao
UOC4 HPW4 S2
Prerequisite/s: CEIC2011, CEIC2020, MATH2030

Concepts of process control, including: dynamic modelling of processes, linearisation, 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 Eng and Industrial Chemistry
Staff Contact: V Chen
UOC3 HPW3 S1
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: J Bao
UOC4 HPW4 S1
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: V Chen
Enrolment requires School approval
UOC9 S2

The experimental investigation of some aspect of an elected topic area in Chemical Engineering

CEIC4101
Professional Electives Advanced
School of Chemical Eng and Industrial Chemistry
Staff Contact: School Office
UOC3 S2
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: T Tran
UOC3 S1
Prerequisite/s: 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 CEIC6*** NOT CEIC4102. Not all courses are offered at any one time.

CEIC4103
Professional Electives
School of Chemical Eng and Industrial Chemistry
Staff Contact: T Tran
UOC3 S1
Prerequisite/s: 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 CEIC6*** NOT CEIC4102. Not all courses are offered at any one time.

CEIC4104
Professional Electives
School of Chemical Eng and Industrial Chemistry
Staff Contact: T Tran
UOC3 S1
Prerequisite/s: 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 CEIC6*** NOT CEIC4102. Not all courses are offered at any one time.

CEIC4105
Professional Electives
School of Chemical Eng and Industrial Chemistry
Staff Contact: T Tran
UOC3 S2
Prerequisite/s: 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 CEIC6*** NOT CEIC4105. Not all subjects are offered at any one time.

CEIC4106
Professional Electives
School of Chemical Eng and Industrial Chemistry
Staff Contact: School Office
UOC3 S2
Prerequisite/s: 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 CEIC6*** NOT CEIC4106. Not all courses are offered at any one time.

CEIC4110
Plant Management and Operation (3041 Program Students only)
School of Chemical Eng and Industrial Chemistry
Staff Contact: School Office
UOC4 S2
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: C Barner-Kowollik
UOC6 S1 S2
Prerequisite/s: 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 subject also includes SESC3310, 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, 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 Eng and Industrial Chemistry
Staff Contact: C Barner-Kowollik
Enrolment requires School approval
UOC3 S2
Prerequisite/s: 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 subject also includes SESC3310, 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. Will cover four major topic areas, which are: professional ethics, environmental related issues, safety and liability and controls of future technology.

CEIC4200
Industrial Experience
School of Chemical Eng and Industrial Chemistry
Staff Contact: School Office
UOC18 S1

CEIC4201
Industrial Experience
School of Chemical Eng and Industrial Chemistry
Staff Contact: School Office
UOC18 S2

CEIC6101
Advanced Reaction Engineering
School of Chemical Eng and Industrial Chemistry
Staff Contact: A Adesina
UOC3 S2

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, pharmaceutics and microelectronic processing), kinetics of heterogenous reactions, diffusion and raction in porous crystals, design of fixed bed reactors, trickle-bed and slurry bed reactors.

CEIC6102
Advanced Process Control
School of Chemical Eng and Industrial Chemistry
Staff Contact: J Bao
UOC3 S2

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, robus control, decentralised control.

CEIC6103
Advanced Particle & Separation Process
School of Chemical Eng and Industrial Chemistry
Staff Contact: R Amal
UOC3 S2

The course involves 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 Eng and Industrial Chemistry
Staff Contact: J Heuts
UOC3 S2

In past years this course has focussed upon three main areas (a) reaction engineering and catalyst aspects of polyolefins; (b) advanced free radical polymerisation; (c) polymers for biomedical applications. The lectures will also cover new methods of polymerisation, new polymers and new applications.

CEIC6201
Minerals Engineering
School of Chemical Eng and Industrial Chemistry
Staff Contact: T Tran
UOC3 S1

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 Eng and Industrial Chemistry
Staff Contact: School Office
UOC3 S1

CEIC6203
Environmental Management 2A
School of Chemical Eng and Industrial Chemistry
Staff Contact: P Crisp
UOC3 S1

CEIC6204
Business Mangement in Chemical Engineering A
School of Chemical Eng and Industrial Chemistry
Staff Contact: School Office
UOC3 S1

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 lemming 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 Eng and Industrial Chemistry
Staff Contact: J Stubington
Enrolment requires School approval
UOC3 S1

Current energy resources and alternatives for the future. Basic princples of fuel conversion processes: gasification, carbonisation, oil refining etc. Introduction to combustion of solid, liquid and gaseous (fossil) fuels.

CEIC6206
Minerals Engineering - Practical
School of Chemical Eng and Industrial Chemistry
Staff Contact: T Tran
UOC3 S2

Practice - This part of the course involves a metallurigical testwork program where students will be required to conduct tests to determine conditions for optimising processing options. Students are required to process an ore using mineral processing equipment to determine optimum design criteria for processing the raw material given into final products.

CEIC6207
Environmental Management 2B
School of Chemical Eng and Industrial Chemistry
Staff Contact: R Amal
UOC3 S2

CEIC6208
Business Managementin CE B
School of Chemical Eng and Industrial Chemistry
Staff Contact: R Burford
UOC3 S2

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, bench-marking.

CEIC6209
Fuel & Energy 2
School of Chemical Eng and Industrial Chemistry
Staff Contact: J Stubington
UOC3 S2

Fundamentals of combustion science and engineering. Fuel plant technology. Energy management and technologies for the efficient use of fuel.

CEIC6210
Biochemical Processing 2
School of Chemical Eng and Industrial Chemistry
Staff Contact: School Office
UOC3 S2

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 Eng and Industrial Chemistry
Staff Contact: C Barner-Kowollik
UOC3 S1

This subject is designed for chemical engineering students who wish to gaina general understanding of polymerization processes. Particular emphasis isgiven to free-radical (co)polymerization processes, their reactions, basickinetics and industrial applications. The course will also address polymer characterisation techniques ranging from chromatography to massspectrometry. In addition, novel living methods of free-radical polymerisation will be discussed. The material may be augmented with lab visits, demonstrations, and industry visits.

CHEM1000
Chemistry at the Cutting Edge
School of Chemical Sciences
Staff Contact: School Office
UOC3 HPW2 S2

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/s: Restricted to Advanced Science students.

CHEM1011
Fundamentals of Chemistry 1A
School of Chemical Sciences
Staff Contact: D Duffy
UOC6 HPW6 S1 S2

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.

CHEM1021
Fundamentals of Chemistry 1B
School of Chemical Sciences
Staff Contact: D Duffy
UOC6 HPW6 S2
Prerequisite/s: CHEM1011

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 Chemical Sciences
Staff Contact: D Duffy
UOC6 HPW6 S1

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 Chemical Sciences
Staff Contact: D Duffy
UOC6 HPW6 S2
Prerequisite/s: CHEM1031

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.

CHEM1817
Chemistry 1ME
School of Chemical Sciences
Staff Contact: D Duffy
UOC3 HPW3 S2
Excluded: CHEM1101, CHEM1201, CHEM1031, CHEM1041.

Stoichiometry. Atomic and molecular structure. States of Matter, Equilibrium, Oxidation and reduction, electro-chemistry and corrosion of metals. Introduction to organic chemistry, structure and properties of polymers.
Note/s: Restricted to programs 3683, 3688, 3710, 3711, 3712 and 3985. Alternative courses are available to avoid timetable clashes. Please consult with the School.

CHEM1819
Biological Chemistry for Optometry Students A
School of Chemical Sciences
Staff Contact: D Duffy
UOC6 HPW6 S1

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 2 Unit Chemistry 65-100)
Note/s: Restricted to program 3950.

CHEM1829
Biological Chemistry for Optometry Students B
School of Chemical Sciences
Staff Contact: D Duffy
UOC6 HPW6 S2
Prerequisite/s: 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/s: Restricted to program 3950.

CHEM1900
Chemistry for Prosthetics and Orthotics
School of Chemical Sciences
Staff Contact: D Duffy
UOC3 HPW3 S1

The classification and structure of matter. Molecular structure and bonding. Intermolecular forces. Chemical reactions. Energy and chemical reactions; equilibrium. Structure, properties and reactions of organic compounds relevant to medicine.
***Assumed Knowledge*:** A basic knowledge of chemistry equivalent to Year 11 high school level.
Note/s: Only offered off-campus via web delivery.

CHEM2011
Physical Chemistry
School of Chemical Sciences
Staff Contact: N Roberts
UOC6 HPW6 S2
Prerequisite/s: 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/s: Alternative courses are available to avoid timetable clashes. Please consult with the School.

CHEM2021
Organic Chemistry
School of Chemical Sciences
Staff Contact: N Roberts
UOC6 HPW6 S2
Prerequisite/s: 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 Chemical Sciences
Staff Contact: N Roberts
UOC6 HPW6 S1
Prerequisite/s: 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/s: Alternative courses are available to avoid timetable clashes. Please consult with the School.

CHEM2041
Chemical and Spectroscopic Analysis
School of Chemical Sciences
Staff Contact: N Roberts
UOC6 HPW6 S1
Prerequisite/s: 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 Chemical Sciences
Staff Contact: N Roberts
UOC3 S1
Prerequisite/s: 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.

CHEM2821
Biological Organic Chemistry
School of Chemical Sciences
Staff Contact: N Roberts
UOC6 HPW6 S1
Prerequisite/s: CHEM1011 or CHEM1031, CHEM1021 or CHEM1041

The chemistry of selected classes of organic compounds of biological importance. Sugars and polysaccharides. Lipids. Amino acids and proteins. Enzyme-catalysed reactions. Heterocyclic chemistry, including vitamins.
Note/s: A satisfactory performance in CHEM2821 may be accepted as a prerequisite for CHEM3021. Please consult with the School.

CHEM2828
Organic and Inorganic Chemistry for Nanotechnology
School of Chemical Sciences
Staff Contact: N Roberts
UOC6 HPW6 S2
Prerequisite/s: 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 Chemical Sciences
Staff Contact: N Roberts
UOC6 HPW6 S2
Prerequisite/s: 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 Chemical Sciences
Staff Contact: N Roberts
UOC6 HPW6 S2
Prerequisite/s: 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 addititves.

CHEM3011
Physical Chemistry
School of Chemical Sciences
Staff Contact: R Bishop
UOC6 HPW6 S1
Prerequisite/s: 6 units of credit in Level 1 Physics, CHEM2011, CHEM2041, CHEM2031 or CHEM2839 .

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 Chemical Sciences
Staff Contact: R Bishop
UOC6 HPW6 S1
Prerequisite/s: 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 Chemical Sciences
Staff Contact: R Bishop
UOC6 HPW6 S1
Prerequisite/s: CHEM2031 or CHEM2839

Descriptive chemistry and bonding, stereochemistry, magnetic and spectroscopic properties, stabilities of complexes of normal and inner transition series elements. Stabilisation of oxidation states. Aspects of the chemistry of p-block elements including the inert pair effect.

CHEM3041
Analytical Chemistry
School of Chemical Sciences
Staff Contact: R Bishop
UOC6 HPW6 S1
Prerequisite/s: CHEM2041

Instrument design, theory and operating principles for the following instrumental areas: electrochemical, atomic and molecular spectroscopy, chromatography, mass spectrometry, automated analysis.

CHEM3101
Project Laboratory in Chemistry
School of Chemical Sciences
Staff Contact: R Bishop
UOC6 HPW6 S2
Prerequisite/s: CHEM3011 or CHEM3021 or CHEM3031 or CHEM3041

Group projects in instrumental and synthetc 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 Chemical Sciences
Staff Contact: R Bishop
UOC6 HPW6 S2
Prerequisite/s: 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/s: 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 Chemical Sciences
Staff Contact: R Bishop
UOC12 HPW12 S2
Prerequisite/s: 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/s: 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 Chemical Sciences
Staff Contact: R Bishop
UOC6 HPW6 S2
Prerequisite/s: CHEM3021

Aspects of bioorganic, bioinorganic and bioanalytical chemistry including: Natural products chemistry, antibiotics and drugs, herbicides and pesticides. The occurance, coordination and role of metals in biology, enzyme and immunoassays in chemical analysis, biosensors.

CHEM3311
Environmental Chemistry
School of Chemical Sciences
Staff Contact: R Bishop
UOC6 HPW6 S2
Prerequisite/s: 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 Chemical Sciences
Staff Contact: R Bishop
UOC6 S1

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 anaylsis. Major instrumental techniques and their applications. Choice of an analytical method.

CHEM3829
Organic Chemistry
School of Chemical Sciences
Staff Contact: R Bishop
UOC6 HPW6 S1
Prerequisite/s: 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 Chemical Sciences
Staff Contact: R Bishop
UOC6 HPW6 S2
Prerequisite/s: 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.

CHEM4003
Advanced Chemistry 4 Honours
School of Chemical Sciences
Staff Contact: G Edwards
Enrolment requires School approval
UOC24 S1 S2

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 Chemical Sciences
Staff Contact: G Edwards
Enrolment requires School approval
UOC24 S1 S2

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 Chemical Sciences
Staff Contact: G Edwards
Enrolment requires School approval
UOC24 S1 S2

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 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 Eng and Industrial Chemistry
Staff Contact: V Chen
UOC3 HPW3 S2
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: J Heuts
UOC6 HPW6 S1
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: R Burford
UOC3 HPW3 S2
Prerequisite/s: CHEN2061.

An introduction to and survey of the organic and inorganic chemistry of industrially important products.

CHEN2140
Mass Transfer
School of Chemical Eng and Industrial Chemistry
Staff Contact: J Stubington
UOC3 HPW3 S2

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 Eng and Industrial Chemistry
Staff Contact: A Adesina
UOC3 HPW2 S1
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: A Adesina
UOC3 HPW3 S2
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: A Adesina
UOC3 HPW3 S2
Prerequisite/s: 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/s: This course is an extension of material given in CEIC2120 Fluid Flow, CEIC2130 Heat Transfer and CHEN2140 Mass Transfer.

CHEN3062
Particles, Separation, Heat Exchangers and Pressure Vessels
School of Chemical Eng and Industrial Chemistry
Staff Contact: N Foster
UOC6 S1

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, convey or belts and elevators.

CHEN3065
Plant and Equipment Design
School of Chemical Eng and Industrial Chemistry
Staff Contact: T Pham
UOC4 HPW4 S2
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: T Pham
UOC3 HPW3 S1
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: G Bushell
UOC3 HPW3 S2
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: J Stubington
UOC3 HPW3 S1
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: R Amal
UOC3 HPW3 S1

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 Eng and Industrial Chemistry
Staff Contact: D Wiley
UOC8 HPW6 S1
Prerequisite/s: 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 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 Eng and Industrial Chemistry
Staff Contact: V Chen
UOC3 HPW3 S1 S2
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: V Chen
UOC12 HPW10 S1 S2
Prerequisite/s: CHEN4091

The experimental investigation of some aspect of an elected topic area in Chemical Engineering.

CHEN4093
Small Research Project Theory
School of Chemical Eng and Industrial Chemistry
Staff Contact: V Chen
UOC4 HPW4 S1 S2
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: V Chen
UOC8 HPW8 S1 S2
Prerequisite/s: CHEN4093

The experimental investigation of some aspect of an elected topic area in Chemical Engineering.

CHIN1006
Introductory Chinese A1 (Complete Beginners)
Department of Chinese & Indonesian Studies
Staff Contact: P Wang
UOC6 HPW6 S1
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 A2
Department of Chinese & Indonesian Studies
Staff Contact: L Heinrich
UOC6 HPW6 S2
Prerequisite/s: 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 A1
Department of Chinese & Indonesian Studies
Staff Contact: Y Fang
UOC6 HPW5 S1
Prerequisite/s: 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/s: Excluded HSC Chinese. Students are grouped according to their language ability.

CHIN2007
Intermediate Chinese Language A2
Department of Chinese & Indonesian Studies
Staff Contact: P Lee
UOC6 HPW5 S2
Prerequisite/s: 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/s: Excluded HSC Chinese.

CHIN2210
Chinese English Translation
Department of Chinese & Indonesian Studies
Staff Contact: Y Zhong
UOC6 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: Y Zhong
UOC6 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: L Heinrich
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: J Von Kowallis
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: P Wang
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: M Yang
UOC6 HPW3 S1
Prerequisite/s: 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/s: The course will be taught in English.

CHIN2302
Chinese Cinema
Department of Chinese & Indonesian Studies
Staff Contact: L Heinrich
UOC6 HPW3 S1
Prerequisite/s: 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 Chinese Culture and Society
Department of Chinese & Indonesian Studies
Staff Contact: M Yang
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: H Hendrischke
UOC6 HPW3 X1
Prerequisite/s: 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.

CHIN2312
Chinese Seminar Option
Department of Chinese & Indonesian Studies
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: 36 units of credit

A three hour a week seminar on selected topics on the culture and society of China.

CHIN2313
Introduction to Chinese Performing Arts
Department of Chinese & Indonesian Studies
Staff Contact: M Yang
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: M Yang
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: J Von Kowallis
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: H Hendrischke
UOC6 HPW3 S1
Prerequisite/s: CHIN1207

Introduces students to the language requirements for business and management in China through project work on Chinese language management case studies. We will discuss and analyse 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
Staff Contact: H Hendrischke
UOC6 HPW3 S1
Prerequisite/s: 48 units of credit;
Excluded: IBUS2105

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
Staff Contact: H Hendrischke
UOC6 HPW3 S2
Prerequisite/s: 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.

CHIN2800
Cantonese Phonology
Department of Chinese & Indonesian Studies
Staff Contact: P Lee
UOC6 HPW3 S1
Prerequisite/s: CHIN1207

This course introduces Cantonese phonology to Mandarin speakers who have completed the first-year courses.
Note/s: Excludes Cantonese speakers.

CHIN2801
Cantonese Morphology
Department of Chinese & Indonesian Studies
Staff Contact: P Lee
UOC6 HPW3 S2
Prerequisite/s: CHIN2800

Analyses Hong Kong Cantonese morphology in terms of root, stem, affix and loan words. Looks at the comparison of Hong Kong Cantonese morphemes with their semantic equivalents in Mandarin, as well as some aspects of written language.
Note/s: Excludes Cantonese speakers.

CHIN3004
Advanced Chinese (In-Country)
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
Enrolment requires School approval
UOC6 HPW5 X1
Prerequisite/s: 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 A1
Department of Chinese & Indonesian Studies
Staff Contact: P Wang
UOC6 HPW4.5 S1
Prerequisite/s: 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 A2
Department of Chinese & Indonesian Studies
Staff Contact: L Heinrich
UOC6 HPW4.5 S2
Prerequisite/s: CHIN3006 or CHIN3106 or equivalent;
Excluded: CHIN1207, CHIN3000, CHIN3107

Further consolidation and development of language skills acquired in CHIN3006.

CHIN3900
Advanced Chinese Studies
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: H Hendrischke
UOC6 HPW3 S2
Prerequisite/s: 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 F/T
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 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/s: 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 P/T
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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/s: 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 F/T
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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 as approved by the Heads of the two participating Schools/Departments.
Note/s: Combined Honours programs require coordination between the two schools/departments involved.

CHIN4550
Combined Chinese Honours Research P/T
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 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 as approved by the Heads of the two participating Schools/Departments.
Note/s: Combined Honours programs require coordination between the two schools/departments involved.

CMED3001
Medical Ethics and Health Law
School of Public Health and Community Medicine
Staff Contact: P McNeill
UOC4 HPW1.5 S2
Prerequisite/s: MDSG2001

Medical Ethics and Health Law builds on medical ethics presented particularly in second year Human Behaviour, to give students additional preparation for ethical issues which arise in their placements in hospitals, general practice and community settings during Years 3 to 6. The subject introduces students to medical practitioners responsibilities in law including the duty of care, obligations to maintain privacy and confidentiality, and the legal basis of registration and de-registration of medical practitioners. Principles of ethics and rules of law are considered in relation to specific issues including cloning and genetic engineering, withdrawal of treatment, and the funding of health care. Tutorials are based on material covered in lectures and seek to expand students understanding of ethics and law through discussion, structured debates and tutorial exercises. The overall aim of the subject is that students learn to demonstrate and apply an understanding of ethics and law as a part of their commitment to social responsibility and considerate and appropriate treatment of patients (and others) in the practice of medicine. Assessment: Consists of two tutorial assignments and an essay (which total 50% of the marks) and an end of session examination (contributing a further 50%).

COFA7000
Creative Village
School of Art
Staff Contact: School Office
UOC6 HPW6

This elective is an interdisciplinary studio between architecture and landscape architecture with students from the College of Fine Arts. Projects dealing with issues of community arts, sustainable design and collaborative methods in art and design are undertaken by interdisciplinary teams of students. These experiences provide an excellent training in community consultation and community art works.

COMD1001
Comparative Development: The Pre-Industrial World
Faculty of Arts and Social Sciences
Staff Contact: P Ross
UOC6 HPW3 S1
Excluded: COMD1000

An investigation of various pre-industrial societies including hunter-gatherers and sedentary agriculturalists with emphasis on structural similarities before European domination. Describes a long history of connections, mutual influences, and equality in the material condition of humankind, and concludes with the coming of industrial capitalism.

COMD1002
Comparative Development: Poor World, Rich World
Faculty of Arts and Social Sciences
Staff Contact: School Office
UOC6 HPW3 S2
Excluded: COMD1000

An analysis of the deepening inequalities and uneven development within industrial capitalism. Considers such issues as racism, environmental threat, politics of trade and aid, de-colonisation, gender inequalities and delayed industrialisation in the so-called Third World.

COMD2000
The Theory and Practice of Development
School of Social Science and Policy
Staff Contact: M Johnson
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit in Arts and Social Science courses;
Excluded: 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
Staff Contact: M Berger
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit in Arts and Social Sciences;
Excluded: 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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: HIST2061, SPAN2429, 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.

COMD2050
Sustainable Development, Globalisation & the Third World
Faculty of Arts and Social Sciences
Staff Contact: J Merson
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: HPSC2550, SCTS3001, 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.

COMD4500
Combined Honours (Research) in Comparative Development F/T
Faculty of Arts and Social Sciences
Staff Contact: M Johnson
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 36 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) P/T
Faculty of Arts and Social Sciences
Staff Contact: M Johnson
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 36 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
Staff Contact: T Lambert
UOC6 HPW6 S1 S2
Prerequisite/s: COMP1001
Corequisite/s: MATH1131 or MATH1141

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) or COMP1001.

COMP1021
Computing 1B
School of Computer Science and Engineering
Staff Contact: P Ho M Pagnucco
UOC6 HPW6 S1 S2 X1
Prerequisite/s: 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.

COMP1711
Higher Computing 1A
School of Computer Science and Engineering
Staff Contact: R Buckland
Enrolment requires School approval
UOC6 HPW7 S1
Excluded: COMP1011, COMP1811.

As for COMP1011 but in greater depth.

COMP1721
Higher Computing 1B
School of Computer Science and Engineering
Staff Contact: A Taylor
UOC6 HPW7 S2
Prerequisite/s: DN in COMP1011 or DN in COMP1711;
Excluded: COMP1021, COMP1821, COMP2811.

As for COMP1021 but in greater depth and breadth.

COMP2011
Data Organisation
School of Computer Science and Engineering
Staff Contact: A Blair
UOC6 HPW5 S1 S2
Prerequisite/s: 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.

COMP2021
Digital System Structures
School of Computer Science and Engineering
Staff Contact: O Diessel S Parameswaran
UOC6 HPW5 S1 S2
Prerequisite/s: COMP1021 or COMP1721 or COMP2811;
Excluded: ELEC1041, ELEC2021.

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 the design and operation of hardware models of digital and computer systems.The mapping of high level programming constructs (programs and data structures) through intermediate levels of abstraction to the hardware level of a computer system will be introduced.

COMP2041
Software Construction: Techniques and Tools
School of Computer Science and Engineering
Staff Contact: A Taylor
UOC6 HPW5 S1 S2
Prerequisite/s: (COMP1021 or COMP1721 or COMP2811 at a credit level) or (COMP1021 or COMP1721 or COMP2811 and currently enrolled in program 3647 or programs 3648 or 3651 or 3652 or program 3978).

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.

COMP2110
Software System Specification
School of Computer Science and Engineering
Staff Contact: K Robinson
UOC3 HPW2.5 S1
Prerequisite/s: COMP1021 or COMP1721 or COMP2811;
Corequisite/s: SENG2010 and MATH1081.

Formal specification: set theory, logic, schema calculus, case studies. the Z specification notation. The relationship between informal specification methods such as data flow, and Object-Oriented methods, such as OMT, and formal methods like Z. This course will attempt to develop the case for rigorous specification methods. Project work for this course will be done within SENG2010.

COMP2411
Logic and Logic Programming
School of Computer Science and Engineering
Staff Contact: E Martin
UOC6 HPW5 S1

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.

COMP2711
Higher Data Organisation
School of Computer Science and Engineering
Staff Contact: H El Gindy
UOC6 HPW7 S1
Prerequisite/s: COMP1021 or COMP2811 at 75% or COMP1721;
Excluded: COMP2011.

As for COMP2011 but in greater depth and breadth.

COMP2811
Computing B
School of Computer Science and Engineering
Staff Contact: P Ho M Pagnucco
UOC6 HPW6 S1 S2 X1
Prerequisite/s: 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.

COMP2920
Professional Issues and Ethics for Computer Science
School of Computer Science and Engineering
Staff Contact: J Franklin
UOC3 HPW3 S2

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.

COMP3111
Software Engineering
School of Computer Science and Engineering
Staff Contact: A Sowmya
UOC6 HPW5 S1 S2
Prerequisite/s: COMP2011 or COMP2711;
Excluded: COMP9008.

Informal specification: Data flow diagram methodology, analysis, design, testing, management and documentation of software. formal specification: set theory, logic, schema, calculus, case studies. The Z specification notation. Managing the project life cycle. CASE tools. A major group project is undertaken.

COMP3120
Introduction to Algorithms
School of Computer Science and Engineering
Staff Contact: H El Gindy
UOC3 HPW2.5 S1 S2
Prerequisite/s: 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.

COMP3121
Algorithms and Programming Techniques
School of Computer Science and Engineering
Staff Contact: A Ignjatovic R Buckland
UOC6 HPW5 S1 S2
Prerequisite/s: 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.

COMP3131
Programming Languages and Compilers
School of Computer Science and Engineering
Staff Contact: J Xue
UOC6 HPW5 S2
Prerequisite/s: 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 programing language for a small programming language.

COMP3141
Software System Design and Implementation
School of Computer Science and Engineering
Staff Contact: A Michail
UOC6 HPW5 S1
Prerequisite/s: 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.

COMP3151
Foundations of Concurrency
School of Computer Science and Engineering
Staff Contact: K Engelhardt
UOC6 HPW5 S2
Prerequisite/s: COMP2011 or COMP2711;
Excluded: COMP2031,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.

COMP3161
Concepts of Programming Languages
School of Computer Science and Engineering
Staff Contact: G Kellar
UOC6 HPW3 S1
Prerequisite/s: COMP2011 or COMP2711

Programming language paradigms: imperative, object oriented, declarative (i.e. functional and logic). Theoretical foundations of programming languages: syntax, operatational, 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.

COMP3211
Computer Architecture
School of Computer Science and Engineering
Staff Contact: O Diessel
UOC6 HPW5 S2
Prerequisite/s: COMP2021 or ELEC2041;
Excluded: COMP9211.

Combinatorial and sequential circuit design; synchronisation, communication and arbitration; register transfer specification (Modal). Arithmetic Design Strategies. Memory Organisation: physical and virtual address space; operating system and compiler support; memory mapping and caching. Communications Organisation: shared memory, memory mapping; network systems. Processor Design: the instruction pipeline; hardwired and micro-programmed control; instruction sets; RISC and object-based processor organisation. Error Detection/Correction and Fault Tolerance; coding theory. Lab: major design project.

COMP3221
Microprocessors and Embedded Systems
School of Computer Science and Engineering
Staff Contact: S Nooshabadi
UOC6 HPW5 S1 S2
Prerequisite/s: COMP2021;
Excluded: ELEC2041, ELEC3020, COMP9221.

Principles of microprocessor-based systems are covered, including programmers' models of general-purpose microprocessors and microcontrollers, assembly language programming, address maps, memory devices and interfacing, bus timing and standards, input, output interfacing, polling and interrupts and DMA interfaces. Examples are mostly taken from the MC68000 family, although aspects of other microprocessors are discussed. A key aspect is the laboratory work involving an MC68HC11-based target system, where both the hardware and the software drivers for additional subsystems are designed, implemented, and tested.

COMP3231
Operating Systems
School of Computer Science and Engineering
Staff Contact: K Elphinstone G Keller
UOC6 HPW5 S1 S2
Prerequisite/s: COMP2011 or COMP2711, COMP2021 or ELEC2041;
Excluded: COMP9201.

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.

COMP3311
Database Systems
School of Computer Science and Engineering
Staff Contact: R Wong J Shepherd
UOC6 HPW5 S1 S2
Prerequisite/s: 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.

COMP3331
Computer Networks and Applications
School of Computer Science and Engineering
Staff Contact: M Rezvan
UOC6 HPW5 S1 S2
Prerequisite/s: COMP2011 or COMP2711;
Excluded: COMP9331,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.

COMP3411
Artificial Intelligence
School of Computer Science and Engineering
Staff Contact: A Hoffmann
UOC6 HPW5 S1
Prerequisite/s: 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.

COMP3421
Computer Graphics
School of Computer Science and Engineering
Staff Contact: T Lambert
UOC6 HPW5 S2
Prerequisite/s: COMP2011 or COMP2711;
Excluded: COMP9415, COMP9701.

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.

COMP3441
Cryptography and Distributed Systems Security
School of Computer Science and Engineering
Staff Contact: R Van Der Meyden
UOC6 HPW5 S2
Prerequisite/s: COMP3120 or COMP3121, COMP3331;
Excluded: COMP4012 (2000-2001), COMP9441.

Topics chosen from: 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.

COMP3511
Human Computer Interaction
School of Computer Science and Engineering
Staff Contact: D Woo
UOC6 HPW5 S2
Prerequisite/s: 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.

COMP3710
Software Project Management
School of Computer Science and Engineering
Staff Contact: D Jeffery
UOC3 HPW2.5 S2
Prerequisite/s: MATH2859 or MATH2901 or MATH2801,COMP2011 or COMP2711.

This course introduces various aspects of software project management. Special emphasis is given to planning, size measurement, size estimation, resource estimation, schedule estimation, and earned value tracking. Concepts of size estimation are introduced via a series of five programming assignments from Watts Humphrey's Personal Software Process.

COMP3720
Total Quality Management
School of Computer Science and Engineering
Staff Contact: R Jeffery
UOC3 HPW3 S1
Prerequisite/s: MATH2849 or MATH2859, COMP3710;
Excluded: COMP0001.

This course introduces elements of statistical methods underlying quality management in the context of software development. Special emphasis is placed on economics of software quality, development of a quality strategy, yield management, defect removal strategies and defect prevention strategies. Techniques for review, code review and inspections are also covered in detail. These ideas are introduced via a series of five programming assignments from Watts Humphrey's Personal Software Process.

COMP4001
Object-Oriented Software Development
School of Computer Science and Engineering
Staff Contact: J Xue
UOC6 HPW4 S1
Prerequisite/s: 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.

COMP4133
Advanced Compiler Construction
School of Computer Science and Engineering
Staff Contact: J Xue
UOC6 HPW3 S1
Prerequisite/s: 65% average in COMP3131.

Compiler Back Ends:(a) program analysis - static single assignment form (SSA), control-flow analysis, data-flow analysis, abstract interpretation, dependence analysis, pointer analysis, type-based analysis;(b) code optimisation;(c) code generation - register allocation, code selection and instruction scheduling. Modern Compiler Techniques:(a) dynamic and staged compilation - profiling, specialisation, run-time code optimisation and generation;(b) run-time support - memory management and garbage collection;(c) compiler techniques for improving memory hierarchy performance - control and data transformations, prefetching;(d) compiler techniques for superscalar and VLIW architectures - predication, data speculation, control speculation, software pipelining.The lecture materials will be complemented by two or three large programming assignments.

COMP4411
Experimental Robotics
School of Computer Science and Engineering
Staff Contact: A Blair A Sowmya
UOC6 HPW5 S1 S2
Prerequisite/s: 12 units of credit from COMP3### courses or 12 units of credit from COMP9### courses and average of 75% or better.

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.

COMP4412
Introduction to Modal Logic
School of Computer Science and Engineering
Staff Contact: N Foo
Enrolment requires approval
UOC6 HPW4 S2
Prerequisite/s: COMP9414 or COMP3411.

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.

COMP4415
Logical Foundations of Artificial Intelligence
School of Computer Science and Engineering
Staff Contact: R Vander Meyden
Enrolment requires approval
UOC6 HPW4 S1
Excluded: COMP4412 (1996).

This course is a presentaion 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 formalisation of common sense reasoning.

COMP4416
Intelligent Agents
School of Computer Science and Engineering
Staff Contact: W Wobcke
Enrolment requires approval
UOC6 S2
Prerequisite/s: 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.

COMP4511
User Interface Design and Construction
School of Computer Science and Engineering
Staff Contact: D Woo
UOC6 HPW5 S1
Prerequisite/s: 70% in COMP3511;
Corequisite/s: COMP4001

Concetrates on the design and develoment of user interface software. Provides practical object orientated programming knowledge about the underlying elements of a graphical user interface and associated development process, extending principles introduced in Human Computer Interaction. Based around the Aqua User Interface in Mac OS X. Special topics include: speech, accessability and mobile devices.

COMP4903
Industrial Training (B.E.)
School of Computer Science and Engineering
Staff Contact: P Ho
Enrolment requires School approval
UOC0 S1
Excluded: COMP4904,COMP4905.

Students enrolled in Computer Engineering, Software Engineering and Bioinformatics programs must complete a minimum of 60 days' industrial training. At least some of this should be obtained in Australia. Students are required to submit to the School evidence from their employers confirming completion of the prescribed training and a report, typically 2000 words long, summarising the work done and training received. Students will formally enrol in the course in Year 4, although they are strongly encouraged to complete as much industrial experience as possible in the breaks between the early years of the program Help on finding employers can be found at www.eng.unsw.edu.au/silu/index.cfm.

COMP4904
Industrial Placement Program
School of Computer Science and Engineering
Staff Contact: C Graham
UOC0 S1 S2
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.

COMP4910
Thesis Part A
School of Computer Science and Engineering
Staff Contact: A Nymeyer
UOC3 HPW7 S1 S2
Prerequisite/s: 126 units of credit, enrolment in program 3645 or 3722 or 3726;
Excluded: BINF4910, BIOM5920,SENG4910.

Thesis Part A and B are done in the last two semesters of the BE degree program. For full-time students, a nominal 3 hours per week in the first semester and 15 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.

COMP4911
Thesis Part B
School of Computer Science and Engineering
Staff Contact: A Nymeyer
UOC15 HPW14 S1 S2
Prerequisite/s: COMP4910;
Excluded: BINF4911,BIOM5921,SENG4911.

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.

COMP4920
Professional Issues and Ethics
School of Computer Science and Engineering
Staff Contact: D Heler
UOC3 HPW4 S2

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.

COMP9116
Software System Development Using the B-Method and B-Toolkit
School of Computer Science and Engineering
Staff Contact: K Robinson
UOC6 HPW3 S2
Prerequisite/s: COMP2110 or COMP3111.

The B-Method is a rigorous mathematically based method for the development of reliable software. The method covers the complete software cycle from requirement s 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 programmin g 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, l;aboratory exercises to use the tools, a major project to apply all aspects of the method, and use of the tools.

COMP9117
Architecture of Software Systems
School of Computer Science and Engineering
Staff Contact: P Maheshwari
UOC6 HPW3 S2
Prerequisite/s: (COMP3111) and (COMP3141 or SENG3020).

Principal architectural issues associated with the design and construction of large scale software systesm. 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 interopability of platforms such as J2EE, Microsoft, NET and CORBA. Case studies and exercises will be used to illustrate the architectural issues.

COMP9231
Integrated Digital Systems
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: COMP2021;
Excluded: ELEC4532.

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. Lab: design project.

COMP9242
Advanced Operating Systems
School of Computer Science and Engineering
Staff Contact: G Heiser
UOC6 HPW4 S2
Prerequisite/s: Average of 65 in COMP3231;
Corequisite/s: COMP3211.

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 microkernal system will be used to provide hands-on experience with low-level implementation of OS components.

COMP9315
Database Systems Implementation
School of Computer Science and Engineering
Staff Contact: X Lin
UOC6 HPW3 S1 S2
Prerequisite/s: COMP3311.

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.

COMP9316
eCommerce Systems Implementation
School of Computer Science and Engineering
Staff Contact: B Benatallah
UOC6 HPW4 S1 S2
Prerequisite/s: COMP1021 or COMP1721 or COMP2811; COMP3311 or INFS3608.

eCommerce: Models, Architectures, and Systems. Principles: integration, coupling, security, scalability. eCatalogs: Modelling, Querying, and Integrating Web Data. EDI - Electronic Data Interchange. Component-based Mediators and eCommerce. XML-based eCommerce Frameworks.

COMP9332
Network Routing and Switching
School of Computer Science and Engineering
Staff Contact: M Hassan
UOC6 HPW3 S1 S2
Prerequisite/s: COMP3331

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 prgramming knowledge is assumed.

COMP9333
Advanced Computer Networks
School of Computer Science and Engineering
Staff Contact: S Jha
UOC6 HPW3 S1 S2
Prerequisite/s: COMP9332

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.

COMP9334
Capacity Planning of Computer Systems and Networks
School of Computer Science and Engineering
Staff Contact: B Howarth
UOC6 HPW3 S2
Prerequisite/s: COMP3331.

Techniques for performance evaluation of distributed systesms. 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.

COMP9417
Machine Learning
School of Computer Science and Engineering
Staff Contact: C Sammut M Bain
UOC6 HPW3 S1 S2
Prerequisite/s: COMP3411.

Decision tree learning algorithms (such as C4.5), covering algorithms (such as AQ), instance based learning, case-based learning, nearest neighbour classifiers, genetic algorithms, inductive logic programming theoretical analysis of learning algorithms.

COMP9444
Neural Networks
School of Computer Science and Engineering
Staff Contact: W Wilson
UOC6 HPW3 S2
Excluded: COMP4444

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.

COMP9791
Modern Navigation & Positioning Technologies
School of Computer Science and Engineering
Staff Contact: C Rizos
UOC6 HPW3 S2
Prerequisite/s: Complete 18 units of credit of COMP3 or COMP9 Computer Science courses;
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) 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.
Note/s: Enrolment requires School approval. This course is equivalent to GMAT4910.

CRIM1000
Criminal Law and Justice 1
School of Social Science and Policy
Staff Contact: D Dixon
UOC6 HPW4 S1

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
Staff Contact: A Goulston
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: D Oxley
UOC6 HPW3 S1
Prerequisite/s: 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.

CRIM3000
Researching Crime and Justice
School of Social Science and Policy
Staff Contact: J Chan
UOC6 HPW3 S1
Prerequisite/s: 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.

CRIM4000
Criminology Honours (Research) F/T
School of Social Science and Policy
Staff Contact: School Office
Enrolment requires School approval
UOC24 HPW4 S1 S2
Prerequisite/s: 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. Partipation 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
Staff Contact: J Ball
UOC3 HPW3 S1

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/s: This is a servicing course for other Schools.

CVEN0656
Soil and Pavement Engineering
School of Civil and Environmental Engineering
Staff Contact: G Swarbrick
UOC3 HPW3 S2

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/s: This is a servicing course for other Schools.

CVEN1021
Civil Engineering Practice 1A
School of Civil and Environmental Engineering
Staff Contact: S Foster
UOC4 HPW2 S1 X1

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
Staff Contact: B Cathers
UOC6 HPW4 S2

Following on from CVEN1021, this course introduces student to engineering and its place in society an 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
Staff Contact: F Tin Loi M Bradford
UOC4 HPW3 S1 S2

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 (determinancy, internal hinges); analysis of trusses (methods of joints and sections); cables; fluid statics including hydorstatic pressure, body forces, buoyancy, stability, and manometry; introduction to three dimensional statics.

CVEN1024
Dynamics
School of Civil and Environmental Engineering
Staff Contact: R Lawther N Gowripalan
UOC4 HPW3 S1 S2

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
Staff Contact: G Swarbrick A Sharma
UOC4 HPW3 S1 S2

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
Staff Contact: N Gowripalan
UOC4 HPW3 S2

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
Staff Contact: D Waite
UOC4 HPW4 S2

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
Staff Contact: S Foster
UOC4 HPW2 S1 X1

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.

CVEN1722
Environmental Engineering Practice 1B
School of Civil and Environmental Engineering
Staff Contact: B Cathers
UOC6 HPW4 S2

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.

CVEN2022
Civil Engineering Practice 2
School of Civil and Environmental Engineering
Staff Contact: W Peirson
UOC3 HPW2 S2
Prerequisite/s: 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
Staff Contact: Z Vrcelj
UOC3 HPW3 S1
Prerequisite/s: 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; stressses and strains at a point; principal stresses and strains.
***Assumed Knowledge*:** MATH1231.

CVEN2025
Engineering Computations 1
School of Civil and Environmental Engineering
Staff Contact: A Sharma
UOC3 HPW3 S1

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
Staff Contact: N Gowripalan
UOC3 HPW3 S1

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.

CVEN2032
Civil/ Structural Engineering Practice 2
School of Civil and Environmental Engineering
Staff Contact: S Foster
UOC3 HPW2 S2
Prerequisite/s: 36 units of credit

The 2nd year integrating course introducing students to the multi-disciplinary nature of real world civil engineering problems and the relationship of civil engineering to the wider socio-economic environment. Case studies in formulation, modelling and resolution of civil and structural 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. Students will be exposed to various structural forms and undertake site visits and inspections.

CVEN2052
Civil/Water Engineering Practice 2
School of Civil and Environmental Engineering
Staff Contact: W Peirson
UOC3 HPW2 S2
Prerequisite/s: 36 units of credit

The 2nd year integrating subject introducing students to the multi-disciplinary nature of real world civil engineering problems and the relationship of civil engineering to the wider socio-economic environment. Case studies in formulation, modelling and resolution of civil and water 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. Students will undertake site visits to current project sites and water engineering consultant's laboratories and offices.

CVEN2062
Civil/Geotechnical Engineering Practice 2
School of Civil and Environmental Engineering
Staff Contact: S Davis
UOC3 HPW2 S2
Prerequisite/s: 36 units of credit

The 2nd year integrating subject introducing students to the multi-disciplinary nature of real world civil engineering problems and the relationship of civil engineering to the wider socio-economic environment. Case studies in formulation, modelling and resolution of civil and geotechnical 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. Students will undertake site visits to construction sites and geotechnical engineering consultant's laboratories and offices.

CVEN2125
Systems Engineering
School of Civil and Environmental Engineering
Staff Contact: S Davis
UOC3 HPW2 S2

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 anlalysis, synthesis and investigation. Decision making. Allownace for variability and uncertainty. Case studies.
***Assumed Knowledge*:** CVEN1022, CVEN1025.

CVEN2126
Engineering Construction 1
School of Civil and Environmental Engineering
Staff Contact: G Nawar
UOC3 HPW3 S1

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
Staff Contact: K Douglas
UOC3 HPW3 S1

A course covering an introduction to Geotechnical Engineering and Geology. Topics include: history of the earth; plate tectonics; fomation of different soils and rocks; classification of soils and rocks; structural geology and mapping; site investigation concepts and the geotechnical model.

CVEN2322
Structural Engineering 1
School of Civil and Environmental Engineering
Staff Contact: S Foster
UOC6 HPW6 S2
Prerequisite/s: 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; determinancy; 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 memebers; 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
Staff Contact: W Peirson
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: R Cox
UOC3 HPW2 S2
Prerequisite/s: 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.

CVEN2732
Environmental /Geotechnical Engineering Practice 2
School of Civil and Environmental Engineering
Staff Contact: S Davis
UOC3 HPW2 S2
Prerequisite/s: 36 units of credit

The 2nd year integrating subject 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 environmental and geotechnical 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. Students will undertake site visits and visits to geotechnical engineering consultant's laboratories and offices.

CVEN2752
Environmental /Water Engineering Practice 2
School of Civil and Environmental Engineering
Staff Contact: R Cox
UOC3 HPW2 S2
Prerequisite/s: 36 units of credit

The 2nd year integrating subject 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 environmental and water 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. Students will undertake site visits and visits to water engineering consultants' laboratories and offices.

CVEN3013
Civil Engineering and Project Management Practice 3B
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 84 units of credit

CVEN3013 continues on from CVEN3012. 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 and project management program. Students will undertake various project based assessment tasks. The course also involves site visits to construction sites and current projects and students will also be exposed to the day to day activities of a project management consultant.

CVEN3023
Civil Engineering Practice 3A
School of Civil and Environmental Engineering
Staff Contact: U Vandebona
UOC3 HPW2 S1
Prerequisite/s: 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.

CVEN3024
Civil Engineering Practice 3B
School of Civil and Environmental Engineering
Staff Contact: M Attard
UOC3 HPW2 S2
Prerequisite/s: 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.

CVEN3025
Engineering Computations 2
School of Civil and Environmental Engineering
Staff Contact: R Lawther
UOC3 HPW3 S1

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.

CVEN3032
Civil/Structural Engineering Practice 3A
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 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 and structural engineering program reinforcing the material covered in Years 1 and 2 and in the courses being undertaken concurrently. Students will undertake various project based assessment tasks. The course also involves site visits to construction sites and structural engineering projects and students will also be exposed to the day to day activities of a structural engineering consultant.

CVEN3033
Civil/Structural Engineering Practice 3B
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 84 units of credit

CVEN3033 continues on from CVEN3032. 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 and structural engineering program. Students will undertake various project based assessment tasks. The course also involves site visits to construction sites and structural engineering projects and students will also be exposed to the day to day activities of a structural engineering consultant.

CVEN3042
Civil/Transport Engineering Practice 3A
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 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 and transport engineering program reinforcing the material covered in Years 1 and 2 and in the courses being undertaken concurrently. Students will undertake various project based assessment tasks. The course also involves site visits to construction sites and transport engineering projects and students will also be exposed to the day to day activities of a transport engineering consultant.

CVEN3043
Civil/Transport Engineering Practice 3B
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 84 units of credit

CVEN3043 continues on from CVEN3042. 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. Students will undertake various project based assessment tasks. The course also involves site visits to construction sites and transport engineering projects and students will also be exposed to the day to day activities of a transport engineering consultant.

CVEN3052
Civil/Water Engineering Practice 3A
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 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, water and coastal engineering program reinforcing the material covered in Years 1 and 2 and in the courses being undertaken concurrently. Students will undertake various project based assessment tasks. The course also involves site visits to construction sites and areas of water and coastal engineering interest. Students will also be exposed to the day to day activities of a water engineering consultant.

CVEN3053
Civil/Water Engineering Practice 3B
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 84 units of credit

CVEN3053 continues on from CVEN3052. 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, water and coastal engineering program. The course also involves site visits to construction sites and areas of water and coastal engineering interest. Students will also be exposed to the day to day activities of a water engineering consultant.

CVEN3062
Civil/Geotechnical Engineering Practice 3A
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 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 and geotechnical engineering program reinforcing the material covered in Years 1 and 2 and in the courses being undertaken concurrently. Students will undertake various project based assessment tasks. The course also involves site visits to construction sites and areas of geotechnical interest and students will also be exposed to the day to day activities of a geotechnical engineering consultant.

CVEN3063
Civil/Geotechnical Engineering Practice 3B
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 84 units of credit

CVEN3063 continues on from CVEN3062. 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 and geotechnical engineering program. The course also involves site visits to construction sites and areas of geotechnical interest and students will also be exposed to the day to day activities of a geotechnical engineering consultant.

CVEN3125
Engineering Construction 2
School of Civil and Environmental Engineering
Staff Contact: G Nawar
UOC3 HPW3 S2
Prerequisite/s: CVEN2126.

Construction management issues dealing with resources of people, money, equipment and materials. An introduction to the design, planning and management of constuction 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.

CVEN3126
Engineering Management 1
School of Civil and Environmental Engineering
Staff Contact: O Faniran
UOC3 HPW3 S2

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.

CVEN3127
Management of Projects
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW2

Overview of project management; project types; project phases (initiation, development, implementation, termination); project management functions (scope, quality, time, cost, risk, contract/ procurement, human resources, communications management); origin of projects; objectives and constraints; the project manager - leadership; the project team; organisational structures; case studies from a variety of disciplines.

CVEN3222
Geotechnical Engineering 2
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3 S1

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.

CVEN3223
Geotechnical Engineering 3
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3 S2
Prerequisite/s: 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.

CVEN3225
Geotechnical Mapping and Logging
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3

The course deals with all key elements of mapping and logging, from collecting the data to processing, understanding and presenting the results. Materials range from soil to rock. Data and sampling biases; addressing the shortcomings of the each method. In the mapping section, the different generic maps are covered including geotechnical, structural, geomorphological, air photo, specialised vector maps and landslides. The logging is an extension of the surface mapping and deals with techniques for gathering data in the other dimension; from pits, tunnells, trenches and cutting; using tools such as detailed face-logs, Sirojoint, simple photogrammetry, sketch maps, etc. The logging of core is covered from first principles, dealing initially with the drilling process then leading through to processing the data. Elements covered include orientation techniques, oriented core, orientation logs, blind zones, Terzaghi corrections, drilling and sampling biases. The roles of the detailed, structure and summary logs are explained.

CVEN3322
Structural Engineering 2
School of Civil and Environmental Engineering
Staff Contact: S Foster
UOC6 HPW6 S1

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
Staff Contact: B Uy
UOC3 HPW3 S2
Prerequisite/s: 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).

CVEN3438
Transport Planning and Environment
School of Civil and Environmental Engineering
Staff Contact: U Vandebona
UOC3 HPW3 S1

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 transporation, 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
Staff Contact: P Hidas
UOC3 HPW3 S2

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.

CVEN3526
Water Resources Engineering
School of Civil and Environmental Engineering
Staff Contact: J Ball
UOC3 HPW3 S1

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, hydorgraph 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.

CVEN3527
Water Engineering
School of Civil and Environmental Engineering
Staff Contact: B Cathers
UOC3 HPW3 S2
Prerequisite/s: 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, beform, sediment stability, channel side slopes, suspended sediment, fluvial sediment transport capacity estimators, groundwater, hydraulic conductiviity, Darcy's Law, intrinsic permeability, water potential, hydraulic head, unsaturated zone, aquifers, aquicludes, aquitards, steady state flow, transient flow, effective stress, transmissivity, storativity.

CVEN3528
Sustainable Catchment and Coastal Systems
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3
Prerequisite/s: CVEN2525.

Catchment and river system morphology, sustainable water resources (quantity and quality), catchment and river engineering and management, estuarine and coastal system morphology, sustainability of coastal water and beach systems, estuarine and coastal engineering and management.

CVEN3531
Principles and Applications of Aquatic Chemistry
School of Civil and Environmental Engineering
Staff Contact: D Waite
UOC3 HPW3 S2

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
Staff Contact: R Acworth
UOC3 HPW2 S1
Prerequisite/s: 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.

CVEN3724
Environmental Engineering Practice 3B
School of Civil and Environmental Engineering
Staff Contact: R Acworth
UOC3 HPW2 S2
Prerequisite/s: 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.

CVEN3725
Waste Management
School of Civil and Environmental Engineering
Staff Contact: S Moore
UOC3 HPW3 S1

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.

CVEN3726
Environmental Policy, Law and Economics
School of Civil and Environmental Engineering
Staff Contact: S Moore
UOC3 HPW3 S2

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.

CVEN3733
Environmental /Geotechnical Engineering Practice 3A
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 84 units of credit

A project based subject 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 and geotechnical engineering program reinforcing the material covered in Years 1 and 2 and in the courses being undertaken concurrently. Students will undertake various project based assessment tasks. The course also involves site visits to areas of geotechnical interest and students will also be exposed to the day to day activities of a geotechnical engineering consultant.

CVEN3734
Environmental /Geotechnical Engineering Practice 3B
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 84 units of credit

CVEN3734 continues on from CVEN3733. A project based subject integrating the material learnt in the various sub-disciplines of environmental engineering. This subject is focal in S2 of Year 3 of the undergraduate environmental and geotechnical engineering program reinforcing the material covered in the subjects being undertaken concurrently. Students will undertake various project based assessment tasks. The course also involves site visits to areas of geotechnical interest and students will also be exposed to the day to day activities of a geotechnical engineering consultant.

CVEN3743
Environmental /Transport Engineering Practice 3A
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 84 units of credit

A project based subject 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 and transport engineering program reinforcing the material covered in Years 1 and 2 and in the courses being undertaken concurrently. Students will undertake various project based assessment tasks. The course also involves site visits and students will be exposed to the day to day activities of a transport engineering consultant.

CVEN3744
Environmental /Transport Engineering Practice 3B
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 84 units of credit

CVEN3744 continues on from CVEN3743. A project based subject integrating the material learnt in the various sub-disciplines of environmental engineering. This subject is focal in S2 of Year 3 of the undergraduate environmental and transport engineering program reinforcing the material covered in the subjects being undertaken concurrently. Students will undertake various project based assessment tasks. The course also involves site visits and students will be exposed to the day to day activities of a transport engineering consultant.

CVEN3753
Environmental /Water Engineering Practice 3A
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 84 units of credit

A project based subject 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, water and waste engineering program reinforcing the material covered in Years 1 and 2 and in the courses being undertaken concurrently. Students will undertake various project based assessment tasks. The course also involves site visits and students will be exposed to the day to day activities of a water or waste engineering consultant.

CVEN3754
Environmental /Water Engineering Practice 3B
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: 84 units of credit

CVEN3754 continues on from CVEN3753. A project based subject integrating the material learnt in the various sub-disciplines of environmental engineering. This subject is focal in S2 of Year 3 of the undergraduate environmental, water and waste engineering program reinforcing the material covered in the subjects being undertaken concurrently. Students will undertake various project based assessment tasks. The course also involves site visits and students will be exposed to the day to day activities of a water or waste engineering consultant.

CVEN4000
Honours Thesis Part A
School of Civil and Environmental Engineering
Staff Contact: J Ball
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 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.

CVEN4001
Honours Thesis Part B
School of Civil and Environmental Engineering
Staff Contact: J Ball
UOC4 S1 S2
Prerequisite/s: CVEN4000

Part B of the Honours thesis. Course description as for CVEN4000.

CVEN4027
Civil Engineering Practice 4A
School of Civil and Environmental Engineering
Staff Contact: F Tin Loi
UOC6 HPW4 S1

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 form industry and will be mulit-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 fo working drawings and project reports similar to those required in industry.

CVEN4028
Ciivl Engineering Practice 4B
School of Civil and Environmental Engineering
Staff Contact: M Marosszeky
UOC6 HPW4 S1

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
Staff Contact: R Cox
UOC6 HPW4 S1

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 progam. 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
Staff Contact: B O'Brien
UOC3 HPW3 S1

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 outliing their industrial training experiences.
***Assumed Knowledge*:** CVEN3126.

CVEN4139
Advanced Construction and Project Management
School of Civil and Environmental Engineering
Staff Contact: D Carmichael
UOC4 HPW3 S2
Prerequisite/s: 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
Staff Contact: M Marosszeky
UOC4 HPW3 S2
Prerequisite/s: CVEN3126, CVEN4126

Professional level construction and project management skills and techniques.

CVEN4159
Advanced Construction Technology and Engineering
School of Civil and Environmental Engineering
Staff Contact: B O'Brien
UOC4 HPW3 S2
Prerequisite/s: 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
Staff Contact: K Douglas
UOC3 HPW3 S1
Prerequisite/s: 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.

CVEN4269
Environmental Geotechnics
School of Civil and Environmental Engineering
Staff Contact: G Swarbrick
UOC4 HPW3 S2

Geotechnical design of landfills; contaminant migration in soils; emediation of contaminated sites. Mine waste management, including tailings disposal and acid mine drainage.

CVEN4279
Rock and Slope Engineering
School of Civil and Environmental Engineering
Staff Contact: K Douglas
UOC4 HPW3 S2

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 or 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
Staff Contact: R Fell
UOC4 HPW3 S2

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
Staff Contact: C Song
UOC4 HPW3 S2

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
Staff Contact: B Uy
UOC3 HPW3 S1

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.

CVEN4339
Design of Bridges
School of Civil and Environmental Engineering
Staff Contact: F Tin Loi
UOC4 HPW3 S2

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
Staff Contact: R Gilbert
UOC4 HPW3 S2

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. CompositeSteel-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
Staff Contact: R Lawther
UOC4 HPW3 S2

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
Staff Contact: U Vandebona
UOC4 HPW3 S2
Prerequisite/s: 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 queuing 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
Staff Contact: P Hidas
UOC4 HPW3 S2
Prerequisite/s: 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
Staff Contact: P Hidas
UOC4 HPW3 S2
Prerequisite/s: 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
Staff Contact: N Ashbolt
UOC3 HPW3 S1

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.

CVEN4533
Transport and Fate of Pollutants
School of Civil and Environmental Engineering
Staff Contact: R Acworth
UOC3 HPW3 S1

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
Staff Contact: D Waite
UOC4 HPW3 S2
Prerequisite/s: 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
Staff Contact: J Ball
UOC4 HPW3 S2
Prerequisite/s: 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
Staff Contact: W Peirson
UOC4 HPW3 S2

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
Staff Contact: N Ashbolt
UOC4 HPW3 S2
Prerequisite/s: 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
Staff Contact: N Ashbolt
UOC6 HPW4 S1
Prerequisite/s: 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 appllication 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.

CVEN4728
Environmental Engineering Practice 4B
School of Civil and Environmental Engineering
Staff Contact: R Acworth
UOC6 HPW4 S1
Prerequisite/s: 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 form 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.

CVEN4729
Environmental Engineering Practice 4C
School of Civil and Environmental Engineering
Staff Contact: R Cox
UOC6 HPW4 S1
Prerequisite/s: 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 thoughout the undergraduate progam. 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.

DANC1001
Dance Styles 1
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW7.5 S1
Prerequisite/s: 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
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW7.5 S2
Prerequisite/s: DANC1001

Extends the student's acquisition of technical mastery over the body begun in Dance Styles 1.

DANC1101
Anatomical Foundations of Dance Education
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW3 S1
Prerequisite/s: 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
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW3 S2
Prerequisite/s: 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
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW4 S1
Prerequisite/s: 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
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW4 S2
Prerequisite/s: 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/s: Students should be aware that this course involves at least 20-30 extra hours of production time in mid-late November. 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
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW4 S2
Prerequisite/s: 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/s: 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
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW4 S1
Prerequisite/s: 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
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW7.5 S1
Prerequisite/s: DANC1001, DANC1002

Course requires a demonstration of skill and competence in Classical Ballet, Modern Dance and Jazz Dance.

DANC2104
Dance Styles 4
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW7.5 S2
Prerequisite/s: DANC1001, DANC1002

Expands and consolidates the student's mastery of a range of practical dance styles.

DANC2105
Dance Styles 5
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW7.5 S1
Prerequisite/s: DANC1001, DANC1002

Expands and consolidates the student's mastery of a range of practical dance styles.

DANC2106
Dance Styles 6
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW7.5 S2
Prerequisite/s: DANC1001, DANC1002

Expands and consolidates the student's mastery of a range of practical dance styles.

DANC2107
Dance Styles 7
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW7.5 S1
Prerequisite/s: 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
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW4 S2
Prerequisite/s: 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
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC12 S2
Prerequisite/s: DANC2209

Teaching experience consists of 40 days experience in a NSW 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/s: This course is a formal requirement of the BA(Dance)BEd program.

DANC2209
Dance Method A
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC3 HPW2 S1
Prerequisite/s: DANC1001, DANC1002, DANC2201;
Excluded: DANC2210.

Students are given a wide range of practical dance activities that will enable them to implement all levels of the NSW syllabi. They will examine the national Curriculum Document and investigate ways of integrating dance with the other major arts areas.

DANC2211
Dance Method B
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC3 HPW2 S2
Prerequisite/s: 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) F/T
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 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
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S1 S2

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
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S1
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
Staff Contact: School Office
UOC6 HPW3 S1 S2
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
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S1
Excluded: ECOH1301

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
Staff Contact: School Office
UOC6 HPW3 S2
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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON1101 or ECON1103

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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON1102 or ECON1104

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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON1101 or ECON1103

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.

ECON2107
The Economics of Information and Technology
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON1101 or ECON1103

The course examines the following: Information, market failure and R & D; asymmetric information; localised learning; technological change and intellectual property rights; the economics of innovation; market structure, patents, inventions and R & D; information technology; biotechnology; clusters of innovations and the diffusion of innovations; Land National Technology Strategy.

ECON2109
Economics of Natural Resources
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON1101 or ECON1103

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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON1102 or ECON1104

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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON1101 or ECON1103

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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON1101 or ECON1103

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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON1102 or ECON1104

This course introduces a number of important facts concerning Japanese business and government and analyses them by applying theorectical 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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON1102 or ECON1104

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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON1101 or ECON1103

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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON2206

This course covers estimation of econometric models using cross-section data, discrete choice models, and instrumental variable estimators. Practical computer applications feature throughout.

ECON2208
Operations Research
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON1202

Introduces operations research as the systematic application of quantitative methods to the analysis of problems involving decision making in economics and related disciplines. Includes linear programming, quadratic programming and dynamic programming with applications to transportation, inventory and portfolio selection and other economic related fields.

ECON2209
Business Forecasting
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON1203

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
Staff Contact: School Office
UOC6 HPW3 S1 S2
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
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: 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.

ECON2305
Modern Asian Economic History
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON1102
Excluded: ECOH2305

This course examines the contrasting histories of Asian economies in the modern period. Four major areas are considered - Japan, China, India and Indonesia. Focus is on the nature of the Asian economies and the impact of the West prior to 1949, and the history of planning in the four nations since the Second World War. Four specific themes are considered: the impact of Japanese development on Asia; economic planning and policy in China; problems of the modern Indian economy; and planning for scientific and technological development in modern Asia.

ECON2313
Australian Economic Development
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON1102
Excluded: ECOH2313

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.

ECON2319
Economic and Social Policy in Australia since Federation
School of Economics
Staff Contact: School Office
UOC6 HPW3
Prerequisite/s: ECON1102
Excluded: ECOH2319

This course is concerned with the nature and development of economic policy in Australia since the establishment of the Commonwealth. It deals with policy issues in economic management such as fiscal, tariff, immigration, finance, employment and trade as well as those in social development such as education, health, housing and welfare. It aims to analyse the formulation of policy, the growth of State intervention in economic and social activities and the more recent trends towards deregulation. Attention will be paid to the impact upon Australian policy development of outside forces such as the two world wars, the Great Depression and fluctuations in the international economy. Finally, this course considers the ideological underpinnings of economic and social policy formation in Australian society and places economic rationalism in a historical perspective.

ECON2321
Growth and Development of International Business
School of Economics
Staff Contact: School Office
UOC6 HPW3
Excluded: ECOH2321

The historical origins and development of international business from the late 19th century. Topics covered include: growth of managerial capitalism; strategies of corporate growth such as vertical integration and diversification; the development of multinational enterprises in the 20th century; international competitiveness of business; the changing business environment; relations with government; business ethics in historical perspective. Case studies will be drawn from major international firms originating in Britain, Europe, USA and Japan. Students will be encouraged to gain insights into the strategy and structure of modern business corporations by analysis of their development in the past.

ECON2322
European Integration
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON1102
Excluded: ECOH2322, 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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S2

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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON1101 or ECON1103

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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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 eqilibrium 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 micoreconomic theory underlying the determination of firms' value is developed. This leads to a discussion of the Modigiliani-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 asymmetrics for financial theories, with particular emphasis on insurance markets.

ECON3109
Economic Growth, Technology and Structural Change
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON2101 or ECON2103

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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON2101 or ECON2103

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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON1102 or ECON1104

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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON1102 or ECON1104

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
Staff Contact: School Office
UOC6 HPW3 S2
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 comparisions.

ECON3116
International Economics
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3
Prerequisite/s: ECON1102 or ECON1104

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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON2102

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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON2101 or ECON2105 or ECON2112

This course aims to equip students with the knowledge and skills necessary to tackle many of the complex strategic decisons 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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S1
Excluded: ECON3206

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
Staff Contact: School Office
UOC6 HPW3 S2
Excluded: ECON3207

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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON2101, ECON2102 or at discretion of the Head of School

Selected topics in advanced microeconomics and macroeconomics.

ECON4101
International Trade
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Industrial Organisation
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1
Corequisite/s: 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 subject.

ECON4103
Business Cycles and Growth
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Corequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2

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
Staff Contact: School Office
Enrolment requires School approval
UOC48 HPW6 S1 S2
Prerequisite/s: 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.
Note/s: Students are expected to do a substantial amount of work on their thesis before the commencement of the academic year. They must have a topic approved by the Head of School before the end of the year preceeding their entry into their final year.

ECON4127
Thesis (Economics)
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW3 S1 S2
Prerequisite/s: ECON1203.

Note/s: Students are expected to do a substantial amount of work on their thesis before the commencement of the academic year. They must have a topic approved by the Head of School. Students are required to present a seminar on the topic of their thesis.

ECON4201
Applied Econometrics
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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 heteoskedasticity, 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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S2

The simple and multivariate regression models with economic applications emphasising practical aspects of model building. Extensions of multiple regression models when the classical assumptions break down. Introduction to simultaneous equation models. Quantitative studies of applied econometric themes such as consumption, demand, investment and production.

ECON4227
Thesis (Econometrics)
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC24 HPW3 S1 S2

Note/s: Students are expected to do a substantial amount of work on their thesis before the commencement of the academic year. They must have a topic approved by the Head of School. Students are required to present a seminar on the topic of their thesis.

ECON4321
Economic History 4 Honours
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC48
Prerequisite/s: ECON1102
Excluded: ECOH4321

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
Staff Contact: School Office
Enrolment requires School approval
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. The thesis topic must be approved by the Head of School before the end of November in the year preceding the Honours year.

EDST1101
Educational Psychology 1
School of Education
Staff Contact: J Sweller
UOC6 HPW3 S1

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.

EDST1102
Social Foundations of Education
School of Education
Staff Contact: M Matthews
UOC6 HPW3 S2

Examines sociological and philosophical aspects of Australian education: interrelations between society, the economy and education; different forms of school system; structure and evolution of NSW schooling; role of government and pressure groups in the determination of curriculum and the distribution of resources; educational testing and inequalities in educational achievement: differing accounts of inequality, sexism in school systems, affirmative action programs and their putative justifications; the educational influence of both schools and families. Philosophical matters: ethics of affirmative action proposals; justice in the distribution of educational resources; justification of curriculum decisions.

EDST2010
Educational Psychology 2
School of Education
Staff Contact: R Low
UOC6 HPW3 S1
Prerequisite/s: EDST1101;
Excluded: EDST1201.

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, in reading, in mathematics and in science.

EDST2030
History, Philosophy and Science Teaching
School of Education
Staff Contact: M Matthews
UOC6 HPW6 S2
Prerequisite/s: EDST1102;
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/s: Offered in condensed mode during 6 non-practice teaching weeks. Contact the School for dates and details.

EDST2041
Stress and Anxiety in Students and Teachers
School of Education
Staff Contact: P Jin
UOC6 HPW3 S1
Prerequisite/s: EDST1101;
Excluded: EDST1304.

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
Staff Contact: J McCormick
UOC6 HPW3 S2
Prerequisite/s: EDST1101;
Excluded: EDST1402

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.

EDST2054
Managing the Classroom Environment
School of Education
Staff Contact: K Barnett
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

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.

EDST2055
Literacy across the Curriculum
School of Education
Staff Contact: P Knapp
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

Aims to provide student teachers with a thorough understanding of the concept of literacy and the different literacy demands required of secondary students to successfully negotiate the school curriculum. Teachers of secondary students in English, Mathematics, Science and other associated disciplines need an understanding of the literacy demands of contemporary classrooms. Provides a range of strategies for teaching and assessing literacy including developing units of work.

EDST2060
Educational Programs and Curricula for Intellectually Gifted Students
School of Education
Staff Contact: K Hoekman
UOC6 HPW3 S2
Prerequisite/s: EDST1205 or EDST2050 or EDST4095;
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.

EDST2062
Assessment as Practice
School of Education
Staff Contact: P Knapp
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

An introduction to educational assessment which examines theoretical and practical aspects of assessing student learning in the classroom. Topics include: assessment models, programming for outcomes, outcomes-based assessment, analysing student/school/system data, reporting student outcomes.

EDST2070
Culture, Identity and Education
School of Education
Staff Contact: M Varvaressos
UOC6 HPW3 S1
Prerequisite/s: EDST1102;
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
Staff Contact: J Sweller
UOC6 HPW3 S2
Prerequisite/s: EDST1101;
Excluded: EDST1301.

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
Staff Contact: P Ayres
Enrolment requires School approval
UOC6 HPW6 S1

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/s: A Method 1 course in a teaching specialisation is a co-requisite.

EDST4000
Education Honours F/T
School of Education
Staff Contact: J Sweller
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 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/s: Intending Honours students are advised to consult the School about their program of study.

EDST4050
Education Honours P/T
School of Education
Staff Contact: J Sweller
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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/s: Intending Honours students are advised to consult the School about their program of study.

EDST4081
Professional Issues in Teaching
School of Education
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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/s: May not be counted towards a major sequence in program 3400 BA.

EDST4092
Computer Skills for Teachers
School of Education
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: 6 units of credit in Method courses;
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/s: Taught in conjunction with Method courses. Designed to meet the NSW DET requirements for new teachers in government schools. Students are required to attend computer laboratory sessions in the last four weeks of Session 2.

EDST4093
Special Education
School of Education
Staff Contact: R Howard
UOC3 HPW2 S1
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
Staff Contact: R Low
UOC15 S2
Excluded: EDST4090

Consists of 40 days experience in a NSW 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, e.g. school policies and general supervision of school students.
Note/s: Requires successful completion of 6 units of credit in Teaching Method courses.

EDST4095
Gifted and Talented Students: Recognition and Response
School of Education
Staff Contact: M Gross
UOC3 HPW2 S1
Prerequisite/s: 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
Staff Contact: P Ayres
UOC3 HPW4 S1
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 NSW syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of Chinese; lesson preparation and assessment practices.

EDST4122
Chinese Method 2
School of Education
Staff Contact: P Ayres
UOC3 HPW4 S2
Prerequisite/s: EDST1469 or EDST4121;
Excluded: EDST1429, EDST2429, EDST1470.

Continuation of the topics in EDST4121.

EDST4125
Drama Method 1
School of Education
Staff Contact: P Ayres
UOC3 HPW3 S1
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.

EDST4126
Drama Method 2
School of Education
Staff Contact: P Ayres
UOC3 HPW3 S2
Prerequisite/s: EDST1461 or EDST4125;
Excluded: EDST1421, EDST2421, EDST1462.

Continuation of the topics in EDST4125.
Note/s: It is recommended that students complete this course in conjunction with EDST4094.

EDST4127
English Method 1
School of Education
Staff Contact: P Ayres
UOC3 HPW3 S1
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.

EDST4128
English Method 2
School of Education
Staff Contact: P Ayres
UOC3 HPW3 S2
Prerequisite/s: EDST1463 or EDST4127;
Excluded: EDST1423, EDST2423, EDST1404, EDST4130, EDST1464.

Continuation of the topics in EDST4127.
Note/s: It is recommended that students complete this course in conjunction with EDST4094.

EDST4131
Literacy / English as a Second Language Method 1
School of Education
Staff Contact: P Ayres
UOC3 HPW3 S1
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.

EDST4132
Literacy / English as a Second Language Method 2
School of Education
Staff Contact: P Ayres
UOC3 HPW3 S2
Prerequisite/s: EDST1465 or EDST4131;
Excluded: EDST1425, EDST1466, EDST2425.

Continuation of the topics listed in EDST4131.
Note/s: It is recommended that students complete this course in conjunction with EDST4094.

EDST4133
French Method 1
School of Education
Staff Contact: P Ayres
UOC3 HPW4 S1
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 NSW syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of French; lesson preparation and assessment practices.

EDST4134
French Method 2
School of Education
Staff Contact: P Ayres
UOC3 HPW4 S2
Prerequisite/s: EDST1471 or EDST4133;
Excluded: EDST1431, EDST2431, EDST1472.

Continuation of the topics in EDST4133.
Note/s: It is recommended that students complete this course in conjunction with EDST4094.

EDST4135
Geography Method 1
School of Education
Staff Contact: P Ayres
UOC3 HPW3 S1
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.

EDST4136
Geography Method 2
School of Education
Staff Contact: P Ayres
UOC3 HPW3 S2
Prerequisite/s: EDST1493 or EDST4135;
Excluded: EDST1494.

Continuation of the topics in EDST4135.
Note/s: It is recommended that students complete this course in conjunction with EDST4094.

EDST4137
German Method 1
School of Education
Staff Contact: P Ayres
UOC3 HPW4 S1
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 NSW syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of German; lesson preparation and assessment practices.

EDST4138
German Method 2
School of Education
Staff Contact: P Ayres
UOC3 HPW4 S2
Prerequisite/s: EDST1475 or EDST4137;
Excluded: EDST1435, EDST2435, EDST1476.

Continuation of the topics in EDST4137.
Note/s: It is recommended that students complete this course in conjunction with EDST4094.

EDST4141
History Method 1
School of Education
Staff Contact: P Ayres
UOC3 HPW3 S1
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.

EDST4142
History Method 2
School of Education
Staff Contact: P Ayres
UOC3 HPW3 S2
Prerequisite/s: EDST1467 or EDST4141;
Excluded: EDST1427, EDST2427, EDST1406, EDST4144, EDST1468.

Continuation of the topics listed in EDST4141.
Note/s: It is recommended that students complete this course in conjunction with EDST4094.

EDST4145
Indonesian Method 1
School of Education
Staff Contact: P Ayres
UOC3 HPW4 S1
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 NSW syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of Indonesian; lesson preparation and assessment practices.

EDST4146
Indonesian Method 2
School of Education
Staff Contact: P Ayres
UOC3 HPW4 S2
Prerequisite/s: EDST1483 or EDST4145;
Excluded: EDST1437, EDST2437, EDST1484.

Continuation of the topics in EDST4145.
Note/s: It is recommended that students complete this course in conjunction with EDST4094.

EDST4147
Japanese Method 1
School of Education
Staff Contact: P Ayres
UOC3 HPW4 S1
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 NSW syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of Japanese; lesson preparation and assessment practices.

EDST4148
Japanese Method 2
School of Education
Staff Contact: P Ayres
UOC3 HPW4 S2
Prerequisite/s: EDST1473 or EDST4147;
Excluded: EDST1433, EDST2433, EDST1474.

Continuation of the topics in EDST4147.
Note/s: It is recommended that students complete this course in conjunction with EDST4094.

EDST4149
Mathematics Method 1
School of Education
Staff Contact: P Ayres
UOC6 HPW6 S1
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. NSW 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.

EDST4150
Mathematics Method 2
School of Education
Staff Contact: P Ayres
UOC6 HPW6 S2
Prerequisite/s: EDST1479 or EDST4149;
Excluded: EDST1445, EDST2445, EDST1480.

Continuation of the topics listed in EDST4149.
Note/s: It is recommended that students complete this course in conjunction with EDST4094.

EDST4151
Science Method 1
School of Education
Staff Contact: P Ayres
UOC6 HPW8 S1
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.

EDST4152
Science Method 2
School of Education
Staff Contact: P Ayres
UOC6 HPW8 S2
Prerequisite/s: EDST1481 or EDST4151;
Excluded: EDST1447, EDST2447, EDST1482.

Continuation of the topics listed in EDST4151.
Note/s: It is recommended that students complete this course in conjunction with EDST4094.

EDST4153
Spanish Method 1
School of Education
Staff Contact: P Ayres
UOC3 HPW4 S1
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 NSW syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of Spanish; lesson preparation and assessment practices.

EDST4154
Spanish Method 2
School of Education
Staff Contact: P Ayres
UOC3 HPW4 S2
Prerequisite/s: EDST1477 or EDST4153;
Excluded: EDST1439, EDST2439, EDST1478.

Continuation of the topics in EDST4153.
Note/s: It is recommended that students complete this course in conjunction with EDST4094.

EDST4157
Computing Studies Method 1
School of Education
Staff Contact: P Ayres
Enrolment requires School approval
UOC3 HPW3 S1

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.

EDST4158
Computing Studies Method 2
School of Education
Staff Contact: P Ayres
Enrolment requires School approval
UOC3 HPW3 S2
Prerequisite/s: EDST4157

Continuation of topics covered in EDST4158.
Note/s: It is recommended that students complete this course in conjunction with EDST4094.

EDST4161
Economics and Business Studies Method 1
School of Education
Staff Contact: P Ayres
UOC3 HPW3 S1

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.

EDST4162
Economics and Business Studies Method 2
School of Education
Staff Contact: P Ayres
UOC3 HPW3 S2
Prerequisite/s: EDST4161

Continuation of the topics studied in EDST4161.

EDST4163
Junior HSIE Method 1
School of Education
Staff Contact: P Ayres
UOC3 HPW3 S1

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.

EDST4164
Junior HSIE Method 2
School of Education
Staff Contact: P Ayres
UOC3 HPW3 S2
Prerequisite/s: EDST4163

Continuation of the topics studied in EDST4163.

ELEC0806
Industrial Electrical Design
School of Electrical Eng and Telecommunications
Staff Contact: B Phung
UOC6 HPW3 S2

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 Eng and Telecommunications
Staff Contact: E Spooner
UOC6 HPW4 S2
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: E Spooner
UOC3 HPW3 S1
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: I MacGill
UOC3 HPW3 S1

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 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 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 Eng and Telecommunications
Staff Contact: B Phung R Ramer
UOC6 HPW6 S1 S2

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 Eng and Telecommunications
Staff Contact: S Parameswaran
UOC6 HPW4 S2
Prerequisite/s: 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. PLDs, & FPGA's.

ELEC2015
Electromagnetic Applications
School of Electrical Eng and Telecommunications
Staff Contact: F Rahman
UOC3 HPW3 S2
Prerequisite/s: PHYS2939 or PHYS2949.

General field properties. Electric and magnetic fields. Inductance and capacitance. Dielectric and magnetic materials and their applications. Electrodynamic 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 Eng and Telecommunications
Staff Contact: K Daly
UOC3 HPW3 S1 S2
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: T Lehmann K Daly
UOC3 HPW3 S2 X1
Prerequisite/s: 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 secondorder linear differential equations; computer aided analysis of signals and systems, including state space representations; continuous time signals, sinusiods 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 Eng and Telecommunications
Staff Contact: S Nooshabadi
UOC6 HPW4 S1
Prerequisite/s: (COMP1011and 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 Eng and Telecommunications
Staff Contact: R Eaton
UOC3 HPW3 S1 S2
Prerequisite/s: (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 Eng and Telecommunications
Staff Contact: E Ambikairajah
UOC6 HPW5 S1 S2
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: C Grantham
UOC6 HPW5 S1
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: A Dzurak
UOC6 HPW5 S1
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: P Neilson
UOC6 HPW5 S2
Prerequisite/s: 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; Masons 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 Eng and Telecommunications
Staff Contact: C Grantham
UOC6 HPW4 S2
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: A Dzurak
UOC6 HPW4 S2
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: K Willey
UOC6 HPW5 S2

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 Eng and Telecommunications
Staff Contact: R Eaton
UOC6 HPW4 S2
Prerequisite/s: 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.

ELEC3402
Introductory Physiology for Engineers
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC6 HPW4
Prerequisite/s: ELEC2032.

An introduction to biophysics and physiology for engineers. Cells, tissues and organ systems with emphasis on their functional and regulatory characteristics and their interaction. An introduction to computer models of physiological control systems demonstrating their value in understanding the dynamics of complex neural, hormonal and circulatory responses to changes in homeostasis.

ELEC4010
Project Management for Professional Services
School of Electrical Eng and Telecommunications
Staff Contact: I MacGill
UOC3 HPW4 S1
Prerequisite/s: 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, organisational strategy development, human resources and effective communications.

ELEC4011
Ethics and Electrical Engineering Practice
School of Electrical Eng and Telecommunications
Staff Contact: I Skinner
UOC3 HPW2 S2
Prerequisite/s: 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 miminum of 60 days of industrial training with one or more companies, prefereably before the commencement of this course. The objectives of industrial training are (i) to develop an appreciation fo 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 Eng and Telecommunications
Staff Contact: D Taubman
UOC6 HPW4 S1
Prerequisite/s: 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 algortihm. Analysis of Finite-word length effects. Limit Cycles. Round-off noise. Nonstationary Signal Processing.

ELEC4205
Electrical Energy Systems
School of Electrical Eng and Telecommunications
Staff Contact: T Blackburn
UOC6 HPW4 S1
Prerequisite/s: ELEC3005

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 Eng and Telecommunications
Staff Contact: C Grantham
UOC6 HPW4 S2
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: F Rahman
UOC6 HPW4 S1
Prerequisite/s: 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 uniterruptible 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 Eng and Telecommunications
Staff Contact: P Neilson
UOC6 HPW4 S1
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: A Savkine
UOC6 HPW4 S2
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: School Office
UOC6 HPW4
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: B Celler
UOC6 HPW4 S2
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: C Kwok
UOC6 HPW4 S1
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: C Kwok
UOC6 HPW4 S1
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: S Nooshabadi
UOC6 HPW4 S2
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: T Blackburn
UOC3 HPW4 S1 S2
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: T Blackburn
UOC9 HPW10 S1 S2
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: T Blackburn
UOC3 HPW4 S1 S2
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: T Blackburn
UOC9 HPW10 S1 S2
Prerequisite/s: 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
Staff Contact: P Alexander
UOC6 HPW3 S2
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
Staff Contact: B Olubas
UOC6 HPW3 S1

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
Staff Contact: W Walker
UOC6 HPW3 S1

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.

ENGL2101
Women on the Apron Stage
School of English
Staff Contact: R Madelaine
UOC6 HPW3 S2
Prerequisite/s: 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.

ENGL2103
Jane Austen in Context
School of English
Staff Contact: C Alexander
UOC6 HPW3 S2
Prerequisite/s: 6 Level 1 units of credit in English and 36 units of credit overall;
Excluded: ENGL3254.

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.

ENGL2159
The Renaissance Eye: Knowledge and Representation
School of English
Staff Contact: B Johnson
UOC6 HPW3 S2
Prerequisite/s: 6 level 1 units of credit in ENGL and 36 units of credit overall;
Excluded: ENGL2158.

Traces epistemic shifts that emerged from the Renaissance, and the ways they have affected ways of representing the world, disclosing changes in the conception of the relationship between human beings and their environment: it is about the 'Eye' and the 'I'. Also examines the transition from medievalism to modernity, the dialectics of the scientific revolution and the way these manifest themselves in language, visual perspective, and conceptions of the function of knowledge.

ENGL2204
The Twentieth Century: Postmodernism and Postmodernity
School of English
Staff Contact: B Johnson
UOC6 HPW3 S2
Prerequisite/s: 6 Level 1 units of credit in English and 36 units of credit overall.

Examines literature and related expressive forms in English in the period following the Second World War. Contextualises and questions the relationship between the term 'Postmodernism' and its relation to literary and other social practices.

ENGL2207
Nineteenth-Century English Poetry: Romantic and Victorian Poetry 1789-1914
School of English
Staff Contact: P Alexander
UOC6 HPW3 S2
Prerequisite/s: 6 Level 1 units of credit in English and 36 units of credit overall;
Excluded: ENGL3257.

A study of English poetry from 1789 to 1914 within the context of contemporary religious, philosophical, social, political, and scientific thought.

ENGL2305
African Resistance Writing
School of English
Staff Contact: S Kossew
UOC6 HPW3 S2
Prerequisite/s: 6 Level 1 units of credit in English and 36 units of credit overall.

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.

ENGL2360
Australia in the Twentieth Century: Literary Modernity and Postmodernity
School of English
Staff Contact: B Johnson
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

Traces contours in Australian culture and society in the twentieth century with reference to problematics associated with Modernism and Postmodernism. Considers how the geographical and historical profile of the country affected its responses to the growth of political, economic and cultural globalisation, examining this process as it is disclosed in literature, and also with reference to related issues in painting, music, film and the media. The links and tensions between Australian modernism/postmodernism and such issues as nationalism, feminism and ideas of cultural value and academic interdisciplinarity will be considered. Case studies include a literary hoax, a civil action for artistic fraud, a legal prosecution for obscenity.

ENGL2400
Twentieth-Century Women Writers
School of English
Staff Contact: E McMahon
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: WOMS2001

Introduces the work of major and adventurous women writers of this century, which draws on the genres of novel, short story, poetry and drama. A wide range of issues will be explored, including formal innovation, identity formation and the interaction of gender, race and class within the practices of writing and reading.

ENGL2404
Writing Back: Post-Colonial Re-Writings of the Canon
School of English
Staff Contact: S Kossew
UOC6 HPW3 S1
Prerequisite/s: 6 Level 1 units of credit in English and 36 units of credit overall.

Examines post-colonial re-writings of canonical British literary works. Aims to point out the various ways in which such re-writings have voiced resistance to, and interrogation of, imperial culture.

ENGL2503
Language, Text and Context
School of English
Staff Contact: C Painter
UOC6 HPW3 S1
Prerequisite/s: 6 Level 1 units of credit in English and 36 units of credit overall;
Excluded: LING2400.

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? Develops 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.

ENGL3460
Crime Fiction, Film and Theatre
School of English
Staff Contact: R Madelaine
UOC6 HPW3 S1
Prerequisite/s: 6 Level 1 units of credit in English and 36 units of credit overall.

Focuses on fictional problematisations of justice, crime detection and law enforcement. The texts illustrate a range of criminological issues as well as a range of fictional media and styles, from Renaissance revenge drama to modern crime novels, film and theatre.

ENGL3470
Australian Masculinities: Reading Gender, Sex and Culture
School of English
Staff Contact: E McMahon
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: AUST2033, WOMS2008

Explores the construction of masculinities through the study of a range of Australian texts. Beginning with an examination of key theoretical readings in the area of gender, sex and masculinity, the course will move on to analyse these issues in a number of texts from various genres, both fictional and non-fictional, and various media, including literature, film and television.

ENGL3471
Contemporary Irish Literature
School of English
Staff Contact: P Kuch
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: 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.

ENGL3472
Modernism - Joyce
School of English
Staff Contact: P Kuch
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: 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.

ENGL3753
Creative Writing A
School of English
Staff Contact: P Dawson
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: ENGL3750, GENT0205.

Explores a wide range of approaches to creative writing with an emphasis on the development of writing strategies and analysis of the writing process. Includes poetry, fiction, writing for performance, hypertext and intermedia work (which combines text, sound and image). Students can specialise in areas which most interest them.

ENGL3754
Creative Writing B
School of English
Staff Contact: A Brewster
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: ENGL3751, GENT0205

Development of explorative approaches to creative writing. Emphasis is on experimental methodologies which encompass both a practical and theoretical investigation of language.

ENGL3902
Contemporary Critical and Cultural Theory
School of English
Staff Contact: E McMahon
UOC6 HPW3 S2
Prerequisite/s: 6 Level 1 units of credit in English and 36 units of credit overall and a WAM of 70

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 F/T
School of English
Staff Contact: B Olubas
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 54 units of credit in ENGL including 6 Level 1 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 P/T
School of English
Staff Contact: B Olubas
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 54 units of credit in ENGL including 6 Level 1 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 F/T
School of English
Staff Contact: B Olubas
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 48 units of credit in ENGL including 6 Level 1 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 P/T
School of English
Staff Contact: B Olubas
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 48 units of credit in ENGL including 6 Level 1 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 & Environmental Sciences
Staff Contact: P Adam
UOC6 HPW6 S1

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/s: Restricted to the Environmental Science programs.

ENVS2030
The Human Environment
School of Biological, Earth & Environmental Sciences
Staff Contact: C Gibson
UOC6 HPW4 S2
Prerequisite/s: ENVS1011;
Excluded: ENVS2010, ENVS2020, GEOG2641, GEOH2641.

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 & Environmental Sciences
Staff Contact: P Adam
UOC6 HPW4 S2
Prerequisite/s: 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.

ENVS4104
Environmental Science 4 Biology B (Honours) F/T
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC24 S1 S2

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/s: Completion of 144UOC (with Credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4107
Environmental Science 4 Biology A (Honours) F/T
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC21 S1 S2

Full year research project and thesis.
Note/s: Superior performance in 144UOC of an appropriate Environmental Science program, including all core requirements is required for enrolment. Enrolment in BIOS4511 is also required.

ENVS4204
Environmental Science 4 Marine B (Honours) F/T
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC24 S1 S2

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/s: Completion of 144UOC (with Credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4207
Environmental Science 4 Marine A (Honours) F/T
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC21 S1 S2

Full year research project and thesis.
Note/s: Superior performance in 144UOC of an appropriate Environmental Science program, including all core requirements is required for enrolment. Enrolment in BIOS4511 is also required.

ENVS4304
Environmental Science 4 Microbial B (Honours) F/T
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC24 S1 S2

Half year research project and thesis. 24UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.
Note/s: Completion of 144UOC (with Credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4308
Environmental Science 4 Microbial A (Honours) F/T
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC24 S1 S2

Full year research project and thesis.
Note/s: Superior performance in 144UOC of an appropriate Environmental Science program, including all core requirements is required for enrolment.

ENVS4404
Environmental Science 4 Chemistry B (Honours) F/T
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC24 S1 S2

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/s: Completion of 144UOC (with Credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4408
Environmental Science 4 Chemistry A (Honours) F/T
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC24 S1 S2

Full year research project and thesis.
Note/s: Superior performance in 144UOC of an appropriate Environmental Science program, including all core requirements is required for enrolment.

ENVS4504
Environmental Science 4 Geography B (Honours)
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC24 S1 S2

Half year research project and thesis. 24UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.
Note/s: Completion of 144UOC (with Credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4508
Environmental Science 4 Geography A (Honours) F/T
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC24 S1 S2

Full year research project and thesis.
Note/s: Superior performance in 144UOC of an appropriate Environmental Science program, including all core requirements is required for enrolment.

ENVS4514
Environmental Science 4 Geography (FBE)(Honours) P/T
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC12 S1 S2

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/s: Superior performance in 144UOC of an appropriate Enviromental Science program, including all core requirements is necessary for enrolment.

ENVS4518
Environmental Science 4 Geography (FBE)(Honours) F/T
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC24 S1 S2

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/s: Superior performance in 144UOC of an appropriate Enviromental Science program, including all core requirements is necessary for enrolment.

ENVS4546
Env Sc Geog B (Hons)
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC12 S1 S2

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) P/T
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
UOC12 S1 S2

Part-time research project and thesis. 12 UOC of course work as approved by the Environmental Science Program Co-ordinator Note: Completion of 144UOC (with Credit average) of an appropriate Environmental Science program is required before enrolment is allowed.

ENVS4604
Environmental Science 4 Geology B (Honours) F/T
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC24 S1 S2

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/s: Completion of 144UOC (with Credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4608
Environmental Science 4 Geology A (Honours) F/T
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC24 S1 S2

Full year research project and thesis.
Note/s: Superior performance in 144UOC of an appropriate Environmental Science program, including all core requirements is required for enrolment.

ENVS4704
Environmental Science 4 Math B (Honours) F/T
School of Biological, Earth & Environmental Sciences
Staff Contact: P Adam
Enrolment requires School approval
UOC24 S1 S2

Half year research project and thesis. 24UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.
Note/s: 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
Staff Contact: J Milfull
UOC6 HPW3 S1

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/s: 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
Staff Contact: J Milfull
UOC6 HPW3 S2

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/s: 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
Staff Contact: G Minnerup
UOC6 HPW3 S1
Prerequisite/s: 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 though the centuries, and discusses their relevance to the contemporary difficulties of the European Union.

EURO2001
Gender, Race, Nature and Reason
Faculty of Arts and Social Sciences
Staff Contact: J Milfull
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: HIST2761, SOCA3315, WOMS2002.

Vital concepts like equality, freedom and emancipation seem inseparable from the European "Enlightenment". Yet the following century saw the development of a new and more subtle form of patriarchy, the increasing discrimination and exploitation of colonised peoples and minorities, and the emergence of nationalism and Fascism. Explores a range of texts in literature, philosophy and social history from the eighteenth century to the present, and seeks to analyse both the so-called "failure(s) of enlightenment" and the impact of the two central and inter-related concepts, nature and reason, that shaped its program.

EURO2331
Understanding Nazi Germany: Origins, Structures, Explanations
Faculty of Arts and Social Sciences
Staff Contact: G Minnerup
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: HIST2422

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
Nineteenth-Century Europe, 1815-1914: Bourgeois Culture, Peoples' Revolutions
Faculty of Arts and Social Sciences
Staff Contact: G Minnerup
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: HIST2410.

Themes in the political, social and cultural history of 19th century Europe. One part of the course will deal with the great revolutions of 1830, 1848, 1871 and 1905, with special emphasis on the role of the great 19th century ideologies of liberalism and nationalism. Other themes include the rise of the modern city, the impacts of famine, disease and emigration, and the rise of modern science. Also discusses aspects of dominant bourgeois culture, including the new domestic ideology and the role of women within it.

EURO2411
Spain: From Loss of Empire to European Integration
Faculty of Arts and Social Sciences
Staff Contact: P Ross
UOC6 HPW3 S1
Prerequisite/s: 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.

EURO2470
Modern France since 1870: Politics, Society and Culture
Faculty of Arts and Social Sciences
Staff Contact: M Lyons
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: HIST2470

Surveys divisions and conflicts in France since 1870 through three republican regimes and two foreign occupations. Special attention is paid to the Dreyfus Affair, experience of two world wars, the Popular Front, Vichy and the Resistance and their role in the national historical memory. Other topics include Gaullism, the Algerian War, the 'events' of May 1968, and the rise of Jean-Marie Le Pen. Discussion material will include film and literary sources.

EURO2500
The Russian Experience
Faculty of Arts and Social Sciences
Staff Contact: School
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

An introduction to the politics, history, thought, language and literature of Russia, which seeks to provide a broad understanding of the Russian past and present and the basis for some predictions for the future, and to signal directions for further study.

EURO2600
European Integration
Faculty of Arts and Social Sciences
Staff Contact: P Kriesler
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: M Krygier
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: LAWS2232.

When European communist states collapsed like a pack 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.

EURO2800
Discovering Europe
Faculty of Arts and Social Sciences
Staff Contact: J Milfull
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

In the last two centuries, many Australians, Anglo and non-Anglo, have "discovered" Europe as a strange place, peopled by sometimes unfriendly natives with curious practices. This course aims to bring together students' own experiences of (re-)discovering Europe and case studies of previous Australian invaders, exploring the secrets of their success and failure and attempting to arrive at an assessment of our sameness and difference. Is Australia (still) a "European" culture?

EURO3000
Evidence and Interpretation: Controversies in European History
Faculty of Arts and Social Sciences
Staff Contact: G Minnerup
UOC6 HPW3 S1
Prerequisite/s: 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.

EURO4000
European Studies Honours F/T
Faculty of Arts and Social Sciences
Staff Contact: J Milfull
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: An average of 70% in the European Studies major and related courses

This course is primarily intended for students enrolled in combined degrees who are unable to meet the prerequisites for EURO4500. It requires the completion of a thesis of 15-20,000 words on a cross-disciplinary topic in European Studies and a program of coursework negotiated between the program and appropriate School(s).

EURO4050
European Studies Honours P/T
Faculty of Arts and Social Sciences
Staff Contact: J Milfull
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: An average of 70% in the European Studies major and related courses

This course is primarily intended for students enrolled in combined degrees who are unable to meet the prerequisites for EURO4500. It requires the completion of a thesis of 15-20,000 words on a cross-disciplinary topic in European Studies and a program of coursework negotiated between the Program and appropriate School(s).

EURO4500
Combined Honours (Research) in European Studies F/T
Faculty of Arts and Social Sciences
Staff Contact: J Milfull
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 36 units of credit in EURO with an average of 70% and permission from co-ordinator

Combined Honours candidates are required to present a cross-disciplinary thesis approved by the Heads of two participating schools/ programs.
Note/s: No coursework component is currently available.

EURO4550
Combined Honours (Research) in European Studies P/T
Faculty of Arts and Social Sciences
Staff Contact: J Milfull
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 36 units of credit in EURO with an average of 70% and permission from co-ordinator

Combined Honours candidates are required to present a cross-disciplinary thesis approved by the Heads of two participating schools/ programs.

FILM1101
Introduction to Film
School of Theatre, Film and Dance
Staff Contact: J Donald
UOC6 HPW4.5 S1
Excluded: THFI1000, THFI1001

An introduction to the study and analysis of film and its reception.

FILM2001
Contemporary Approaches to the Cinema
School of Theatre, Film and Dance
Staff Contact: J Brooks
UOC6 HPW4.5 S1
Prerequisite/s: DANC1002 or FILM1101 or PFST1103 or THFI1002 or THST1101

Analyses and tests a number of contemporary theoretical approaches to the cinema.

FILM2002
Australian Cinema
School of Theatre, Film and Dance
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: DANC1002 or DANC1103 or FILM1101 or PFST1103 or THFI1002 or THST1101 or 48 units of credit in Arts and Social Sciences;
Excluded: AUST2028

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.

FILM2007
Movie Worlds: National Cinemas
School of Theatre, Film and Dance
Staff Contact: J Donald
UOC6 HPW4.5 S2
Prerequisite/s: DANC1002 or DANC1103 or FILM1101 or PFST1103 or THFI1002 or THST1101 or 48 units of credit in Arts and Social Sciences

Studies film history, film production and individual films from selected European and Asian countries. Explores the ways in which individual cultures use film to strengthen their identities and/or join the race for global recognition as filmmaking nations.

FILM2008
Film Genres
School of Theatre, Film and Dance
Staff Contact: School Office
UOC6 HPW4.5 S2
Prerequisite/s: DANC1002 or DANC1103 or FILM1101 or PFST1103 or THFI1002 or THST1101 or 48 units of credit in Arts and Social Sciences

Examines the development, production and exploitation of various film genres, ranging from the western to comedy and musical to documentaries, thrillers and science-fiction.

FILM2010
Electronic Media in Perspective
School of Theatre, Film and Dance
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: DANC1002 or DANC1103 or FILM1101 or PFST1103 or THFI1002 or THST1101 or 48 units of credit in Arts and Social Sciences

New technologies of television, video, computers, telecommunications and robotics are changing the nature of global communications and entertainment. This course looks at the development of television, television drama and the ways artists and independent producers have contributed to the development of new media from video art to 'virtual reality'.

FILM2011
Major Figures in World Cinema
School of Theatre, Film and Dance
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: DANC1002 or DANC1103 or FILM1101 or PFST1103 or THFI1002 or THST1101 or 48 units of credit in Arts and Social Sciences

With the steady proliferation of film in the information age, there is a tendency to focus on the contemporary at the expense of film history, its major figures and key innovators. This course addresses this oversight by introducing the work of a number of significant contributors to the history of film not covered in other film and media courses.

FILM2012
Performance in Independent American Cinema
School of Theatre, Film and Dance
Staff Contact: G Kouvaros
UOC6 HPW4 S2
Prerequisite/s: DANC1002 or DANC1103 or FILM1101 or PFST1103 or THFI1002 or THST1101 or 48 units of credit in Arts and Social Sciences

Studies gendered performance in the independent American Cinema. Beginning with an extended examination of the films of John Cassavetes, the course also considers the work of filmmakers such as Martin Scorsese, Robert Altman, Elaine May and Terence Malick. Focuses on the changed nature of performative identity within a post-war cultural landscape.

FILM2013
Theories of Cinema Spectatorship
School of Theatre, Film and Dance
Staff Contact: J Brooks
UOC6 HPW4.5 S2
Prerequisite/s: THST1101 or FILM1101 or DANC1103 or THFI1002 or DANC1002 or 48 units of credit in Arts and Social Sciences;
Excluded: FILM3904.

Studies ways in which (a) different historical formations of cinema enable and entail different modes of spectatorship (in particular, the recent work on preclassical and postclassical spectatorship), and (b) different forms of cinema (e.g. the horror film, porn and the cult film) can be seen to elicit particular spectatorial practices.

FILM2014
Film Comedy: The Theory and Practice of Comedic Performance in Cinema
School of Theatre, Film and Dance
Staff Contact: L Trahair
UOC6 HPW4 S2
Prerequisite/s: DANC1002 or DANC1103 or FILM1101 or PFST1103 or THFI1002 or THST1101 or 48 units of credit in Arts and Social Sciences

Tracing the work of a variety of cinematic comedians from the silent era to the present, this course examines the predominant features of comic performance in cinema. The approach will be interdisciplinary, endeavouring to situate such performance in relationship to the philosophy of the comic.

FILM2019
Issues of Aesthetics and Representations in French Cinema
School of Theatre, Film and Dance
Staff Contact: L Trahair
UOC6 HPW4 S2
Prerequisite/s: DANC1002 or DANC1103 or FILM1101 or PFST1103 or THFI1002 or THST1101 or 48 units of credit in Arts and Social Sciences

Examines a range of French films, from the pre-war French School to the Left Bank Group, focussing on issues relating to aesthetics and representation.

FILM2021
The Hollywood System
School of Theatre, Film and Dance
Staff Contact: J Donald
UOC6 HPW4 S1
Prerequisite/s: THST1101 or DANC1103 or FILM1101 or THFI1002 or DANC1002 or PFST1103 or 48 units of credit in Arts & Social Sciences; *Excluded:* FILM2005, FILM2006.

How can the history of Hollywood be viewed as narrative, corporate and cultural system? Covers the rise of continuity and stars, consolidation of the mode of production, including genres, and vertical integration of the major studios through 1950. This period also sees such politically sensitive movements as film noir, postwar melodrama, and the Red Scare. At the same time, the studios had to sell off their theatres and confront television. Independent production and corporate conglomeration changed the structure, but not the ultimate function of Hollywood entertainment. Concludes with discussion of recent scholarship on "New Hollywood," including new technologies and globalisation.

FILM3001
Video Exercise
School of Theatre, Film and Dance
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: FILM2001 or FILM2004 or FILM2005 or FILM2006 and 18 units of credit from FILM2001-2017

Introduces the basic concepts that underlie a video production, from script to final cut, plus some practical experience of video-making.

FINS1612
Capital Markets and Institutions
School of Banking and Finance
Staff Contact: J Zein
UOC6 HPW3 S1 S2
Corequisite/s: 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
Staff Contact: S Owen
UOC6 HPW3 S1 S2
Corequisite/s: 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.

FINS2622
Emerging Capital Markets
School of Banking and Finance
Staff Contact: J Wang V Hooper
UOC6 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: H Yip
UOC6 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: D Gallagher
UOC6 HPW3 S2
Prerequisite/s: FINS1613;
Prerequisite/s or Corequisite/s:FINS2624

Examines the investment and financial issues arising from the wealth management activities of retail clients (private individuals). Commences with an introduction of the financial planning industry, then explores the most important components in wealth management - setting financial plans, investment planning and strategies, managed funds and portfolio management, risk management and insurance, superannuation, tax planning, leveraged investments, estate planning and social security. Also evaluates the decision-making processes of institutional superannuation fund trustees, given their role as stewards of member assets.

FINS3000
Special Program in Financial Research
School of Banking and Finance
Staff Contact: T Walter
Enrolment requires School approval
UOC24 S2

FINS3616
International Business Finance
School of Banking and Finance
Staff Contact: A Yawson
UOC6 HPW3 S1 S2
Prerequisite/s or Corequisite/s: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
Small Business Finance
School of Banking and Finance
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: A Yawson J Suchard
UOC6 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: K Pham
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: F Moshirian
UOC6 HPW3 S1 S2
Prerequisite/s: FINS1612, 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.

FINS3631
Risk and Insurance
School of Banking and Finance
Staff Contact: School Office
UOC6 HPW3
Prerequisite/s or Corequisite/s: FINS2624

The nature of commercial, financial and physical risk is explored. In addition to the theory of risk, the way in which insurance has evolved to deal with this important aspect of the economic environment is studied in depth. Case studies are used to illustrate points of practical relevance. Emphasises the mathematical and statistical foundations of the discipline. Topics in the area of risk include, risk premia, insurance ratings, simulations of risky environments, physical risk, and death. Insurance is approached as a natural commercial response to risk with inference from insurance data, general insurance, motor insurance, very large risks, and life assurance.

FINS3633
Real Estate Finance
School of Banking and Finance
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: T Edwards
UOC6 HPW3 S1
Prerequisite/s: FINS1612, FINS1613

Focus is credit analysis and lending emphasising finance theory and practical applications. Includes: credit analysis; credit scoring and modelling; loan products; loan pricing; commercial lending; consumer lending; special risk markets such as small business, agricultural and real estate; international and trade financing; managing the loan portfolio; and problem loans. Includes case study work.

FINS3635
Options, Futures and Risk Management
School of Banking and Finance
Staff Contact: L Yang
UOC6 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: F Foster
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: D Gallagher
UOC6 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: D White
UOC6 HPW3 S2
Prerequisite/s: FINS2624

Provides students with an understanding of the techniques and models employed in the valuation of securities; evaluates securities using both technical analysis and fundamental analysis. The technical analysis component reviews security volatility and correlations, moving average models, financial time series models and risk management. The second component examines security valuation approaches, the measurement and forecasting of dividends and cash flows, valuation methods, estimation of growth, equity discount models and the cost of capital, valuation in terms of mergers and acquisitions, and enhancing security valuation. Also includes the valuation of private firms, companies with negative earnings, and distressed corporations.

FINS3642
Strategies for Investment Management
School of Banking and Finance
Staff Contact: D White
UOC6 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: S Kim
UOC6 HPW3 S2
Corequisite/s: FINS3616

Focuses on providing students with an understanding of the operating environments of international banking institutions. The covered topics 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
Staff Contact: School Office
UOC6 HPW3
Prerequisite/s or Corequisite/s: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
Staff Contact: J Reeves R Kohn
UOC6 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s or Corequisite/s: 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
Staff Contact: J Reeves R Kohn
Enrolment requires School approval
UOC6 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s or Corequisite/s: 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
Staff Contact: R Powell
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s or Corequisite/s: 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.

FINS4778
Recent Developments in Banking Research
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s or Corequisite/s: FINS3775 or FINS4775

Focuses on recent developments in theory and empirical research relating to banking and bank management. Includes: development of banking models; uniqueness of banks and bank lending; advanced techniques in bank risk management; analysis of bank cost functions in the context of economies of scale, economies of scope, expense preference behaviour, and the contestable markets hypothesis; the regulatory environment and its impact on bank valuation and banking practice; optimal capital and capital adequacy; modelling off-balance sheet activities; and models of international banking.

FINS4779
Research Methods in Finance 2
School of Banking and Finance
Staff Contact: A Sim
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s or Corequisite/s: 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
Staff Contact: S Kim
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: Admission to BCom

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.

FINS4795
Thesis (Finance)
School of Banking and Finance
Staff Contact: S Kim
Enrolment requires School approval
UOC24 S2

FOOD1120
Introduction to Food Science
School of Chemical Sciences
Staff Contact: J Paton
UOC6 HPW4 S1

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 Sciences
Staff Contact: J Cox
UOC6 HPW6 S2

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 Sciences
Staff Contact: J Paton
UOC6 HPW6 S2

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 (e.g. anorexia, bulimia); diet and consequences for physical and mental activity (e.g. sports diets); implications for food product development, process development, marketing, advertising and diet design.

FOOD1360
Food Processing Principles
School of Chemical Sciences
Staff Contact: J Paterson
UOC6 HPW6 S1

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, Fo, 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 Sciences
Staff Contact: J Paterson
UOC6 HPW6 S1

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 Sciences
Staff Contact: R Driscoll
UOC6 HPW6 S2
Prerequisite/s: 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 Sciences
Staff Contact: J Paton
UOC6 HPW6 S2
Prerequisite/s: 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 Sciences
Staff Contact: J Paterson
Enrolment requires School approval
UOC6 S1 S2 X1
Prerequisite/s: 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/s: Restricted to program 3060.

FOOD1470
Postharvest Technology of Foods
School of Chemical Sciences
Staff Contact: School Office
UOC6 HPW6
Prerequisite/s: FOOD1380

Pre-harvest considerations; postharvest physiology and biochemistry; postharvest factors affecting quality; methods of storage and handling; marketing strategies for selected food commodities.

FOOD1480
Minor Project
School of Chemical Sciences
Staff Contact: J Paterson
UOC6 S1 S2
Prerequisite/s: 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 Sciences
Staff Contact: J Paterson
UOC6 HPW6 S1
Prerequisite/s: 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 Sciences
Staff Contact: G Fleet
UOC6 HPW6 S1

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 Sciences
Staff Contact: J Cox
UOC6 HPW4 S2

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 Sciences
Staff Contact: K Buckle
UOC6 HPW4 S2

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 Sciences
Staff Contact: G Fleet
UOC6 HPW3 S1

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 Sciences
Staff Contact: G Fleet
UOC6 HPW3 S2
Prerequisite/s: 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.

FOOD2490
Analytical Microbiology
School of Chemical Sciences
Staff Contact: School Office
UOC6 HPW6
Prerequisite/s: FOOD2320

The aim of this course is to provide students with an understanding of the underlying principles of and practical exposure to modern and rapid methods for microbiological analysis, with specific reference to foods. The course begins with a history of the development of methods of analysis and criteria for the evaluation of methods. Methods considered include improved and advanced cultural methods, automated biochemical identification systems, ATP and lux bioluminescence, methods for assessing hygiene, ice nucleation, impedance technology, immunoassay, electrophoretic and chromatographic techniques for strain characterisation and identification, nucleic acid probes, PCR and genechip technology.

FOOD3220
Nutrition
School of Chemical Sciences
Staff Contact: J Arcot
UOC6 HPW6 S1
Corequisite/s: 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 Sciences
Staff Contact: J Arcot
UOC6 HPW6 S2
Prerequisite/s: 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 Sciences
Staff Contact: J Arcot
UOC6 HPW6 S2
Prerequisite/s: 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 Sciences
Staff Contact: R Driscoll
UOC6 HPW6 S1

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 Sciences
Staff Contact: K Buckle
UOC6 HPW6 S1
Prerequisite/s: 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 Sciences
Staff Contact: K Buckle
UOC24 HPW24 S1 S2
Prerequisite/s: 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 Sciences
Staff Contact: J Cox
Enrolment requires School approval
UOC21 S1 S2

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/s: Restricted to program 3065.

FOOD9420
Food Science and Technology (Honours)
School of Chemical Sciences
Staff Contact: K Buckle
Enrolment requires School approval
UOC24 S1 S2

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 Sciences
Staff Contact: K Buckle
Enrolment requires School approval
UOC24 S1

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/s: Restricted to programs 3970, and Advanced Science - Life Sciences. Enrolment requires corequisites: 24UOC of level III/IV courses as approved by the Program Coordinator.

FREN1001
French 1A Introductory French 1
Department of French
Staff Contact: M Blackman
UOC6 HPW6 S1
Excluded: FREN1101, GENT0425

Designed for students who have little or no knowledge of French. The most recent methods are used to give students a sound basis in spoken and written French. The course also includes an introduction to contemporary French culture, and a graded reading program. All teaching is by tutorial groups. In addition to the 5 hours per week of scheduled classes, students must follow a program of work in the language laboratory (1 HPW).
Note/s: Excludes students qualified to enter FREN1011, FREN1021, FREN1023 or FREN1030.

FREN1002
French 1A Introductory French 2
Department of French
Staff Contact: M Blackman
UOC6 HPW6 S2
Prerequisite/s: FREN1001

A continuation of FREN1001. The most recent methods are used to give students a sound basis in spoken and written French. The course also includes an introduction to contemporary French culture, and a graded reading program. All teaching is by tutorial groups. In addition to the 5 hours per week of scheduled classes, students must follow a program of work in the language laboratory (1HPW).

FREN1011
French 1B: Intermediate French 1
Department of French
Staff Contact: J Battestini-Newman
UOC6 HPW5 S1

Designed for students who have acquired a reasonable knowledge of French but need to develop further their oral/aural and written skills. The course follows a communicative approach and focuses on both language and culture: four hours out of five are devoted to an intensive study of French language; the fifth hour is devoted to cultural studies.
Assumed Knowledge: Some knowledge of French (e.g. HSC 2 unit French or HSC 2 unit Z French).
Note/s: Excludes students qualified to enter FREN1001, FREN1021, FREN1023 or FREN1030.

FREN1012
French 1B Intermediate French 2
Department of French
Staff Contact: J Battestini-Newman
UOC6 HPW6 S2
Prerequisite/s: FREN1011

This course is a continuation of FREN1011. Designed for students who have acquired a reasonable knowledge of French but need to develop further their oral/aural and written skills. The course follows a communicative approach and focuses on both language and culture: four hours out of five are devoted to an intensive study of French language; the fifth hour is devoted to the study of selected literary texts.

FREN1021
French 1C Language and Culture 1
Department of French
Staff Contact: E Temple
UOC6 HPW5 S1

Core language course designed for students who have acquired a sound knowledge of spoken and written French. Consolidates aural, oral and writing skills, together with further study of French culture through selected texts and other materials. Introduction to close reading and analysis of literary texts.
Assumed Knowledge: A good knowledge of French (eg HSC 2 unit French at percentile range 81-100 or HSC 3 unit French 51-100).
Note/s: Excludes students qualified to enter FREN1001, FREN1011, FREN1023 or FREN1030.

FREN1022
French 1C Language & Culture 2
Department of French
Staff Contact: E Temple
UOC6 HPW5 S2
Prerequisite/s: FREN1021

A continuation of FREN1021. Core language course designed for students who have acquired a sound knowledge of spoken and written French. Consolidates aural, oral and writing skills, together with further study of French culture through selected texts and other materials. Introduction to close reading and analysis of literary texts.
Note/s: Excludes students qualified to enter FREN1012 or FREN1030.

FREN1023
French 1C Language Part 1
Department of French
Staff Contact: E Temple
UOC3 HPW3 S1

This course is designed for students who have acquired a sound knowledge of spoken and written French and who wish to further their knowledge without completing a major in French. Consolidates aural, oral and writing skills, together with further study of French culture through selected texts and other materials.
Assumed Knowledge: A good knowledge of French (eg HSC 2 unit French at percentile range 81-100 or HSC 3 unit French 51-100).
Note/s: Excludes students qualified to enter FREN1001, FREN1011, FREN1021 or FREN1030.

FREN1024
French 1C Language Part 2
Department of French
Staff Contact: E Temple
UOC3 HPW3 S2
Prerequisite/s: FREN1023

This course is designed for students who have acquired a sound knowledge of spoken and written French and who wish to further their knowledge without completing a major in French. A continuation of FREN1023, the course consolidates aural, oral and writing skills, together with further study of French culture through selected texts and other materials.
Note/s: Excludes students qualified to enter FREN1002, FREN1022 or FREN1030.

FREN1030
French 1D Language
Department of French
Staff Contact: E Temple
UOC6 HPW3 S1
Corequisite/s: FREN1221

Language studies for suitably qualified Francophone students, with special emphasis on advanced practice in writing skills and in the refining and mastery of grammatical subtleties and idiomatic usage, and on advanced study and practice of written and oral French discourse in academic and vocational contexts.
Note/s: For Francophone students with a Baccalaureat or equivalent qualifications. Excludes students qualified to enter FREN1001, FREN1011 or FREN1021.

FREN1221
French 1D Literature & Society A
Department of French
Staff Contact: M Blackman
UOC3 HPW2 S1
Corequisite/s: FREN1030

Study of aspects of modern French culture and society through selected texts and other materials. Introduction to close reading and analysis of literary texts.
Note/s: For Francophone students with a Baccalaureat or equivalent qualifications. Excludes students qualified to enter FREN1001, FREN1011, FREN1021 or FREN1023.

FREN1222
French 1D Literature and Society B
Department of French
Staff Contact: E Temple
UOC3 HPW2 S2
Prerequisite/s: FREN1221

Study of aspects of modern French culture and society through selected texts and other materials. Introduction to close reading and analysis of literary texts.
Note/s: Excludes students qualified to enter FREN1002, FREN1012, FREN1022 and FREN1024.

FREN2003
French 2A Intermediate French 1
Department of French
Staff Contact: E Temple
UOC6 HPW4 S1
Prerequisite/s: FREN1000 or FREN1002 or FREN1100 at 70% or better;
Excluded: FREN2000.

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.

FREN2004
French 2A Intermediate French 2
Department of French
Staff Contact: E Temple
UOC6 HPW4 S2
Prerequisite/s: FREN2003

Intensive study of French Language aimed at consolidating and extending the skills taught in FREN2003. Special emphasis on the study of syntax and an introduction to literary text analysis. Further study of French culture.

FREN2013
French 2B Language and Culture A
Department of French
Staff Contact: A Tabensky
UOC6 HPW4 S1
Prerequisite/s: FREN1010 or FREN1012

Intensive study of French language: the course focuses on forms of spoken and written discourse, such as oral discussions and short essays, together with a systematic study of morphosyntactic structures. Study of contemporary French culture is conducted through analysis of authentic documents. One hour is devoted to an introduction to the reading and analysis of short French literary texts.

FREN2014
French 2B Language and Culture B
Department of French
Staff Contact: A Tabensky
UOC6 HPW4 S2
Prerequisite/s: FREN2013

Intensive study of French language: further exploration of spoken and written discourse is achieved by the analysis of authentic documents and by a variety of class exercises, such as oral presentations and debates. There is a systematic study of French syntax and an exploration of Francophone websites for the study of contemporary culture. One hour is devoted to the reading and analysis of short literary texts.

FREN2020
French 2C - Language and Culture
Department of French
Staff Contact: J Battestini-Newman
UOC6 HPW4 S1
Prerequisite/s: FREN1020, FREN1225 or FREN1022

Intensive study and practice of both oral and written French in order to enhance competence in all skills. Consolidation and extension of grammatical knowledge, together with further study of French culture.
Note/s: Excludes students qualified to enter FREN2030.

FREN2030
Advanced Core Language
Department of French
Staff Contact: E Temple
UOC6 HPW3 S2
Prerequisite/s: FREN1020 or FREN1022 at 70% and 65% in FREN1225 or FREN2020 or FREN3011

Language studies for suitably advanced students, with special emphasis on advanced practice in writing skills and in the refining and mastery of written and oral French discourse in academic and vocational contexts.
Note/s: Excludes students who have successfully completed FREN1030, FREN2021 or FREN2022.

FREN3003
French 3A Language and Culture A
Department of French
Staff Contact: A Tabensky
UOC6 HPW4 S1
Prerequisite/s: FREN2003, FREN2004;
Excluded: FREN2010.

Intensive study of French language: consolidation of aural/oral skills through a variety of interactive tasks and initiation to the study of forms of spoken and written discourse, such as oral discussions and short essays. There is a systematic study of morphosyntactic structures. Contemporary French culture is approached through analysis of authentic documents. One hour is devoted to an introduction to the reading and analysis of short French literary texts.

FREN3004
French 3A Language and Culture B
Department of French
Staff Contact: A Tabensky
UOC6 HPW4 S2
Prerequisite/s: FREN3003;
Excluded: FREN2010.

Intensive study of French language: exploration of spoken and written discourse is achieved by the analysis of authentic documents and by a variety of class exercises, such as oral presentations and debates. There is a systematic study of French syntax and an exploration of Francophone websites for the study of contemporary culture. One hour is devoted to the reading and analysis of short literary texts.

FREN3011
French 3B Language and Culture
Department of French
Staff Contact: J Battestini-Newman
UOC6 HPW4 S1
Prerequisite/s: (FREN2013 and FREN2014) or FREN2010

Extensive study and practice of oral and written French in order to enhance competence in all skills. Consolidation and extension of grammatical knowledge, together with further study of French culture.

FREN3120
Exploring the French Language
Department of French
Staff Contact: A Tabensky
UOC6 HPW3 S1
Corequisite/s: FREN1021, FREN1022 or FREN1030 or FREN3004 or FREN3011;
Excluded: FREN3121.

Students will examine key concepts such as the linguistic sign, sentence, utterance, and discourse, and explore practical applications in authentic documents. The course combines theoretical and practical study of form and meaning in the French language. Readings of French linguists will be included.

FREN3210
French Prose Fiction
Department of French
Staff Contact: M Blackman
UOC6 HPW3 S2
Corequisite/s: (FREN1021,FREN1022) or FREN1030 or FREN3011

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
Staff Contact: M Blackman
UOC6 HPW3 S1 S2
Prerequisite/s: FREN1030

Reading in selected French masterpieces. Students are required to submit an in-depth analysis of work studied.

FREN3216
France Today
Department of French
Staff Contact: A Tabensky
UOC6 HPW3 S2
Corequisite/s: FREN3004;
Excluded: FREN2014, FREN2020, FREN2030, FREN3011.

An option in the French major designed specifically for students from A Stream. Also available for any students who wish to inform themselves about contemporary France while they improve their French. Topics include: political developments in France and the EU; social issues; recent trends in literature, art and cinema; employment in France; popular culture; gastronomy.

FREN3410
French for Special Purposes
Department of French
Staff Contact: C Sheaffer-Jones
UOC6 HPW3 S2
Corequisite/s: (FREN1021, FREN1022) or FREN1030 or FREN3004 or FREN3011

A study of French as used in the world of business, tourism, leisure and restauration, particularly from the point of view of the professional in these fields. Particular emphasis will be placed on comparative cultural studies, e.g. expressing Australian cultural concepts in French.

FREN3510
Contemporary French Cinema and Society
Department of French
Staff Contact: School Office
UOC6 HPW3 S1
Corequisite/s: (FREN1021, FREN1022) or FREN1030 or FREN3004 or FREN3011

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
Staff Contact: M Blackman
Enrolment requires School approval
UOC6 HPW3 S1 S2
Prerequisite/s: 36 units of credit including 12 units of French at credit 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/s: Typically done in the second year of C or D stream, this course is designed for students wishing to proceed to Honours in the Department of French.

FREN3910
Honours Preparatory Seminar
Department of French
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 36uc of French courses at Credit 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/s: Typically done in the third year of C or D stream, this course is designed for students wishing to proceed to Honours in the Department of French.

FREN4000
French Honours (Research) F/T
Department of French
Staff Contact: M Blackman
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 54 units of credit in FREN, including FREN3910 at 65% 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) P/T
Department of French
Staff Contact: M Blackman
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 54 units of credit in FREN, including FREN3910 at 65% 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 F/T
Department of French
Staff Contact: M Blackman
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 48 units of credit in FREN, including FREN3910 at 65% 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 P/T
Department of French
Staff Contact: M Blackman
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 48 units of credit in FREN, including FREN3910 at 65% 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 Eng and Industrial Chemistry
Staff Contact: J Stubington
UOC3 HPW2 S1

An introduction to combustion technology, combustion calculations, burner design, furnace, kiln and boiler thermal design.

GENC1001
Accounting and Society
School of Accounting
Staff Contact: School Office
UOC3 HPW2 S1
Excluded: ACCT1501

The aim of the course is to develop students' understanding of the use of financial information in the allocation of scarce resources in the fields of private and public enterprise, and in the bargaining processes of stakeholders in competing for shares of the wealth generated or distributed by those enterprises. The stakeholders include equity and debt investors, employees and the community within which both private and public enterprises operate under a social contract. The course introduces students to the basic concepts of financial information recognition and measurement, the media through which financial information are communicated and briefly outlines the ethical and regulatory frameworks within which information is communicated. Students are introduced to the various financial and non-financial performance indicators used by stakeholders in the assessment of their interests in private and public enterprises through the analysis of an entity in the private sector and in a government agency.

GENC2001
An Introduction to the Australian Economy
School of Economics
Staff Contact: School Office
UOC3 HPW2 S1 S2
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.

GENC2005
Economic Philosophers
School of Economics
Staff Contact: School Office
UOC3 HPW2

The subject of study will be the thoughts and lives of great economists of the past. An examination of major traditions of economic thought illustrates the evolution of economic ideas and contemporary developments. There will be considerable emphasis on the intellectual and social background which influenced the more important contributions.

GENC2102
Black Death to Aids: Economic Impact of Epidemics on Society
School of Economics
Staff Contact: School Office
UOC3 HPW2 S1

The course explores the impact and responses to three major outbreaks of infectious disease: the Black Death in the mid-14th century, the cholera epidemic of the early 1830s and that of AIDS in our own time. This involves the contemporary epidemiology of the disease, suggested cures and behavioural responses. Some of the latter are remarkably similar, with differences reflecting those in the broader social context that is also explored.

GENC3001
Understanding Asian Banking and Finance
School of Banking and Finance
Staff Contact: School Office
UOC3 HPW2 S2

An introduction to the diverse banking and capital markets of Asia. Explores how finance has contributed to economic development and how financial institutions, both formal and informal, have developed in the region. Comparative advantage theory in trade in financial services (including insurance) is introduced.The growth of Asian foreign exchange stock markets is examined with emphasis on ethical issues and how regulators attempt to control market participants. The analysis of market efficiency is extended to include aspects of social efficiency in the less developed nations of the region. Explores current issues and trends in Asian financial markets.

GENC3003
User's Guide to Personal Financial Planning
School of Banking and Finance
Staff Contact: School Office
UOC3 HPW2 S1

In recent years the rapidly changing economic environment has heavily influenced the wealth of individuals. This course aims to assist the individual in financial planning in the changing environment. Commences with overall money management strategy and includes topics such as banking services of financial institutions, choosing a source of credit, an introduction to consumer credit, housing finance, personal and household insurance, superannuation, the fundamentals of investing and small business finance. Some general knowledge in the use of foreign exchange as a household asset is introduced.

GENC5001
Introduction to the Internet and Electronic Commerce
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC3 HPW3 X1

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
Staff Contact: School Office
UOC3 HPW2 S1 S2
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
Staff Contact: School Office
UOC3 HPW2 S1 S2
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
Staff Contact: School Office
UOC3 HPW2 S1 S2

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
Staff Contact: School Office
UOC3 HPW2 S1 S2
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 by this course.

GENC7003
Managing Your Business
School of Business Law and Tax
Staff Contact: School Office
UOC3 HPW2 S1 S2
Excluded: LEGT1711

Business management is the science of managing scarce resources, change, 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. Amongst the topics covered include: rights and obligations attached to property, dealing with suppliers, employees, subcontractors, developing legal financial models, business plans and undertaking legal and compliance audits and continuing governance reviews that provide focus to the business entities. The course will provide substantial range of analytical research and practical skills to empower students to undertake the responsibilities of the contemporary manager.

GENC9001
From Paper to the Web: Finding and Keeping Information
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC3 HPW3 X1

As information resources appear in increasingly diverse forms, researchers face increasing challenges. Students will be assisted to become critically aware of this diverging range of resources - books, journals, electronic and multimedia materials - inside and outside the walls of the University Library and throughout the World Wide Web. The context in which these materials are produced and distributed will be discussed.The issues of managing literature searches will be addressed, including search techniques, subject analysis and control, referencing styles and conventions, and the use of personal bibliographic software.

GENC9002
Web Information Resources
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC3 HPW2 S1 S2

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.School of Marketing

GEND0201
Graphics and Contemporary Society
College of Fine Arts
Staff Contact: School Office
UOC3 HPW2 S1 S2

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.

GEND1202
Drawing the Body: Studies of Surface Anatomy
School of Art
Staff Contact: School Office
UOC3 X1
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.

GEND1203
Drawing the World From Within/Without
School of Art
Staff Contact: School Office
UOC3 HPW2 S1 S2 X1
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.

GEND1204
Studies in Painting
School of Art
Staff Contact: School Office
UOC3 S1 S2 X1
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.

GEND1205
Making a Print
School of Art
Staff Contact: School Office
UOC3 X1
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/s: Lecture/seminar/workshop.

GEND1208
Studies in Sculpture
School of Art
Staff Contact: School Office
UOC3 X1
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.

GEND1209
Studies in the Camera - Analogue Photography
School of Media Arts
Staff Contact: School Office
UOC3 S1 S2
Excluded: SOMA1521,SOMA2521,SOMA3521.

This course provides an introduction to and overview of small to large camera formats and their application in the context of contemorary visual art practices. Demonstrations and workshops to enhance skill acquisition in the use of 35mm cameras provide the bases of the practical component of this couse. Topics covered and practical workshops include: 35mm camera operation; overview of medium and large format cameras; B/W film types and formats; basic natural lighting techniques; light metering; film and print processing; darkroom procedures; and print finishing/ presentation. An overview of electronic and digital cameras will be introduced in the latter half of the subject. Students will undertake a gallery visit to view contemporary photomedia work. Slide lecture topics will comprise the History of Photography, and The Photographic Image in Contemporary Visual Arts. The industrial/commercial uses of image capture devices and the impact of new imaging technologies are discussed and explored.

GEND1210
Studies in the Print - Analogue Photography
School of Media Arts
Staff Contact: School Office
UOC3 S1 S2
Excluded: SOMA1521,SOMA2521,SOMA3521.

This course provides an introduction to and overview of the analogue photographic print in the context of contemporary visual art practices. Demonstrations, workshops and darkroom procedures in fine printing of black & white and colour photographs are the basis of the practical component of this course. Topics covered and practical workshops include: B/W and colour film types and formats; B/W film processing and print procedures; basic colur print procedures; and print finishing/ presentation. An overview of various digital output methods and their relationship to analogue technologies will be introduced in the latter

half of the subject. Students will undertake a gallery visit to view contemporary photomedia work. Slide lecture topics will comprise the History of Photography, and The Photographic Image in Contemporary Visual Arts. The industrial/commercial uses of image capture devices and the impact of new imaging technologies are discussed and explored.

GEND1211
The Artist's Studio
School of Art
Staff Contact: School Office
UOC3

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 deskilling of the contemporary artist.

GEND1212
Analysing a Picture: Composition and Design in Art
School of Art
Staff Contact: School Office
UOC3 X1

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.

GEND2201
Art Therapy
School of Art History and Theory
Staff Contact: School Office
UOC3
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 subject 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.

GEND2202
Multicultural Contexts
School of Art Education
Staff Contact: School Office
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 multi culturalism 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.

GEND2205
Dialogues and Communities
School of Art Education
Staff Contact: School Office
UOC3 S2 X2

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.

GEND2206
The Art Museum and Art Education
School of Art Education
Staff Contact: School Office
UOC3 S2

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.

GEND3218
Psychoanalysis and Art
School of Art History and Theory
Staff Contact: School Office
UOC3 S1
Excluded: SAHT2644, COFA2256 and exclusions apply to some Faculty of Arts and Social Sciences courses.

The subject is designed to develop a critical understanding of the relationship between specific theories of psychology, psychonalysis 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/s: HPW2 lecture/tutorial/seminar. Kensington Campus.

GEND3230
Art, Money and Power
School of Art History and Theory
Staff Contact: School Office
UOC3 HPW2 S1

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.

GEND3231
Picturing Death: Art and the Human Predicament
School of Art History and Theory
Staff Contact: School Office
UOC3

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 castrophes 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.

GEND3232
Pornography, Art and Politics
School of Art History and Theory
Staff Contact: School Office
UOC3 HPW2 S1 S2
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.

GEND3238
Memory and Self
School of Art History and Theory
Staff Contact: School Office
UOC3 HPW2 S2
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'.

GEND4202
Design and Human Functioning
School of Design Studies
Staff Contact: School Office
UOC3 HPW2 S1
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.

GEND4203
Design Management
School of Design Studies
Staff Contact: School Office
UOC3 HPW2 S1 S2
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.

GEND4204
Designing: Practical Studies in Design
School of Design Studies
Staff Contact: School Office
UOC3

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 environmens design may be integrated to contribute to the development of richer appropriate design solutions.

GEND4205
Design Communications and Presentations
School of Design Studies
Staff Contact: School Office
UOC3 X1

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 textural 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.

GEND4206
Integrated Design Studio
School of Design Studies
Staff Contact: School Office
UOC3

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.

GEND4207
Designing: Models as a Tool for Design Communication
School of Design Studies
Staff Contact: School Office
UOC3 X1
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.

GEND4208
Working with Ceramics
School of Design Studies
Staff Contact: School Office
UOC3 HPW2 S1 S2 X1
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.

GEND4209
Working with Jewellery
School of Design Studies
Staff Contact: School Office
UOC3 HPW2 S1 S2 X1
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.

GEND4210
Textiles and Fashion
School of Design Studies
Staff Contact: School Office
UOC3 S1 S2 X1
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.

GEND4211
Design in Performance
School of Design Studies
Staff Contact: School Office
UOC3 HPW2 S1 S2 X1
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.

GEND4212
Design in Adornment and Costume
School of Design Studies
Staff Contact: School Office
UOC3 HPW2 S1 S2 X1

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.

GEND4213
The Arts of Aboriginal People and Torres Strait Islanders
School of Design Studies
Staff Contact: School Office
UOC3
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.

GEND5201
Landscape Animation Elective
School of Media Arts
Staff Contact: School Office
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 aesthotic 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
Staff Contact: R Cox
UOC3 HPW2 S1 S2

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
Staff Contact: School Office
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.

GENE3051
Solar Cars - Speed of Light
Centre for Photovoltaic Engineering
Staff Contact: J Cotter
UOC3 HPW2 S1

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
Staff Contact: R Odell
UOC3 HPW2 S1

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.

GENE7801
Energy and Mineral Resources - Use or Abuse?
School of Mining Engineering
Staff Contact: C Daly
UOC3 HPW2 S1 S2

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 below.

GENL0220
Effective Communication
Faculty of Law
Staff Contact: G Poole
UOC3 HPW2 S1
Excluded: GENP0220, PLAN1062

This course is designed to facilitate an understanding of the key aspect of effective communication, including negotiation and mediation skills. The strong practical emphasis will provide students with the opportunity to develop their interpersonal skills as well as their written, oral and non-verbal presentation techniques, in a variety of contexts. Students will work individually, in pairs and in groups; and will gain confidence in role-play situations.The course will enable students to become aware of contemporary interpersonal communication theory; analyse self more fully and assess personal goals and needs; apply key concepts of effective interpersonal skills; analyse the nature of conflict; further develop effective problem-solving, assertiveness strategies, and conflict resolution techniques. As well, gain an understanding of intercultural and cross-cultural communication in everyday, interview and legal contexts. Attention will be given to the features and benefits of Plain English in documents. Students will also gain experience in functional and written expression modes, eg writing media releases and report writing.Assessment: report 30%; oral presentation 25%; short answer test 20%; tutorial participation 25%.

GENL0230
Law in the Information Age
Faculty of Law
Staff Contact: D Wilding
UOC3 X1

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

GENL1020
World Religions: Customs and Laws
Faculty of Law
Staff Contact: P Gwynne
UOC3 HPW2 S1 S2 X1

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.

GENL2020
An Introduction to the Australian Legal System
Faculty of Law
Staff Contact: J Krygier
UOC3 HPW2 S1 S2

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 colonialisation 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
Staff Contact: C Connolly
UOC3 HPW2 S1 S2

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, jurisdictional problems and borderless transactions. There will be a team teaching approach with a number of lecturers.

GENL3000
Selected Themes on Women in Ancient and Medieval Society
Faculty of Law
Staff Contact: R Bauman
UOC3 HPW2 S1

The transition from the world of Rome to the Middle Ages has been studied from numerous points of view - history, constitutional theory, politics, law, economics, sociology. The course examines the transition through a special lens, namely the role of women. The following themes are covered: family mobility and social mobility; political power (although excluded from formal leadership, women always exercised significant influence on the course of events and sometimes reached positions almost equivalent to actual leadership); crime and punishment (women were not always subjected to the same punishments as men but this was not always an advantage - some of the punishments inflicted on women were more horrendous than those inflicted on men); the changing face of legend (some well known legends about women, such as Helen of Troy, the Amazons, Lucretia were reinterpreted by successive generations in the light of changing political and social patterns).

GENL3040
Human Rights in Ancient Rome
Faculty of Law
Staff Contact: R Bauman
UOC3 HPW2 S2

The modern conception of human rights is arguably a derivative of the Roman model. The course will include comparisons of selected aspects of the Roman and modern versions (which begin with the United Nations' Declaration of Human Rights of 1948). The Romans developed models of laws which emerged to meet the needs of developing societies and it is argued that not only the substance but also the mode of development of this area of jurisprudence has parallels in the ancient world. All necessary modern material is available, in English, in the library. The Roman material - legislation and the case law - is partly in the llibrary, in text and in translation; the rest will be supplied, in translation, in the materials.

GENL3052
Law on Film: Representations of the Law and Legal Process on Film
Faculty of Law
Staff Contact: School Office
UOC3 HPW2

Legal films arise out of conflict and therefore are inherently dramatic. They are frequently resolved in a courtroom, a stage for the resolution of questions of guilt and innocence, right and wrong, good and evil. Films about law are frequently self-reflexive: stories about the process of storytelling. The primary reflexive relationship between mainstream cinema and the courtroom centres on the construction of narrative: investigators piece together stories, witnesses tell stories, legal advocates tell and retell stories, judges and juries evaluate stories on criteria of plausibility and narrative coherence. Legal films frequently examine difficult and contentious social issues: abortion, the death penalty, environmental pollution. This course will seek to provide a foundation for understanding intersecting narrative strategies employed by both film and law, as well as the cultural implications of this convergence. The course will investigate the evolution of legal films; cinematic portrayals of legal processes and legal characters, positive and negative images of lawyers and judges and the legal profession, 'women lawyer films' as they chart debates over the politics of representation of professional women on film, issues of race and the law. Students will be encouraged to investigate how these films disclose the legal issues and debates, social concerns, anxieties and currents of the time in which they were produced and/or were set, e.g. divorce laws in the 1930s, industrial pollution and environmental cases in the 1990s.

GENL5020
Business Fundamentals
Faculty of Law
Staff Contact: J Braw
UOC3 HPW2 S1 S2 X1

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) 50%; class participation/project, team and individual problems 50%.

GENL5030
Understanding Tax
Board of Studies in Taxation
Staff Contact: S Murphy
UOC3 HPW2 S1

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 & Children's Health
Staff Contact: School Office
UOC3 HPW2 S1 S2

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
Staff Contact: K Ashwell
UOC3 HPW3 X1 X2

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.

GENM0202
Frontiers in Brain Research
School of Medical Sciences
Staff Contact: P Carrive
UOC3 HPW3 X2
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.

GENM0510
Using the Media: Promotion Through Mass Media and Multi Media
School of Public Health and Community Medicine
Staff Contact: D Thomas
UOC3 X1 X2

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
Staff Contact: R Iedema
UOC3 X1

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 elctronic, 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
Staff Contact: D Thomas
UOC3 X1 X2

Australia spends $42 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 couse 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 fiels and explores controversies over childbirth.

GENM0701
Contemporary Bioethics
School of Public Health and Community Medicine
Staff Contact: C Berglund A Torda B Revay
UOC3 S1 S2 X1 X2

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
Staff Contact: M Lourey Bird
UOC3 HPW2 S1 S2 X1 X2

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. ***Notes:*** There will be no tutorials held on the first lecture day.

GENM1000
Miracles and Misadventures of Modern Medicine
School of Medical Sciences
Staff Contact: G Velan
UOC3 X2

Modern medicine has worked miracles, with the result of increased life expectancy for Western populations. This has been achieved by cures for previously fatal infectious diseases, early detection and treatment of cancer and coronary artery disease (our two greatest killers), improved understanding and treatment for chronic disorders such as arthritis and asthma, replacement of worn out parts (joints, heart valves) by prosthetic implants and screening for genetic disorders. This course will assume no knowledge of biology, and will introduce students to a selection of advances in modern medicine, and the scientific principles on which they are based. Students will also be encouraged to think critically about the pitfalls (and misadventures) of modern medicine, examples of which will be given in each topic. Tutorials and seminars by experts in their respective fields will be used as a stimulus for discussion and further exploration of the beneficial and deleterious aspects of Western medicine. The course will run in the final week of the mid-year recess.

GENR0003
Spirit, Myth and Sacredness in Architecture
Interior Architecture Program
Staff Contact: H Stephens
UOC3 HPW2 S2

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
Staff Contact: School Office
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 on the topic.

GENR0008
History, Theory and Interpretation: Art and Architecture
Architecture Program
Staff Contact: School Office
UOC3 S1

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.

GENR0010
Architecture and Music
Architecture Program
Staff Contact: M Tawa
UOC3 HPW2 S1

Architecture and music are the arts of space and time. Architecture uses the science of geometry and proportion to construct space, while music uses the science of harmonics to construct sound. This course will explore some of the theoretical and compositional arrangements between architecture and music by studying selected buildings and musical compositions in terms of different ideological and cultural perspectives.Lectures and seminars will follow a thematic structure to examine the philosophical, compositional, aesthetic and emotional qualities of architecture and music, as well as the ethos of the cultures which produce them. Topics include Pythagorean and Platonic ideas of number, geometry, harmonics and music; the sacred architecture and music of India, the Western Middle Ages and the Renaissance; as well as current architectural and musical forms in their cultural and urban settings. The course will also broach significant philosophical issues associated with contemporary postmodern and post structural theory such as order and chaos, limit and freedom, technology and environment, meaning and representation, metaphor and symbolism, singularity and community.

GENR0012
Great Buildings of the World
Architecture Program
Staff Contact: H Stephens
UOC3 HPW2 S1

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
Staff Contact: School Office
UOC3 HPW2 S1
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
Staff Contact: H Stephens
UOC3 HPW2 S2

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
Staff Contact: School Office
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.

GENR0026
Gendered Spaces
Interior Architecture Program
Staff Contact: L Zamberlan
UOC3 HPW2 S2

This course will examine the paradigms of and connections between sexuality and constructed spaces. Issues of sexuality and place will be considered through literature, architecture and cinema with emphasis on the convergent discourses that are revealed across these disciplines. Excerpts from film, literature and architecture will be used as illustrations for investigation and discussion into the representation of gender and space. Issues regarding the female and space, architectures of masculinity and the androgyne will be considered along with the mechanisms with which architecture perpetuates the social order of gender. Classes will provide a platform from which students are encouraged in the advancement of active speculation and critical discourse of current social ideologies. Material is presented as seminars and tutorials. Assessment will be based on active contribution in discussion together with individual and group projects.

GENS0501
The Marine Environment
Faculty of Science
Staff Contact: Dr Matthew England
UOC6 HPW4 S1 S2
Excluded: GENS4625, MSCI2001

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.

GENS1004
Science and the Cinema
School of Chemical Sciences
Staff Contact: School Office
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
Staff Contact: School Office
UOC3 HPW2 X1 X2

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/s: This course only runs in Summer and/or Winter sessions.

GENS2005
History of Mathematics
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: 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
Staff Contact: O Standard
UOC3 HPW2 X1

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/s: 28 hrs/week lecture/tutorials. Offered over 5 days on a full-time basis in the summer recess 17-21 February. Includes field trip to Powerhouse museum.

GENS4001
Astronomy
School of Physics
Staff Contact: S Hagon
UOC3 HPW2 S1 S2 X1
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
Staff Contact: S Hagon
UOC3 HPW2 S2
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
Staff Contact: S Hagon
UOC3 HPW2 S2

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
Staff Contact: S Hagon
UOC3 HPW2 S1 S2

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/s: In Session 2, this course will be taught via web delivery.

GENS4011
Science of Music
School of Physics
Staff Contact: S Hagon
UOC3 HPW2 S2

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.

GENS4013
The World of Light
School of Physics
Staff Contact: S Hagon
UOC3 HPW2 S1

Most of our knowledge of the external world is conveyed by light. The nature of light has always been a topic at the forefront of science, and this remains true today. Although light plays such an important role in our lives, many of its wonderful manifestations remain unnoticed by many. This course examines how light interacts with matter and how our increased understanding allows us to manipulate it.

GENS4014
Are We Alone? The Search for Life Elsewhere in the Universe
School of Physics
Staff Contact: S Hagon
UOC3 HPW2 S1 S2
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 or 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
Staff Contact: S Hagon
UOC3 S1 S2

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 ateaching aid to stimulate student interest and as a starting point from which to communicate the science, and its likely future development. Thiscourse also examines the interaction between science and society, encouraging students to consider how culture influences science and viceversa. 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
Staff Contact: School Office
UOC3 HPW2 S1 S2

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.

GENS6011
The Consumers guide to DNA
School of Biotechnology and Biomolecular Sciences
Staff Contact: H Shoory
UOC3 HPW2 S1
Excluded: BIOC2201, BIOC229, GENB1011

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&Fallacy
Faculty of Science
Staff Contact: School Office
UOC3
Excluded: BIOC1319, BIOC1320, BIOC2101, BIOC2181, BIOC2312, BIOC2372, GENB1002, BIOC1221, BIOD1319, BIOD1320

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. For more information consult www.GENB1002.babs.unsw.edu.au
Note/s: S1 = HPW 2. X2 = web mode and approximately 6 mornings of lectures and tutorials in July.

GENS6013
Plants & People: Murder Magic Medicine
Faculty of Science
Staff Contact: Dr Ian McFarlane
UOC3 HPW2 S2
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.

GENS6033
HIV and Other Unconquered Infections
Faculty of Science
Staff Contact: School Office
UOC3

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 haemorraghic 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/s: Distance (web) mode

GENS6071
Technological, Social and Business Aspects of Alcohol
Faculty of Science
Staff Contact: School Office
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/s: 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
Faculty of Science
Staff Contact: G Hyde
UOC6 HPW3 S1 S2
Excluded: BIOS1101, BIOS1201, BIOS1401, LAND1151, GENB2001

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. 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.

GENS7601
Earth - the Dynamic Planet
School of Biological, Earth & Environmental Sciences
Staff Contact: M Buck
UOC3 HPW2 S1
Excluded: GEOL1111/GEOS1111, GEOL1211/GEOS1211, GENS4625

An exploration of the myth of a 'solid Earth'. With satellite imagery as a tool an examination is made of how the Earth is so different from the other members of the solar system. The fundamental driving forces operating, both within and outside the Earth, are considered in view of their role in the movement of continents, construction of mountain ranges, formation of ocean basins, generation of volcanoes, and circulation within the atmosphere and oceans. A view is given of our relationship with the Earth, including the exploitation of mineral and fuel resources, human-induced hazards such as the greenhouse-effect and the hole in the ozone layer, and the natural hazards that humans have no control over, including ice ages, volcanoes, earthquakes, landslides and tsunamis.
Note/s: Multiple choice assessment.

GENS7602
Viewing the Earth Through a Geological Window
School of Biological, Earth & Environmental Sciences
Staff Contact: D Cohen
UOC3 X2
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. The nature of resources and their genesis. Tutorial sessions on methods of processing satellite imagery and maps. Field excursions examining the influence of geology on landscape and land use. Visits to modern and historical mine workings. Four-day short course delivered during July break.
Note/s: Students will occur some costs associated with field excursion.

GENS7604
Energy Resources for the 21st Century
School of Biological, Earth & Environmental Sciences
Staff Contact: C Ward
UOC3 X2
Excluded: GEOL1111/GEOS1211

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
Staff Contact: A Green
UOC3 HPW2 S2 X1

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/s: Short course mode only (compulsory 3 day workshop plus assessable tasks completed subsequently).

GENS8002
Sports Performance and Injury Prevention
School of Safety Science
Staff Contact: A McIntosh
UOC3 HPW2 S1

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/s: Assignment and laboratory participation.

GENS8003
Work and Safety
School of Safety Science
Staff Contact: C Khalil
UOC3 S1 S2 X1 X2

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.
Note/s: Also offered by web delivery in X1 S1 X2 S2.

GENS8004
Ergonomics, Productivity and Safety
School of Safety Science
Staff Contact: K Kothiyal
UOC3 S1 S2 X1 X2

Ergonomics, Productivity and Safety 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 workplaces. The course discusses the role of ergonomics with reference to the social context, especially in enhancing productivity

and safety in the workplaces. It emphasises the social role of ergonomics in creating jobs and workplaces that increase workers safety and satisfaction. The course will discuss 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 will be 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/
Note/s: Also offered by web delivery in X1 S1 X2 S2.

GENS8005
Environmental Management in the Workplace
School of Safety Science
Staff Contact: C Khalil
UOC3 S1 S2 X1 X2

Environmental problems are seen by society as a failure of technology and industry to play their part in prevention. Environmental Management in the Workplace explores the full range of environmental problems that occur in industry. Students will develop skills to examine, as well as, to play an active role in solving these problems. Students will 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/
Note/s: Also offered by web delivery in X1 S1 X2 S2.

GENS9001
Psychology of the Individual and the Group
Faculty of Science
Staff Contact: J Cranney
UOC6 HPW4 S1
Excluded: GENB4001, PSYC1001

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
Faculty of Science
Staff Contact: J Cranney
UOC6 HPW4 S2
Excluded: GENB4002, PSYC1011

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.

GENS9005
Psychology of Work
Faculty of Science
Staff Contact: J Bright
UOC3 HPW2 S2
Excluded: GENB4005, PSYC2001, PSYC3526

How does the psychologist approach the world of work? This course will involve an examination of the aims, methods and ethics of industrial and organisational psychology. How are the tools of this area used to further the aims of organisations in areas such as personnel selection, training, job analysis and design? What is the relation between job satisfaction and job performance?

GENS9007
The Psychobiology of Sex, Love and Attraction
Faculty of Science
Staff Contact: R Richardson
UOC3 HPW2 S2
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
Faculty of Science
Staff Contact: W Von Hippel
UOC3 HPW2 S1
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.

GENT0201
Communication Skills
School of English
Staff Contact: C Painter
UOC3 HPW2 S1
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
Staff Contact: P Kuch
UOC3 HPW2 S1
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.

GENT0211
Seeing Australia
School of English
Staff Contact: W Ashcroft
UOC3 HPW2 S2
Excluded: ENGL1008.

Taught completely in online mode. Explores the ways in which Australia has historically been depicted and understood. Investigates how Australia has come to exist in the consciousness of its own and other people: rather than a story of the nation moving forward from the moment of colonisation, Australia is seen as the subject of many culturally disparate 'ways of seeing'. The concept of 'seeing' itself is analysed in this process. 'Seeing' stands for many different ways of knowing and representing and these will be explored in a range of texts: written texts in poetic, narrative and dramatic form; popular culture texts such as advertising; visual texts, including painting, photography and films.

GENT0212
Creative Writing
School of English
Staff Contact: P Dawson
UOC3 HPW2 S2
Excluded: GENT0205, ENGL3750, ENGL3751, ENGL3753, ENGL3754.

Introduces students to a wide range of approaches to writing fiction, poetry and performance work. Students will be encouraged to experiment with unusual approaches and will be given advice on how to develop, structure and edit their work. Based on weekly lectures and writing workshops. Both beginners and more advanced writers are welcome.

GENT0307
Sport in the Western World
School of History
Staff Contact: R Cashman
UOC3 HPW2 S2
Excluded: All HIST courses.

Explores why sport has become a dominant form of culture in particular Western societies and examines the varieties of sporting cultures from ancient times to the present. Topics include: sport in Greek and Roman societies; court traditions in medieval times; folk sports including blood sports; the civilisation and codification of sport in recent centuries; sport and colonialism; the Olympic movement; sport in the USA and Australia; sport and politics and the globalisation of sport.

GENT0308
Olympic Games and Mega Events
School of History
Staff Contact: R Cashman
UOC3 HPW2 S1
Excluded: All HIST courses.

Focuses on cultural, social, political and economic dimensions of past and future mega events - the Olympics, the Commonwealth and Asian Games, World Fairs and World Cups. Considers issues relating to winning and hosting such events and evaluating the costs and benefits to the host city and country. Topics include: bidding for events, community involvement, media and sponsorship, the role of government, the impact on the environment, and legacy.

GENT0310
Opiate of the People? Religion and Western Society, 1500-2000
School of History
Staff Contact: J Gascoigne
UOC3 HPW2 S2
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.

GENT0311
A History of Football: Folk Football to World Cups
School of History
Staff Contact: A Hughes
UOC3 HPW4 X1 X2
Excluded: All HIST courses.

The history of football from a violent mob game in medieval times to a contemporary global spectacle. Considers how and why the game became civilised in the nineteenth century and its social utility. Examines how different codes emerged, such as soccer, rugby and rugby league, and became mass spectacles. Topics include: folk football; masculinity and gender issues; football and colonialism; the amateur ideal and professionalism; the social, economic and cultural impact of World Cups; the role of FIFA and the IRFU and television and globalisation.

GENT0312
Dressed to Kill: Dress and Identity in History
School of History
Staff Contact: M Roces
UOC3 HPW2 S1

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 courture, and issues of tradition and modernity as shown through the human body. The relationships between cocealment 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
Staff Contact: V Doulaveras
UOC3 HPW2 S1 S2
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.

GENT0410
Life in Russia: Yesterday and Today
School of Modern Language Studies
Staff Contact: School
UOC3 HPW2 S1
Excluded: EURO2500

Begins with an introduction to Russian life through art, literature, film, history and politics. Considers what it was like to live in Russia in the past, using literature, memoirs and historical works. Attempts to understand what is happening today, examining politics, day-to-day life and culture.

GENT0411
What Word is That? A Brief History of Where English Words Come from
School of Modern Language Studies
Staff Contact: C Hollo
UOC3 HPW2 S2

Shows students how to trace the history of a word from its first recorded form to the present. An overview of the history of the English language in a social and political context will provide the basic framework of relationships between the different languages that have influenced English vocabulary. Explains the processes that bring about changes in languages: stress patterns, changes in sounds, forms and meanings, how words are added and how they drop out of use. Examples will be discussed in tutorials.

GENT0412
Contemporary Japan
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC3 HPW2 S1
Excluded: IBUS2103, JAPN2500, GENC8001, JAPN3900

Since World War II, Japan has undergone massive social, political and economic transformations. Today, Japan is in a state of rapid ageing of its population. The Japanese economy also faced severe difficulties arising from the fallout from the 'bubble economy' of the 1980s, the continuation of a chronic current account surplus and yen volatility. Provides an overview of modern Japan, covering a broad range of issues including politics, economy, education, the role of women, minorities, science and technology and international relations.

GENT0414
Korea at a Glance
Department of Japanese and Korean Studies
Staff Contact: G Evon
UOC3 HPW2 S2
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
Staff Contact: H Hendrischke
UOC3 HPW2 X1
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
Staff Contact: L Heinrich
UOC3 HPW2 S1
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.

GENT0425
French Language for Beginners
Department of French
Staff Contact: C Sheaffer-Jones
UOC6 HPW6 S1
Excluded: FREN1001

Designed for students who have little or no knowledge of French. The most recent methods are used to give students a sound basis in spoken and written French. The course also includes an introduction to contemporary French culture, and a graded reading program.
Note/s: Comprises 5 HPW of scheduled classes plus 1 HPW language laboratory. This course is not available to students enrolled in Faculty of Arts and Social Sciences degree programs.

GENT0426
German Language for Beginners
Department of German and Russian Studies
Staff Contact: B Boss
UOC6 HPW6 S1
Excluded: GERS1400

An intensive practical language course which provides students who have no previous knowledge of German with basic culturally appropriate communicative skills in spoken and written German.
Note/s: This course is not available to students enrolled in Faculty of Arts and Social Sciences degree programs.

GENT0427
Greek Language for Beginners
Modern Greek Studies
Staff Contact: V Doulaveras
UOC6 HPW6 S1
Excluded: GREK1001

Divided into two sections: Language (HPW5) and History and Culture (HPW1). The aim is to enable students to communicate in a Greek-speaking environment, to discuss everyday topics, to write a simple composition and read a short story using a dictionary. The History and Culture component will familiarise students with basic aspects of the Greek culture and society.
Note/s: This course is not available to students enrolled in Faculty of Arts and Social Sciences degree programs.

GENT0428
Indonesian Language for Beginners
Department of Chinese & Indonesian Studies
Staff Contact: D Reeve
UOC6 HPW6 S1
Excluded: INDO1001

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/s: Excluded 2 or 3 Unit HSC Indonesian or equivalent or native speakers of Indonesian and Malay. This course is not available to students enrolled in Faculty of Arts and Social Sciences degree programs.

GENT0429
Italian Language for Beginners
School of Modern Language Studies
Staff Contact: D Palaversich
UOC6 HPW6 S1
Excluded: ITAL1001

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/s: Students who have taken HSC Italian or equivalent courses are excluded from this course. This course is not available to students enrolled in Faculty of Arts and Social Sciences degree programs.

GENT0430
Japanese Language for Beginners
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW6 S1
Excluded: JAPN1000

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 approriate ways are stressed.
Note/s: This course is not available to students enrolled in Faculty of Arts and Social Sciences degree programs.

GENT0431
Korean Language for Beginners
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW6 S1
Excluded: KORE1000

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.
Note/s: This course is not available to students enrolled in Faculty of Arts and Social Sciences degree programs.

GENT0432
Latin Language for Beginners
School of Modern Language Studies
Staff Contact: R Pitcher
UOC6 HPW6 S1
Excluded: LATN1000

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, medieval 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/s: Excluded HSC Latin or equivalent. This course is not available to students enrolled in Faculty of Arts and Social Sciences degree programs.

GENT0434
Russian Language for Beginners
Department of German and Russian Studies
Staff Contact: School
UOC6 HPW6 S1
Excluded: RUSS1111

Designed for students who have little or no knowledge of Russian. The most recent methods are used to give students a sound basis in spoken and written Russian. The course also includes an introduction to contemporary Russian culture, and graded reading program.
Note/s: Comprises 5 HPW in scheduled classes plus 1 HPW language laboratory. This course is not available to students enrolled in Faculty of Arts and Social Sciences degree programs.

GENT0435
Spanish Language for Beginners
Department of Spanish and Latin American
Staff Contact: School Office
UOC6 HPW6 S1
Excluded: SPAN1000, SPAN1001, 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.
Note/s: All students must attend a first meeting for information and organisation of tutorial groups. This course is not available to students enrolled in Faculty of Arts and Social Sciences degree programs.

GENT0436
Chinese Language for Beginners A
Faculty of Arts and Social Sciences
Staff Contact: P Lee
UOC3 HPW2 S1
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
Staff Contact: P Lee
UOC3 HPW2 S2
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/s: 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
Staff Contact: G Stubington
UOC3 HPW2 S1
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
Staff Contact: J Napier
UOC3 HPW2 S1
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
Staff Contact: C Logan
UOC3 HPW2 S1 S2
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
Staff Contact: C Logan
UOC3 HPW2 S1 S2
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
Staff Contact: E Schubert
UOC3 HPW2 S2
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
Staff Contact: School Office
UOC3 HPW2 S2
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
Staff Contact: P Staines
UOC3 HPW2 S1

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
Staff Contact: G Kitching
UOC3 HPW2 S2
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 Mass Media
School of Media and Communications
Staff Contact: S Shaner
UOC3 HPW2 S1
Excluded: GENS4507, SOCA1005, all MDCM courses.

Provides students with an introduction to the issues that arise in the study of media. Structured around concepts, such as ideology, mediation, representation and identity, which are exemplified by looking at different media forms. Covers a range of media, from film and television to advertising, print news to the web. Investigates the media as a cultural industry that does more than merely reflect or report on society. Looks at the complex and quite specific role that media plays in our understanding of society and ourselves.
Note/s: Offered by class attendance or in web mode. Runs in weeks 1 to 7.

GENT0804
Internet and Cyberculture
School of Media and Communications
Staff Contact: C Chesher
UOC3 HPW2 S2
Excluded: All MDCM 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
Staff Contact: P Hardy
UOC3 HPW2 S1
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
Staff Contact: P Brown
UOC3 HPW2 X2
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.

GENT0906
The Risks of Technology
School of History and Philosophy of Science
Staff Contact: G Bindon
UOC3 HPW3 X1
Excluded: All HPSC and SCTS courses

Analyses the social context for debates about the risks posed by modern technologies. Employs the methods of the social sciences to understand the social and political controversies which are frequently associated with industrial development. The history of environmental disputes demonstrates that technical solutions alone have not been successful in addressing the concerns of stakeholders, who bring their different cultural perspectives to bear on any controversy. Analyses the way such disputes unfold. Investigates questions of trust, credibility and fairness, the application of the precautionary principle, and the way decisions are made in the presence of scientific uncertainty and competing rationalities.

GENT0911
Maniacs, Murderers and Medical Detectives
School of History and Philosophy of Science
Staff Contact: P Hardy
UOC3 HPW2 X1
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
Staff Contact: F Lovejoy
UOC3 HPW6 X2
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 the Pacific Islands Through Fieldwork
School of Sociology
Staff Contact: G McCall
Enrolment requires School approval
UOC6 S2
Excluded: SOCA2204, SOCI3710, GENT1204

Provides training in and use of ethnographic fieldwork methods in the context of a Pacific Island 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 shape village life.
Note/s: Taught in November-December 2004. Students must contact Grant McCall g.mccall@unsw.edu.au prior to the commencement of Session 2.

GENT1207
Crime, Sex and Gender
School of Sociology
Staff Contact: F Lovejoy
UOC3 HPW2 X1
Excluded: SOCA3409

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
Staff Contact: F Lovejoy
UOC3 HPW6 X1
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
School of Theatre, Film and Dance
Staff Contact: School Office
UOC3 HPW4 S1
Excluded: All FILM, GENS5180, all THFI

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

GENT1303
Critical Approaches to Film
School of Theatre, Film and Dance
Staff Contact: School Office
UOC3 HPW4 S2
Excluded: All FILM, GENS5180, all THFI

Introduces students to filmic literacy, looking at the history, analysis and basic theory of the cinema. Shows how films are textual systems that can be 'read' in many different ways. Provides exercises in detailed analysis of and reference to a wide range of modern international films, and investigates issues of genre (westerns, action, horror, etc.) and questions of stardom and the screen presence of the actor.

GENT1304
Television and Video Culture
School of Theatre, Film and Dance
Staff Contact: School Office
UOC3 HPW4 S1
Excluded: GENS5180, all FILM courses, all THFI courses

Investigates the history and current state of the most pervasive media form of the modern world, and asks questions about its future influence and development. The material covered includes popular television series and serials, talk shows, television programming and the politics of the television industry.

GENT1401
Biopsychosocial Study of Humour
School of Social Work
Staff Contact: C Moran
UOC3 HPW2 S1
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
Staff Contact: F Trainer
UOC3 HPW2 X1 X2
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
Staff Contact: M Gross
UOC3 HPW3 S1
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.
Note/s: Runs for 9 weeks only

GENT1502
Student Learning Thinking and Problem Solving
School of Education
Staff Contact: J Sweller
UOC3 HPW3 S2
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/s: Runs for 9 weeks only

GENT1503
Introduction to Educational Psychology
School of Education
Staff Contact: J Sweller P Chandler
UOC3 HPW3 S1
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/s: Runs for 9 weeks only

GENT1506
Social Foundations of Education
School of Education
Staff Contact: M Matthews
UOC3 HPW3 S2
Excluded: EDST1102

The philosophical examination of aspects of Australian education such as: the role of government and pressure groups in the determination of curriculum and the distribution of resources, educational testing and inequalities in educational achievement, differing accounts of inequality, affirmative action programmes and their putative justifications, the place of justice in the distribution of educational resources, and the justification of curriculum decisions.
Note/s: Runs for 9 weeks only

GENT1507
Learning Process and Instructional Procedures
School of Education
Staff Contact: R Low
UOC3 HPW2 S1
Excluded: 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
Staff Contact: P Jin
UOC3 HPW2 S1
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.

GENT1513
Culture, Identity & Education
School of Education
Staff Contact: M Varvaressos
UOC3 HPW3 S1
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/s: Runs for 9 weeks only

GENT1520
Motivation in Learning and Teaching
School of Education
Staff Contact: J McCormick
UOC3 HPW3 S2
Excluded: 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.

GENX0101
Indigenous Australia - Travelling Through Time
Aboriginal Research and Resource Centre
Staff Contact: S Green
UOC3 HPW2 S1
Excluded: 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
Aboriginal Research and Resource Centre
Staff Contact: S Green
UOC3 HPW2 S2
Excluded: 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
Aboriginal Research and Resource Centre
Staff Contact: S Green
UOC3 HPW2 S1

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/s: Includes museum/gallery visits.

GENX0104
Aboriginal Popular Culture - We Hear the Songs, See the Dance and Live the Culture
Aboriginal Research and Resource Centre
Staff Contact: S Green
UOC3 HPW2 S2

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/s: Includes a half-day excursion to examine a number of forms of Aboriginal popular culture.

GEOH1601
Australian and Global Geographies: Integration and Divergence
Built Environment Geography
Staff Contact: K Dunn
UOC6 HPW4 S2
Excluded: GEOG1601, GEOG1621, GEOG1062, GEOG1064

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
Built Environment Geography
Staff Contact: W Shaw
UOC6 HPW3 S1
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
Built Environment Geography
Staff Contact: W Shaw
UOC6 HPW3 S1

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
Built Environment Geography
Staff Contact: C Gibson
UOC6 HPW4 S2

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 Informations Systems (GIS) workshops.

GEOH2801
Geographical Information Systems for Built Environment
Built Environment Geography
Staff Contact: B Parolin
UOC6 HPW6 S2

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
Built Environment Geography
Staff Contact: School Office
UOC6 HPW4
Prerequisite/s: 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
Built Environment Geography
Staff Contact: K Dunn
UOC6 HPW4 S2
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
Built Environment Geography
Staff Contact: School Office
UOC6 HPW4 S1
Excluded: GEOG3166, GEOG3621

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
Built Environment Geography
Staff Contact: C Gibson
UOC6 HPW4 X2

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
Faculty of the Built Environment
Staff Contact: K Dunn
UOC6 HPW4 S2

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
Built Environment Geography
Staff Contact: W Shaw
UOC6 HPW4 S2
Excluded: GEOH2611

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
Staff Contact: B Parolin
UOC6 HPW6 S1
Prerequisite/s: 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
Built Environment Geography
Staff Contact: J Sammut
UOC6 HPW4 S1
Excluded: GEOH3911, AUST2032

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
Built Environment Geography
Staff Contact: J Sammut
UOC6 HPW4 S2
Excluded: GEOG3921

This course focuses on coastal resource assessment and management. Topics include: Australian coastal zone policy, coastal ersoion 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
Built Environment Geography
Staff Contact: B Parolin
Enrolment requires School approval
UOC24 S1 S2

Students are required: 1. To undertake an original piece of work extending throughout the year and to submit a thesis based upon it. 2. To participate in seminars and fieldwork as notified by the School of Geography. Seminars include workshops on professional practice in geography and ethical issues in research.
Note/s: Enrolment requires the completion of a three year program, including a major or minor in Geography.

GEOH4871
Transport Applications of Geographical Information Systems
Built Environment Geography
Staff Contact: B Parolin
UOC6 HPW4 S2
Prerequisite/s: 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 & Environmental Sciences
Staff Contact: P Lennox
UOC12 HPW8 S1 S2
Prerequisite/s: 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 Univerisities Consortium of Geology and Geophysics.
Note/s: Some fieldwork may be involved; students may need to meet personal costs.

GEOL4141
Advanced Topics in Applied Geology - B
School of Biological, Earth & Environmental Sciences
Staff Contact: P Lennox
UOC6 HPW4 S1 S2
Prerequisite/s: 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 minerla 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 Univerisities Consortium of Geology and Geophysics.
Note/s: Some fieldwork may be involved; students may need to meet personal costs.

GEOL4203
Field Project P/T
School of Biological, Earth & Environmental Sciences
Staff Contact: P Lennox
Enrolment requires School approval
UOC12 HPW10 S1 S2

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/s: 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 & Environmental Sciences
Staff Contact: P Lennox
Enrolment requires School approval
UOC24 HPW18 S1 S2

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.

GEOL4205
Research Project Geology Honours 18 UOC
School of Biological, Earth & Environmental Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC18

An 18UOC research project in Geology to be completed within a single session.

GEOL4206
Research Project Geology Honours 12 UOC
School of Biological, Earth & Environmental Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW12

A 12UOC research project in Geology to be completed within a single session.

GEOL4207
Research Project Geology Honours 6 UOC
School of Biological, Earth & Environmental Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW6

A 6 UOC research project in Geology to be completed within a single session.

GEOS1111
Fundamentals of Geology
School of Biological, Earth & Environmental Sciences
Staff Contact: P Lennox
UOC6 HPW4 S1
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. Up to two days field work is required and will involve some cost to students.

GEOS1211
Environmental Earth Science
School of Biological, Earth & Environmental Sciences
Staff Contact: G Taylor
UOC6 HPW4 S2
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 enviroments 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. Skills in environmental earth science will be acquired through problem-solving laboratory tutorials and a four day field study camp. The course is delivered by experts from across the range of earth and environmental sciences. The field camp is compulsory and will involve some cost to students.

GEOS1701
Environmental Systems and Process
School of Biological, Earth & Environmental Sciences
Staff Contact: R Brander
UOC6 HPW5 S1
Excluded: GEOG1701, GEOG1721, GEOG1031, GEOG1073, GEOG1711

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. Students are required to take part in a one-day field trip.

GEOS1711
Planet Earth (Physical Geography for Environmental Engineers)
School of Biological, Earth & Environmental Sciences
Staff Contact: R Brander
UOC3 S1
Excluded: GEOG1711, GEOG1701, GEOS1701

GEOS1801
Environmental Earth Observation
School of Biological, Earth & Environmental Sciences
Staff Contact: R Merton
UOC6 HPW5 S2
Excluded: GEOG1801

This course is an introduction to the methods used to gather spatial information by remote sensing and how this can be used in mapping and displaying the observed geographical, geological and biological information gained. The course begins with coverage of the fundamentals of remote sensing including the theory of electromagnetic radiation, spectral properties of the natural and manufactured materials and airborne and satellite sensing systems. This is followed by consideration of the principles of photographic analysis and image interpretation, the fundamentals of cartographic models, GIS data handling, elementary spatial measurement, analysis of spatial arrangements, overlay and thematic mapping.

GEOS2071
Life Through Time
School of Biological, Earth & Environmental Sciences
Staff Contact: D Cohen
UOC6 HPW4 S1
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. Up to 3 days of fieldwork at selected fossil sites will be part of the course and students will incur some personal costs.

GEOS2101
Sedimentary Enviroments
School of Biological, Earth & Environmental Sciences
Staff Contact: C Ward
UOC6 HPW4 S1
Prerequisite/s: GEOL1111/ GEOS1111 or GEOL1211/GEOS1211 or GEOS170 or BIOS1101
Excluded: GEOL2101.

An introduction to the processes and products of sedimentation in natural environments, and their preservation in sedimentary rock sequences. Mechanisms of sediment transport and deposition; nature and origin of depositonal structures. Analysis of depositional environments; fluvial, deltaic, marine lacustrine, glacial and volcanic sediments. Field and laboratory methods for study of sediments, sedimentary basins, facies successions and an introduction to sequence stratigraphy. The fieldwork component will cover modern and ancient sedimentary systems and fossils as various locations, including an introduction to field measurment techniques. Up to four days of fieldwork is required and will involve some cost to students.

GEOS2171
Earth Structures
School of Biological, Earth & Environmental Sciences
Staff Contact: P Lennox
UOC6 HPW4 S2
Prerequisite/s: GEOL1111/GEOS1111 or GEOL1211/GEOS1211
Excluded: GEOL2171

Most region 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 form surface outcrop mapping. A four day field mapping camp form an essential part of the course and will involve some cost to students.

GEOS2181
Earth Materials
School of Biological, Earth & Environmental Sciences
Staff Contact: C Ward
UOC6 HPW4 S1
Prerequisite/s: GEOL1111/GEOS1111 or GEOL1211/GEOS1211 or GEOS1701
Excluded: 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 & Environmental Sciences
Staff Contact: J Jankowski
UOC6 HPW4 S2
Excluded: 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. Fieldwork at dryland saline and contaminated sites.

GEOS2711
Australian Climate and Vegetation
School of Biological, Earth & Environmental Sciences
Staff Contact: S Mooney
UOC6 HPW4 S2
Prerequisite/s: GEOG1701 or GEOG1721 or GEOG1031 or GEOG1073 or GEOS1701;
Excluded: GEOG2025, GEOG3062, 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. Fieldwork is an important component of the course and will involve expense to individuals.

GEOS2721
Australian Surface Environments and Landforms
School of Biological, Earth & Environmental Sciences
Staff Contact: D Edwards
UOC6 HPW4 S1
Prerequisite/s: GEOG1701 or GEOG1721 or GEOG1711;
Excluded: GEOG2051, GEOG3011, GEOG3025, GEOG2721.

The physical and chemical properties of soil, and the processes and factors of soil formation. The relationship between soils and the landforms on which they form. The evolution of landforms in fluvial, arid and coastal environments with an emphasis on current processes and Quaternary history within Australia. Includes a field trip to provide practical experience in physical landscape evaluation and land management techniques.

GEOS2811
Remote Sensing Applications and Digital Image Analysis
School of Biological, Earth & Environmental Sciences
Staff Contact: G Taylor
UOC6 HPW4 S2
Excluded: GEOG2811

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.
***Assumed Knowledge*:** GEOS1801

GEOS2821
Geographic Information Systems
School of Biological, Earth & Environmental Sciences
Staff Contact: S Laffan
UOC6 HPW4 S1
Excluded: GEOG2821, GEOG3122, GEOG3123, GEOG3142, GEOG3831

This course provides an introduction to GIS data display and analysis. Commercially available software will be used to develop data input skills for vector and raster data in a GIS environment, and how the interrogation of datasets to produce mapped, tabular and textual information. Emphasis will be given to the use of vector-based GIS for resource management, earth and environmental assessment, and regional analysis. Topics include spatial databases, data attributes, networks, spatial data analysis, modelling and data visualisation with application-oriented computer laboratory exercises.
***Assumed Knowledge*:** GEOS1801

GEOS3131
Field Methods and Mapping
School of Biological, Earth & Environmental Sciences
Staff Contact: P Lennox
UOC6 HPW4 S2
Prerequisite/s: GEOL1111/GEOS1111 or GEOL1211/GEOS1211 or GEOS1701
Excluded: GEOL3131

This course provides opportunity to undertake an extended field mapping exercise in a seleted 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 conjuction with other universities. 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 & Environmental Sciences
Staff Contact: G Taylor
UOC6 HPW4 S1
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. Up to four days of fieldwork is a compulsory part of this course for which students will incur personal costs.

GEOS3281
Environmental and Contaminant Geochemistry
School of Biological, Earth & Environmental Sciences
Staff Contact: D Cohen
UOC6 HPW4 S2
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 assesments; aqueous geochemistry and contaminant modelling, with reference to Australian case studies. Introduction to sampling, analytical techniques and design of environmental surveys. Fieldwork of up to 3 days duration will involve geochemical surveys at a contaminated site and students will incur some personal costs. The course has assumed knowledge of level 1 geology, geography or chemistry.

GEOS3300
Mine Geology
School of Biological, Earth & Environmental Sciences
Staff Contact: P Lennox
UOC3 HPW4 S1
Prerequisite/s: GEOL1111/GEOS1111 or GEOL5200
Excluded: GEOL3141, GEOL5300, GENS7601, GENS7602

Taught in Weeks 1 to 10, this course provides an introduction to the nature and formation of mineral deposits and coal resources. It covers the geological setting, characsteitics and genesis of major categories of metallic and non-metallic mineral resources, the nature and origin of coal-bearing sequencs and the relevance of geological factors to their extraction and use. There is an introduction to stereographic projects analysis in understanding slope stability. This course includes a laboratory study of hand specimen. Exploration and resource assessment methods are also described.

GEOS3321
Fundamentals of Petroleum Geology
School of Biological, Earth & Environmental Sciences
Staff Contact: P Lennox
UOC6 HPW4 S1
Excluded: GEOL1111/GEOS1111, GENS7601, GENS7602

Introduction to the earth sciences; nature and properties of rocks and minerals; sedimentation and sedimentary enviroments; 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. A 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 & Environmental Sciences
Staff Contact: D Palmer
UOC6 HPW4
Prerequisite/s: GEOL5321/GEOS3331 or GEOL1111/GEOS1111 or GEOL1211/GEOS1211
Excluded: GEOL5332

The applications of geophysics in 3D mapping of stuctures. 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
Specail Topics in Petroleum Geoscience
School of Biological, Earth & Environmental Sciences
Staff Contact: School Office
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.

GEOS3711
Biogeography and Human Impact in Australia
School of Biological, Earth & Environmental Sciences
Staff Contact: S Mooney
UOC6 HPW5 S2
Prerequisite/s: GEOG1701 or GEOS1701 or GEOG1711 or GEOS1711 or GEOG1721 or (BIOS1101 and BIOS1201);
Excluded: GEOG2025, GEOG3711.

The principles and applications of biogeography with an emphasis on Australian natural history and human impact. Palaeoanthropology, archaeology, human biogeography and prehistoric human impacts. The impact of Aboriginal people in Australia compared with elsewhere in the Pacific. Methods for the reconstruction of past environments, vegetation and fire. European expansionism and the impact of European settlement in Australia. The application of biogeography to the management of Australian contemporary environments.

GEOS3731
Catchment and Coastal Geomorphology
School of Biological, Earth & Environmental Sciences
Staff Contact: R Brander
UOC6 HPW4 S2
Prerequisite/s: GEOG1701 or GEOS1701 or GEOG1711 or GEOS1711 or GEOG1721
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. 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 & Environmental Sciences
Staff Contact: S Mooney
UOC6 HPW4 S1
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 & Environmental Sciences
Staff Contact: R Merton
UOC6 HPW6 S2
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*:** GEOS1801, GEOS2811.

GEOS3821
Remote Sensing and GIS Applications
School of Biological, Earth & Environmental Sciences
Staff Contact: S Laffan
UOC6 HPW4 S2
Excluded: GEOG3142, GEOG3821, GEOG3831

Advanced concepts and techniques in both vector and raster based remote sensing/GIS manipulation; scale transformations and the incorporation of satellite data; relational databases; geostatistical computations using raster structures and the modelling of processes across multi-temporal data. Laboratories will develop skills in integrating traditional vector data with that acquired from remote sensing in order to process, analyse and interpret near real-time information for a range of biological, earth and environmental applications.
***Assumed Knowledge*:** GEOS2811, GEOS2821

GEOS4404
Thesis in Applied Geography
School of Biological, Earth & Environmental Sciences
Staff Contact: S Mooney
Enrolment requires School approval
UOC12 S1 S2

Independent and original research project. Formulation under the direction of a supervisor; preparation of a project report.

GEOS4416
Honours in Physical Geography Research Project 12 UOC
School of Biological, Earth & Environmental Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC12

A 12 UOC research project in physical geography to be completed within a single session. 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. 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.

GEOS4417
Research Project Honours in Physical Geography 18UOC
School of Biological, Earth & Environmental Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC18

A 18 UOC research project in physical geography to be completed within a single session.

GEOS4418
Honours Geography
School of Biological, Earth & Environmental Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1 S2

Students are required: 1. To undertake an original piece of work extending throughout the year and to submit a thesis based upon it. 2. To participate in seminars and fieldwork as notified by the School of Geography. Seminars include workshops on professional practice in geography and ethical issues in research.
Note/s: Enrolment requires the completion of a three year program, including a major or minor in Geography.

GEOS4721
Soil Degradation & Conservation
School of Biological, Earth & Environmental Sciences
Staff Contact: D Eldridge
UOC6 HPW4 S1
Excluded: GEOG4320.

Identification, assessment and analysis of the main process of soil degradation, including the role of climate, vegetation, geomorphology and pedology in controlling the processes. Discussions of appropriate management strategies for reducing degradation for reclaiming degraded landscapes. Topics include: surface wash, gully erosion, wind erosion, soil acidification, soild structure decline, salinisation, accumulation of toxins and desertification.

GERS1400
Introductory German A1
Department of German and Russian Studies
Staff Contact: B Boss
UOC6 HPW6 S1
Excluded: GENT0426

An intensive practical language course which provides students who have no previous knowledge of German with basic communicative skills in spoken and written German. Assessment: Class tests and weekly assignments.
Note/s: Excludes students qualified to enter GERS1600 or GERS1700.

GERS1401
Introductory German A2
Department of German and Russian Studies
Staff Contact: B Boss
UOC6 HPW6 S2
Prerequisite/s: GERS1400

Sequel to GERS1400. An intensive, six hours per week practical language course which provides students who have the equivalent of 84 hours of German instruction with basic communicative skills in spoken and written German. Assessment: Class tests and weekly assignments.
Note/s: Excludes students qualified to enter GERS1600 or GERS1700. Students wishing to proceed to GERS2400 Intermediate German are strongly advised to undertake a vacation study program or to attend the German Summer School organised by the Goethe Institute.

GERS1600
Intermediate German B1
Department of German and Russian Studies
Staff Contact: G Fischer
UOC6 HPW5 S1

A five hours per week course consisting of four hours per week language work at an intermediate level and a one hour per week introduction to German Studies. Assessment: Class tests, weekly assignments, oral test.
***Assumed Knowledge*:** HSC 2 or 3 unit German or equivalent.
Note/s: Excludes students qualified to enter GERS1700.

GERS1601
Intermediate German B2
Department of German and Russian Studies
Staff Contact: G Fischer
UOC6 HPW5 S2
Prerequisite/s: GERS1600;
Excluded: GERS1122, GERS1142, GERS1322.

Sequel to GERS1600. A five hours per week course consisting of four hours per week language work at an intermediate level and a one hour per week introduction to German Studies.

GERS1700
Advanced German C1
Department of German and Russian Studies
Staff Contact: G Fischer
UOC6 HPW5 S1
Prerequisite/s: Native speaker status, as determined by the Department;
Excluded: GERS1121, GERS1141, GERS1341.

A five hours per week course consisting of advanced practical language work for advanced speakers of German concentrating on aspects of stylistics, complex issues of grammar, techniques of translation, an introduction to German Studies, and a two hour a week seminar. Assessment: Class work and assignments.

GERS1701
Advanced German C2
Department of German and Russian Studies
Staff Contact: G Fischer
UOC6 HPW5 S2
Prerequisite/s: GERS1700;
Excluded: GERS1122, GERS1142, GERS1342.

A five hour a week course consisting of advanced practical language work for advanced speakers of German concentrating on aspects of stylistics, complex issues of grammar, techniques of translation, an introduction to German Studies, and a two hour a week seminar. Assessment: Class work and assignments.

GERS2400
Intermediate German A1
Department of German and Russian Studies
Staff Contact: G Fischer
UOC6 HPW5 S1
Prerequisite/s: GERS1000 or GERS1022 or GERS1401;
Excluded: GERS2021.

A course involving four hours of language work at an intermediate level and a one hour a week course of studies of cultural aspects of German-speaking countries. Assessment: Class tests, weekly assignments, oral test.

GERS2401
Intermediate German A2
Department of German and Russian Studies
Staff Contact: G Fischer
UOC6 HPW5 S2
Prerequisite/s: GERS2400 or GERS2021;
Excluded: GERS2022.

Sequel to GERS2400. A course involving four hours of language work at an intermediate level and a one hour a week program of studies of cultural aspects of German-speaking countries.

GERS2605
Advanced German B1
Department of German and Russian Studies
Staff Contact: B Boss
UOC6 HPW5 S1
Prerequisite/s: GERS1122 or GERS1601 or GERS2022;
Excluded: GERS2001, GERS2142, GERS2600, GERS2601, GERS2603.

A five-hour a week course consisting of three hours advanced language work and a two hour language-based seminar on exemplary aspects of literary and cultural studies of German-speaking countries with emphasis on modern or contemporary issues.

GERS2606
Advanced German B2
Department of German and Russian Studies
Staff Contact: B Boss
UOC6 HPW5 S2
Prerequisite/s: GERS1122 or GERS2022 or GERS2605;
Excluded: GERS2001, GERS2142, GERS2600, GERS2601, GERS2603.

A five hour a week course consisting of three hours advanced language work and a two hour language-based seminar on exemplary aspects of literary and cultural studies of German-speaking countries with emphasis on modern or contemporary issues.

GERS2700
Advanced German C3
Department of German and Russian Studies
Staff Contact: G Fischer
UOC6 HPW5 S1
Prerequisite/s: GERS1322 or GERS1701;
Excluded: GERS2141, GERS2142.

A five hours per week course consisting of a two hour language-based seminar on exemplary aspects of literary and cultural studies of German-speaking countries with emphasis on modern or contemporary issues, and two seminars of one and a half hours each from the annual seminar program in German Studies. With permission from the Head of Department, students may substitute one or two seminars by choosing other courses dealing with Germany or German speaking countries or language-related courses offered in other Schools of the Faculty.

GERS2701
Advanced German C4
Department of German and Russian Studies
Staff Contact: G Fischer
UOC6 HPW5 S2
Prerequisite/s: GERS1322 or GERS1701 or GERS2700;
Excluded: GERS2141, GERS2142.

A five hours per week course consisting of a two hour language-based seminar on exemplary aspects of literary and cultural studies of German-speaking countries with emphasis on modern or contemporary issues, and two seminars of one and a half hours each from the annual seminar program in German Studies. With permission from the Head of Department, students may substitute one or two seminars by choosing other courses dealing with Germany or German-speaking countries or language-related courses offered in other Schools of the Faculty.

GERS3405
German Studies Seminar 1
Department of German and Russian Studies
Staff Contact: G Fischer
UOC3 HPW1.5 S1 S2
Prerequisite/s: GERS2401 or GERS2606 or GERS2701;
Excluded: GERS2610.

A language-based seminar on exemplary aspects of German linguistics or literary-cultural studies of German-speaking countries with emphasis on modern or contemporary issues.

GERS3406
German Studies Seminar 2
Department of German and Russian Studies
Staff Contact: G Fischer
UOC3 HPW1.5 S2
Prerequisite/s: GERS2401 or GERS2606 or GERS2701;
Excluded: GERS2610.

A language-based seminar on exemplary aspects of German linguistics or literary-cultural studies of German-speaking countries with emphasis on modern or contemporary issues.

GERS3410
Advanced German A1
Department of German and Russian Studies
Staff Contact: B Boss
UOC6 HPW4 S1
Prerequisite/s: GERS2400 or GERS2042;
Excluded: GERS2141, GERS2001, GERS3400, GERS3401, GERS3403.

Consists of two hours advanced language work and a two hour language based seminar on exemplary aspects of literary and cultural studies of German-speaking countries with emphasis on modern or contemporary issues.

GERS3411
Advanced German A2
Department of German and Russian Studies
Staff Contact: B Boss
UOC6 HPW4 S2
Prerequisite/s: GERS2401 or GERS3410 or GERS2042;
Excluded: GERS2142, GERS2001, GERS3400, GERS3401, GERS3403.

Consists of two hours advanced language work and a two hour language based seminar on exemplary aspects of literary and cultural studies of German-speaking countries with emphasis on modern or contemporary issues.

GERS3605
Advanced German B3
Department of German and Russian Studies
Staff Contact: B Boss
UOC6 HPW4 S1
Prerequisite/s: GERS2001 or GERS2601;
Excluded: GERS3600.

Consists of two hours advanced language work, including aspects of stylistics and philology, and a two hour language-based seminar on exemplary topics in modern literature, social history and contemporary culture/civilisation.

GERS3606
Advanced German B4
Department of German and Russian Studies
Staff Contact: B Boss
UOC6 HPW4 S2
Prerequisite/s: GERS3605 and GERS2001;
Excluded: GERS3601.

Consists of two hours advanced language work, including aspects of stylistics and philology, and a two hour language-based seminar on exemplary topics in modern literature, social history and contemporary culture/civilisation.

GERS3700
Advanced German C5
Department of German and Russian Studies
Staff Contact: G Fischer
UOC6 HPW3.5 S1
Prerequisite/s: GERS2701;
Excluded: GERS3141, GERS3142.

A three and a half hours per week course consisting of a two hour language-based seminar on exemplary aspects of literary and cultural studies of German-speaking countries with emphasis on modern or contemporary issues, and one seminar of one and a half hours from the annual seminar program in German Studies. With permission from the Head of School, students may substitute the latter seminar by choosing another course dealing with Germany or German speaking countries or a language-related course offered in other Schools of the Faculty.

GERS3701
Advanced German C6
Department of German and Russian Studies
Staff Contact: G Fischer
UOC6 HPW3.5 S2
Prerequisite/s: GERS2701 or GERS3700

A three and a half hours per week course consisting of a two hour language-based seminar on exemplary aspects of literary and cultural studies of German-speaking countries with emphasis on modern or contemporary issues, and one seminar of one and a half hours from the annual seminar program in German Studies. With permission from the Head of School, students may substitute the latter seminar by choosing another course dealing with Germany or German-speaking countries or a language-related course offered in other Schools of the Faculty.

GERS3900
German Option 1
Department of German and Russian Studies
Staff Contact: G Fischer
UOC6 HPW3 S1
Prerequisite/s: 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.

GERS3901
German Option 2
Department of German and Russian Studies
Staff Contact: G Fischer
UOC6 HPW3 S2
Prerequisite/s: 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.

GERS4000
German Honours (Research) F/T
Department of German and Russian Studies
Staff Contact: G Fischer
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 54 units of credit in German Studies at an average of 65%, including GERS3900 and GERS3901.

Three seminars on literary, linguistic or historical topics; participation in the staff-student seminar; and practical language work as required. A thesis of approximately 15,000 - 20,000 words on a topic approved by the Department.

GERS4050
German Honours (Research) P/T
Department of German and Russian Studies
Staff Contact: G Fischer
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 54 units of credit in German Studies at an average of 65%, including GERS3900 and GERS3901.

Three seminars on literary, linguistic or historical topics; participation in the staff-student seminar; 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 Department.

GERS4500
Combined German Honours (Research) F/T
Department of German and Russian Studies
Staff Contact: G Fischer
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 48 units of credit in German Studies, including GERS3900 at 65% or better.

Two seminars on literary, linguistic or historical topics. Of these, one is shared with the other School or Department. Participation in the staff-student seminar and practical language work as required. A thesis on a topic approved by the two Schools/Departments concerned.

GERS4550
Combined German Honours (Research) P/T
Department of German and Russian Studies
Staff Contact: G Fischer
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 48 units of credit in German Studies, including GERS3900 at 65% or better.

Two seminars on literary, linguistic or historical topics. Of these, one is shared with the other School or Department. Participation in the staff-student seminar and practical language work as required, taken part-time over two years. A thesis on a topic approved by the two Schools/Departments concerned.

GMAT0411
Surveying in Building and Construction
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC3 HPW3 S2

Overview of services provided by Surveyors/Geomatic Engineers. Linear and angular measurement. Setting out. Levelling; laser levelling. Electronic tacheometry. 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
Staff Contact: School Office
UOC3 HPW3 S1

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
Staff Contact: School Office
UOC3 HPW3 S2

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
Staff Contact: School Office
UOC3 HPW3 S1
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
Staff Contact: School Office
UOC3 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: L Daras
UOC6 HPW5 S1

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
Staff Contact: L Daras
UOC6 HPW5 S2
Prerequisite/s: 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
Staff Contact: L Daras
UOC6 HPW4 S2

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
Staff Contact: L Daras
UOC6 HPW4 S1

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
Staff Contact: L Daras
UOC6 HPW5 S2

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
Staff Contact: School Office
UOC6 HPW5 S1
Prerequisite/s: GMAT1100, GMAT1150
Corequisite/s: 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
Staff Contact: School Office
UOC6 HPW5 S2
Prerequisite/s: GMAT1100, GMAT1150
Corequisite/s: GMAT2100, GMAT2300

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; elctro-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
Staff Contact: School Office
UOC6 HPW5 S2
Corequisite/s: 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
Staff Contact: School Office
UOC3 HPW3 S2
Prerequisite/s: MATH 1231, GMAT 1150;
Corequisite/s: 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
Staff Contact: School Office
UOC3 HPW3 S1
Corequisite/s: 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
Staff Contact: School Office
UOC6 HPW5 S1

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
Staff Contact: School Office
UOC6 HPW5 S1

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
Staff Contact: School Office
UOC6 S2

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/s: 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 Tech. & App.
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW5 S1

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, geo-spatial 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
Staff Contact: School Office
UOC3 HPW3 S1

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
Staff Contact: School Office
UOC3 HPW2 S2

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
Staff Contact: School Office
UOC3 HPW3 S2

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 coodinates in cadastral surveying.

GMAT3500
Photogrammetry and Remote Sensing
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW5 S1 S2

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
Staff Contact: School Office
UOC3 HPW2 S1

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
Staff Contact: School Office
UOC9 HPW8 S2

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
Staff Contact: School Office
UOC6 HPW5 S1 S2

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
Staff Contact: School Office
UOC6 HPW2 S1

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
Staff Contact: School Office
UOC3 HPW3 S1

Subdivision and development control in NSW. 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
Staff Contact: School Office
UOC6 HPW2 S2

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
Staff Contact: School Office
UOC3 HPW3 S1

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
Staff Contact: School Office
UOC3 HPW3 S2

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.

GMAT4900
Principles of GNSS Positioning
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S1

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
Staff Contact: School Office
UOC6 HPW3 S2

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.

GREK1001
Introductory Modern Greek A1
Modern Greek Studies
Staff Contact: V Doulaveras
UOC6 HPW6 S1
Excluded: GENT0427

Divided into two sections: Language (HPW5) and History and Culture (HPW1). The aim is to enable students by the end of the year to be able to communicate in a Greek-speaking environment, to discuss everyday topics, to write a simple composition and read a short story using a dictionary. The History and Culture component will familiarise the students with basic aspects of the Greek culture and society. Assessment: Classwork, tests, assignments and an essay.
Note/s: Excluded HSC Modern Greek or equivalent.

GREK1002
Introductory Modern Greek A2
Modern Greek Studies
Staff Contact: V Doulaveras
UOC6 HPW6 S2
Prerequisite/s: GREK1001

Divided into two sections: Language (HPW5) and History and Culture (HPW1). The aim is to enable students by the end of the year to be able to communicate in a Greek-speaking environment, to discuss everyday topics, to write a simple composition and read a short story using a dictionary. The History and Culture component will familiarise the students with basic aspects of the Greek culture and society.

GREK1101
Intermediate Modern Greek B1
Modern Greek Studies
Staff Contact: K Frantzi
UOC6 HPW5 S1
Excluded: GREK1100.

Divided into two sections: Language (HPW2); Modern Greek Writing (HPW2) and History and Culture (HPW1). The aim is to enable students to speak and write Greek accurately, to develop a structural understanding of Greek to the point where it can become a practical asset. The emphasis is on four basic skills: comprehension, speaking, reading and writing. The History and Culture component will familiarise the students with basic aspects of the Greek culture and society. Assessment: Class work, assignments and an essay.

GREK1102
Intermediate Modern Greek B2
Modern Greek Studies
Staff Contact: K Frantzi
UOC6 HPW5 S2
Prerequisite/s: GREK1101

Divided into two sections: Language (HPW2); Modern Greek Writing (HPW2) and History and Culture (HPW1). The aim is to enable students to speak and write Greek accurately, to develop a structural understanding of Greek to the point where it can become a practical asset. The emphasis is on four basic skills: comprehension, speaking, reading and writing. The History and Culture component will familiarise the students with basic aspects of the Greek culture and society.

GREK1201
Advanced Modern Greek C1
Modern Greek Studies
Staff Contact: V Doulaveras
UOC6 HPW5 S1
Excluded: GREK1200

Divided into three sections: Language (HPW2); Modern Greek Literature and Theatre (HPW2) and History and Culture (HPW1). The language component aims at developing writing and aural/oral skills as well as expanding the students' vocabulary. The literature and modern Greek theatre component is studied partly to aid in the understanding of the language. The History and Culture aims at familiarising the students with basic aspects of the history and the culture of Greece. Assessment: Class work, assignments and essays.

GREK1202
Advanced Modern Greek C2
Modern Greek Studies
Staff Contact: H Amvrazi
UOC6 HPW5 S2
Prerequisite/s: GREK1201.

Divided into three sections: Language (HPW2); Modern Greek Literature and Theatre (HPW2) and History and Culture (HPW1). The language component aims at developing writing and aural/oral skills as well as expanding the students' vocabulary. The literature and modern greek theatre component is studied partly to aid in the understanding of the language. The history and culture component aims at familiarising the students with basic aspects of the history and the culture of Greece. Assessment: Class work, assignments and essays.

GREK2003
Advanced Modern Greek B1
Modern Greek Studies
Staff Contact: K Frantzi
UOC6 HPW3 S1
Prerequisite/s: GREK1100, GREK1102;
Excluded: GREK1200, GREK1202, GREK2103.

The course is taught in two components: language and oral/aural skills. The language component will further familiarise students with grammatical and syntactical structures and enable them to put them into practice. The oral/aural component will develop students listening, speaking and understanding skills in Greek, extending the skills taught in GREK1102. Assessment: Class work, assignments and essays.

GREK2004
Advanced Modern Greek B2
Modern Greek Studies
Staff Contact: K Frantzi
UOC6 HPW3 S2
Prerequisite/s: GREK2003 or GREK2103;
Excluded: GREK1200, GREK2104.

The course is taught in two components: language and oral/aural skills. The language component will further familiarise students with grammatical and syntactical structures and enable them to put them into practice. The oral/aural component will develop students listening, speaking and understanding skills in Greek, extending the skills taught in GREK2003. Assessment: Class work, assignments and essays.

GREK2005
Literary Text Analysis 1
Modern Greek Studies
Staff Contact: K Frantzi
UOC3 HPW1.5 S1
Prerequisite/s: GREK1100 or GREK1101 or GREK2000 or GREK2010;
Excluded: GREK1200, GREK1201, GREK2103, GREK2105.

This course is designed to enhance the language of students through a practical introduction to the techniques of reading and interpretation of literary texts. Assessment: Assignments and class presentations oral and written.

GREK2006
Literary Text Analysis 2
Modern Greek Studies
Staff Contact: K Frantzi
UOC3 HPW1.5 S2
Prerequisite/s: GREK2005;
Excluded: GREK2106, GREK2104.

This course is designed to enhance the language of students through a practical introduction to the techniques or reading and interpretation of literary texts. Assessment: Assignments and class presentations oral and written.

GREK2010
Intermediate Modern Greek A1
Modern Greek Studies
Staff Contact: V Doulaveras
UOC6 HPW5 S1
Prerequisite/s: GREK1002;
Excluded: GREK2000.

Divided into two sections: Language (HPW3); Reading and Literature (HPW2). Aims to help students systemise and develop their knowledge of Modern Greek and bring it up to a standard where it can begin to be useful for professional activities. The reading and literature component will develop students' proficiency in reading, build vocabulary and introduce students to some aspects of modern Greek culture through the study of some simple Greek short stories. Assessment: Class work, assignments and essays.

GREK2020
Intermediate Modern Greek A2
Modern Greek Studies
Staff Contact: K Frantzi
UOC6 HPW5 S2
Prerequisite/s: GREK2010

Divided into two sections: Language (HPW3); Reading and Literature (HPW2). Aims to help students systemise and develop their knowledge of Modern Greek and bring it up to a standard where it can begin to be useful for professional activities. The reading and literature component will develop students' proficiency in reading, build vocabulary and introduce students to some aspects of modern Greek culture through the study of some simple Greek short stories. Assessment: Class work, assignments and essays.

GREK2021
Advanced Modern Greek A1
Modern Greek Studies
Staff Contact: V Doulaveras
UOC6 HPW4 S1
Prerequisite/s: GREK2000 or GREK2020;
Excluded: GREK1200, GREK1201, GREK2001, GREK2101, GREK2201.

Taught in two components: language and oral/aural skills. The language component will further familiarise students with grammatical and syntactical structures and enable them to put them into practice. The oral/aural component will develop students listening, speaking and understanding skills in Greek, extending the skills taught in GREK2020. Assessment: Class work, assignments and essays.

GREK2022
Advanced Modern Greek A2
Modern Greek Studies
Staff Contact: V Doulaveras
UOC6 HPW4 S2
Prerequisite/s: GREK2001 or GREK2021 or GREK2101;
Excluded: GREK1200, GREK1202, GREK2002, GREK2102, GREK2202.

Taught in two components: language and oral/aural skills. The language component will further familiarise students with grammatical and syntactical structures and enable them to put them into practice. The oral/aural component will develop students' listening, speaking and understanding skills in Greek, extending the skills taught in GREK2021. Assessment: Class work, assignments and essays.

GREK2201
The Modern Greek Experience
Modern Greek Studies
Staff Contact: V Doulaveras
UOC6 HPW3 S1
Prerequisite/s: (GREK1200 or GREK1202 or GREK2002) and GREK2022 and GREK2004

The course provides a window into various aspects of the modern Greek experience. Students should emerge with a more complex and less stereotypically based understanding of that society. Assessment: Class tests and assignments.

GREK2202
Greek Traditional Culture
Modern Greek Studies
Staff Contact: V Doulaveras
UOC6 HPW3 S2
Prerequisite/s: (GREK1200 or GREK1202) and (GREK2002 or GREK2022) and GREK2004

Students will study a variety of folk songs, myths, legends and popular tales. The aim is to create an awareness and understanding of the forces that have shaped the development of modern Greek society. Assessment: Class tests and assignments.

GREK2203
Core Language 1
Modern Greek Studies
Staff Contact: K Frantzi
UOC3 HPW2 S1
Prerequisite/s: (GREK1200 or GREK1202) and (GREK2002 or GREK2022) and GREK2006

Intensive study of the Greek language. Focuses on broadening the scope of students language by improving discursive competence, in spoken as well as in written Greek. Assessment: Assignments and class presentations oral and written.

GREK2204
Core Language 2
Modern Greek Studies
Staff Contact: K Frantzi
UOC3 HPW2 S2
Prerequisite/s: GREK2203

Advanced study and practise of written and oral Greek discourse in academic and vocational contexts. Assessment: Assignments and class presentations written and oral.

GREK3001
Advanced Modern Greek B3
Modern Greek Studies
Staff Contact: V Doulaveras
UOC3 HPW2 S1
Prerequisite/s: (GREK2004 and GREK2006) or (GREK2104 and GREK2106);
Excluded: GREK3101.

This is a language based course in which students write compositions, make summaries, and correct their own and co-students' errors. The oral/aural part of the course enriches students' vocabulary and provides the opportunity to exercise ear and tongue. Assessment: Class tests and assignments.

GREK3002
Advanced Modern Greek B4
Modern Greek Studies
Staff Contact: V Doulaveras
UOC3 HPW2 S2
Prerequisite/s: GREK3001;
Excluded: GREK3102.

Language based course in which students write compositions, make summaries, and correct their own and co-students' errors. The oral/aural part of the course enriches students' vocabulary and provides the opportunity to exercise ear and tongue. Assessment: Class tests and assignments.

GREK3201
Modern Greek for Special Purposes
Modern Greek Studies
Staff Contact: V Doulaveras
UOC6 HPW3 S1
Prerequisite/s: (GREK2201 and GREK2202) or GREK1200 at distinction level or (GREK2001 and GREK2002 and GREK2021 and GREK2022 at distinction level)

Modern Greek for Special Purposes extends and consolidates translation and interpreting skills with special emphasis on practical application of these skills to professional settings.

GREK3202
Greek Women Writers
Modern Greek Studies
Staff Contact: H Amvrazi
UOC6 HPW3 S2
Prerequisite/s: (GREK2201 and GREK2202) or GREK1200 at distinction level or (GREK2001 and GREK2002 and GREK2021 and GREK2022 at distinction level)

Examines a number of literary texts written by women within the framework of feminist literary criticism.

GREK3205
Pandora's Box: Gender Issues in Greek Mythology and Tragedy
Modern Greek Studies
Staff Contact: V Doulaveras
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

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.

GREK3900
Culture, Ethnicity & Identity in Greek Australian Literature
Modern Greek Studies
Staff Contact: V Doulaveras
UOC6 HPW3 S1
Prerequisite/s: 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/s: Option for Honours.

GREK3901
The History and Development of the Greek Language
Modern Greek Studies
Staff Contact: V Doulaveras
UOC6 HPW3 S2
Prerequisite/s: 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/s: Option for Honours.

GREK4000
Modern Greek Studies Honours (Research) F/T
Modern Greek Studies
Staff Contact: V Doulaveras
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 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) P/T
Modern Greek Studies
Staff Contact: V Doulaveras
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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.

HIST1003
The Fatal Shore: Aborigines, Immigrants and Convict Society
School of History
Staff Contact: R Frances
UOC6 HPW3 S1

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
Staff Contact: A O'Brien
UOC6 HPW3 S2

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
Staff Contact: M Roces
UOC6 HPW3 S1

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 Borobodur 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
Staff Contact: J Gascoigne
UOC6 HPW3 S1

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
Staff Contact: H Graham
UOC6 HPW3 S2

The principal themes in the history of early modern Europe, between the 17th and 19th centuries. Topics may include the Age of Enlightenment, the emergence of a more literate and secular society and the lives and beliefs of 'ordinary people' in the period. They may also include the history of the French Revolution and the significance of the Napoleonic period both for France and for Europe as a whole. For details of topics covered in current year contact the School of History.

HIST1014
Enter the Dragons: Continuity & Change in East Asia
School of History
Staff Contact: H Bowen Raddeker
UOC6 HPW3 S2

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
Staff Contact: S Brawley
UOC6 HPW3 S2

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.

HIST1017
World History 1: From the Ancient World to 1500
School of History
Staff Contact: N Doumanis
UOC6 HPW3 S1
Excluded: ASIA1000, HIST1016, INST1000

Covers the main features of human history from the Upper Palaeolithic through to the eve of the modern period. Topics include: human origins, foraging societies, the agricultural revolution, and the emergence of states and empires. Societies to receive special attention include: Mesopotamia, Ancient Egypt, Han China, the Roman Empire, Islamic civilisation, the Mongol Empire, the Aztecs and Incas, medieval India and Renaissance Europe.

HIST1019
World History 2: Global Change since 1500
School of History
Staff Contact: K Maclean
UOC6 HPW3 S2
Excluded: INST1004

Focuses on the main currents of human history following Columbus's sighting of the New World. Themes include: the European impact on the Americas, the growth of cross-hemispheric trade and biological exchange, the effects of growing inter-continental entanglements on China, India and Europe, the Gunpowder Empires and Europe, modern state formation, European colonialism, the Industrial Revolution, mass culture and politics, and the more salient features of recent global history.

HIST1020
Women, Gender & World History
School of History
Staff Contact: H Bowen Raddeker
UOC6 HPW3 S1
Excluded: 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.

HIST1030
The Modern Jewish Experience: Emancipation to the Holocaust
School of History
Staff Contact: School Office
UOC6 HPW3 S1
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
Staff Contact: I Bickerton
UOC6 HPW3 S2
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.

HIST2000
Twentieth Century World History
School of History
Staff Contact: K Maclean
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: INST2001, SPAN2432

Focuses on the major forces and features of twentieth century world history. Includes colonialism, nationalism, decolonisation, revolution and the Cold War. In particular, this course seeks to place the post-Cold War era within the context of twentieth century world history.

HIST2013
Prophets and Millenarian Movements in World History
School of History
Staff Contact: M Harcourt
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

Analyses radical popular religious movements that envisage an apocalyptic end to the world and its transformation into a perfect new age or a revised golden age. Attempts to explain the causation of such movements in widely diverse human societies. The propensity of such millenarian movements to oscillate between extremes of 'rigorist' puritanism and anti-nomian permissiveness is also investigated. Finally, theories explaining millenarian phenomena and the relationship between millenarian and orthodox religion are reviewed.
Note/s: This course may be counted towards a major sequence in the School of History and Philosophy of Science.

HIST2015
Women in the Modern World
School of History
Staff Contact: I Tyrrell
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: G Nathan
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: J Gascoigne
UOC6 HPW3 S2
Prerequisite/s: 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.

HIST2021
Irish History from 1800
School of History
Staff Contact: J Gascoigne
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: IRSH2001

Major developments in Irish History 1800-1995. Emphasis on social and economic history and emigration in the 19th century, and on political problems in the 20th.

HIST2025
Slavery and Freedom: American History 1750-1890
School of History
Staff Contact: I Tyrrell
UOC6 HPW3 S1
Prerequisite/s: 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
A Commonwealth for a Continent: Australia 1901-1949
School of History
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: AUST2019

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.

HIST2028
Australia since World War II
School of History
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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'.

HIST2030
History of the Arab/Israeli Conflict
School of History
Staff Contact: I Bickerton
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: HIST2023, JWST2102.

Examines the historical background and present state of Arab-Israeli relations. Topics include: early Zionism, the Balfour Declaration, Jewish settlement before and after World War I; the Mandate period; the Holocaust; the creation of Israel; major issues in Arab-Israeli relations since 1948.

HIST2034
Gender and Frontier
School of History
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: HIST2035, AUST2108

Sexuality, 'race', land and environment are investigated by examining the mythology of the Australian frontier which was largely a cultural creation heavily influenced by the myth of the West in United States historical writing, literature and film. To deconstruct this mythology, a more historically complex picture of the colonisation of the Australian continent will be explored. The themes of sexuality, race, gender and class inform this course throughout.

HIST2036
Documentary Film and History
School of History
Staff Contact: R Bell
UOC6 HPW4 S1
Prerequisite/s: 36 units of credit

Documentary film texts raise important questions about representations and constructions of the past. Provides a critical introduction to these issues through an exploration of texts central to the history of documentary film across the twentieth century. Fields discussed include: photography and historical memory, ideology and practice, propaganda and the state, representations of war, ethnographic film, environmental and natural history, popular memory and gender, narrative forms, cinema verite, dramatised documentaries, and television and contemporary history.

HIST2039
Environmental History
School of History
Staff Contact: I Tyrrell
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

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.

HIST2041
Australian Sport: History and Culture
School of History
Staff Contact: R Cashman
UOC6 HPW3 S1
Prerequisite/s: 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.

HIST2043
Modern China: The Last Emperors and the Birth of Modern China
School of History
Staff Contact: M Williams
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

A historical survey of the social, economic, cultural, and especially political institutions of the last Chinese dynasty (Qing, 1644-1911). Emphasises the radical changes of the 19th century, domestic problems, Western imperialism, and the rise of revolutionism.

HIST2044
Modern China: War, Revolution and Reform in the Twentieth Century
School of History
Staff Contact: A Field
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

A historical survey of the political, social, economic, and cultural flux of China during the twentieth century. Focuses on fundamental causes of disorder and revolutionary change during the so-called Republic, the war with Japan, and the Communist era (and Taiwan). Examines the rise of political parties and armies, nationalism, Marxism, and finally post-Mao reformism.

HIST2045
Modern America
School of History
Staff Contact: R Bell
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

The history of the United States from 1890s to 1990s. Explores several major themes in modern America including African American histories; indigenous America; immigration and ethnicity; labour history; women in 20th-century US; US foreign relations; war and society; modernity and popular culture; and history, myths and memories.

HIST2047
Winners and Losers: Poverty, Welfare, Justice in Australia
School of History
Staff Contact: A O'Brien
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

A historical examination of poverty, welfare and the quest for social justice in Australia. Traces the transition from charity to welfare; examines the historical relationships between poverty and social problems such as delinquency, domestic violence, insanity; analyses images of Australia from working man's paradise to 'clever country', and examines the cultural and economic context of the New Conservatism.

HIST2050
Women in Southeast Asian Societies
School of History
Staff Contact: M Roces
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

Explores women's status and roles in politics, culture, economy, and the family, in several countries of the Southeast Asian region; examines women and unofficial power (e.g. wives of male politicians like First Lady Imelda Marcos), women in politics like President Corazon Aquino, and activists including militant nuns; addresses the controversial issues of women's victimisation such as prostitution, mail-order brides and domestic helpers; finally, cultural constructions of the feminine and national identity including women and the veil, beauty queens and revolutionaries.

HIST2053
Understanding Indonesia: Identity, Civil Rights and Jihad
School of History
Staff Contact: J Gelman Taylor
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

Covers the emergence of Islamic culture and monarchies, the impact of colonial rule by Christian Europeans, and post-independence debates on national identity and citizenship in Indonesia. Topics include breakaway movements in Aceh, Irian and Timor, conflicts over resources and religion in Maluku and Sulawesi, and Indonesia's dynamic civil rights movement that is demanding constitutional and legal change.

HIST2054
Modern Japan: Political Culture, Popular Culture
School of History
Staff Contact: H Bowen Raddeker
UOC6 HPW3 S1
Prerequisite/s: 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 (e.g. literary) forms.

HIST2055
Colonialism and Fundamentalism in India
School of History
Staff Contact: K Maclean
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: HIST2008

Examines the colonial origins of contemporary social and religious conflicts in India, Pakistan and Sri Lanka. Topics include: the modern transformation of Hinduism and Islam, the rise of secular and fundamentalist discourses and the interaction of economic development and religious innovation.

HIST2056
From Elizabeth to the Republic: English History 1558-1660
School of History
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: HIST2010

Examines a crucial period in the emergence of the English state, culture and language, from the splendour of the monarchy of Elizabeth I to the 'English Revolution' and the unprecedented experiment of the Puritan Republic under Oliver Cromwell. Topics include: the Elizabethan political world; the problems of James I and Charles I; Puritans and Papists; the first overseas colonies; the rise in witchcraft; the radical sects of the 1650s; and the debate over the nature of the 'English Revolution' and its significance for English and world history.

HIST2059
The Modern Olympics
School of History
Staff Contact: R Cashman
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: M Berger
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: COMD2010, 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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: SPAN2429, COMD2020, 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.

HIST2073
Modern Jewish History
School of History
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: JWST2100.

Investigates the history of the systematic mass murder of Europe's Jews during World War II, commonly known as the Holocaust. Main issues include: how was it possible for a modern state to initiate and carry out the destruction of European Jewry? How did the Jews actually live in Eastern and Western Europe prior to their near annihilation? How might one characterise the Jews' experiences of life and death in the Holocaust? How does the Holocaust fit into German history and historiography? How did Nazi racism affect other European communities? How has the Holocaust influenced Jewish communal life and consciousness in modern Israel and the Diaspora?

HIST2074
Holocaust and Genocide in Historical Perspective
School of History
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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 at War
School of History
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: AUST2008

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.

HIST2080
Rights & Riots: Gender & Politics in 18th-century France
School of History
Staff Contact: H Graham
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

To the guillotine! In popular representations of the French Revolution, women appear prominently: as its aristocratic and religious victims; as the allegorical symbols of Liberty and the Republic; and as the elderly knitters whose bloodthirsty cries encouraged the executioners. This Revolution's enduring legacy promoted universal human rights. Yet no republican franchise in 18th and 19th century France acknowledged women's rights to political participation. Why was that? Why did French women acquire the right to vote only in 1944? And why, nearly 60 years later, was a law passed requiring gender equality among France's elected representatives? Suggests ways in which these issues may be addressed, by considering a variety of approaches to the history of women, gender and politics in modern France.

HIST2081
Traditions, Colonialisms and Revolutions: Southeast Asian Histories
School of History
Staff Contact: J Gelman Taylor
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

Explores Southeast Asian monarchies, European colonialism, rebellion and revolution. Nationalist leaders such as Jose Rizal of the Philippines, Sukarno of Indonesia and Ho Chi Minh of Vietnam tried to inspire revolution by inventing a golden past and modern identity. We examine peasant rebellion and millenarian cults including the role of gangsters, mercenaries and prophets in revolution and also look at ways of representing the past and its use of collective versus individual memory.

HIST2082
The Orient: Western Engagements with East Asia
School of History
Staff Contact: S Brawley
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

Terms such as the 'Orient' and 'Asia' are spatial and cultural constructs which were devised by Western civilisation to help it understand and colonise a large portion of the world's surface and people. Examines the way Western civilisation has conceived the notion of 'Asia'; and how such conceptions have informed the West's engagement of this region. Traces this engagement from pre-modern times to the present. Largely concentrates on that space commonly referred to as the 'Far East', namely Northeast Asia, Southeast Asia and South Asia.

HIST2083
Writing Lives, Writing History
School of History
Staff Contact: A O'Brien
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

How do individual life histories illuminate historical processes? What are the problems and pitfalls in using them? How are autobiographies, biographies and diaries constructed? What insights can psychohistory offer the biographer? To what extent is the historian justified in moving in the 'imaginative territory usually reserved for novelists'? We use key texts - biography, autobiography and the diary - to explore important themes in Australian history: Aboriginal experience, migration and displacement; late 19th century feminism; ordinary lives; war; male and female intellectuals; communism; romance, family and sexuality.

HIST2084
The Vietnam War/The American War
School of History
Staff Contact: S Brawley
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

Examines the role of history in the modern nation state; demonstrates the wide variety of historical sources which are available to the historian and which offer us alternative means of viewing the past. After examining the place of history in Vietnamese and American national life and the place of the Second Indochinese War within this context, the course examines the different means by which the past can be conveyed and demonstrates how such forms as literature, memory and film can help construct historical narratives. Topics will include Vietnamese and American voices, women, masculinity, race, genocide and Cambodia.

HIST2090
The Transformations of Warfare
School of History
Staff Contact: P Schrijvers
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: GENT0309

Examines the role of war in human history, beginning with prehistoric societies and ending with the Second Gulf War. Covers ancient and medieval warfare, the Gunpowder Empires and Europe's military revolution, colonial wars, Total War, and the more significant developments during the twentieth century. Special consideration will be given to the theme of war and society, the role of the state, and technological change.

HIST2095
Talking History: Oral History and the Interview
School of History
Staff Contact: M Roces
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

Focuses on the theory and practice of writing oral history and the use of interviews as a primary source. The most important aspect is an individual oral history project. Topics include: interview ethics, transcribing data, and the problems of interpreting data from interviews.

HIST2100
Urban Legends: The History of Sydney
School of History
Staff Contact: G Karskens
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: AUST2022

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.

HIST2201
The Medieval World
School of History
Staff Contact: N Doumanis
UOC6 HPW3 S1
Prerequisite/s: 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 1000AD. Important themes include sex, gender, Christianity, Islam, heresy, state formation, feudalism, imperialism and warfare.

HIST2300
Between Dictatorship and Democracy: Contemporary Southeast Asia
School of History
Staff Contact: M Roces
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

Focuses on modern Southeast Asia since the end of the colonial period exploring the turbulent shifts between dictatorship and democracy which shape much of the political experiences of the region; surveys the rise of military regimes and the politicisation of the army, the pro-democracy movements, communist insurgencies and rebellion, and the civil wars which threatened to break up the new unions - from the centuries old Muslim separatist movement in southern Philippines to the current issue of East Timor. The regimes of Marcos, Sukarno and Suharto, Mahathir, Lee Kuan Yew, Goh Chok Tong, and Ne Win provide some case studies from which to analyse the problematics of corruption, nepotism, regime violence and torture.

HIST2400
Concepts of Europe
School of History
Staff Contact: G Minnerup
UOC6 HPW3 S1
Prerequisite/s: 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 1815-1914: Bourgeois Culture, Peoples' Revolutions
School of History
Staff Contact: G Minnerup
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: EURO2410.

Themes in the political, social and cultural history of 19th century Europe. One part of the course will deal with the great revolutions of 1830, 1848, 1871 and 1905, with special emphasis on the role of the great 19th century ideologies of liberalism and nationalism. Other themes include the rise of the modern city, the impacts of famine, disease and emigration, and the rise of modern science. Also discusses aspects of dominant bourgeois culture, including the new domestic ideology and the role of women within it.

HIST2422
Understanding Nazi Germany: Origins, Structures, Explanations
School of History
Staff Contact: G Minnerup
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: 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.

HIST2468
History from Crime: Interrogating the European Past
School of History
Staff Contact: H Graham
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

Investigates the historical use of sources drawn from criminal justice records. Through specific examples about Europe from the Middle Ages to the nineteenth century, this course explores narrative, numerical and textual approaches to the study of justice and criminality as well as broader issues: judicial records as sources for gender history and microhistory.

HIST2470
Modern France since 1870: Politics, Society and Culture
School of History
Staff Contact: M Lyons
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: EURO2470

Surveys divisions and conflicts in France since 1870, through three republican regimes and two foreign occupations. Special attention is paid to the Dreyfus Affair, the experience of two world wars, the Popular Front, Vichy and the Resistance and their role in the national historical memory. Other topics include Gaullism, the Algerian War, the 'events' of May 1968 and the rise of Jean-Marie Le Pen. Discussion material will include film and literary sources.

HIST2481
Europe at War 1914-1945: A Social and Political History
School of History
Staff Contact: J Tampke
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: HIST2066

Examines traditional topics such as the causes and the political consequences of the two World Wars. In addition this course looks at the cultural, economic and social devastation brought about by the wars, which caused the death of almost 100 million people in Europe during the first half of the last century.

HIST2500
The Pacific War: World War II in the Asia-Pacific
School of History
Staff Contact: S Brawley
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

A trans-national study of one of the most significant events in the history of the Asia-Pacific region in the twentieth century. Deals with military, social, political and economic themes relating to the war. Topics include: origins and causes; military culture; macro and micro war strategy, the prosecution of the war; civilian life and the homefront; gender, race, labour and sex; propaganda and popular culture; legacies and representations.

HIST2510
The United States and Changing Global Orders
School of History
Staff Contact: P Schrijvers
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: 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.

HIST2600
Islamic Worlds: From Muhammad to the Present
School of History
Staff Contact: J Gelman Taylor
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

Provides an introduction to Islamic societies, and explores relations between Islam and the West. Begins with the development of early Islam, its expansion beyond the Arabian peninsula, Islamic monarchies and empires, Islamic civilisation, Islamic societies under Christian colonial rule, and the search for forms of government suitable for modernising Muslim societies.

HIST2660
Ancient History 1: The Ancient Near East and Greece
School of History
Staff Contact: G Nathan
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

Deals with the first societies of the ancient world, the manner in which they developed, and the contacts between them. Includes the early Mesopotamian societies, Egypt, ancient Israel, Minoan, and Greek civilizations. Examines political and military events, social history, religious and intellectual developments, and various forms of cultural expression.

HIST2661
Ancient History 2: Rome
School of History
Staff Contact: G Nathan
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

Examines the rise of Rome from a small, relatively insignificant city-state in the Italian peninsula to the Empire that spanned three continents and lasted 500 years. The growth of imperialism and its role in the metamorphosis of republican government into autocratic rule, cultural life, private and family experiences, and religious developments will all be topics of special import.

HIST2731
The Unquiet Woods: Conflicting Visions of European Forests
School of History
Staff Contact: H Graham
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

Draws on historical and literary evidence in order to survey the lengthy record of Europeans' exploitation of the woodland and its multiple resources. Special attention is paid to times and places where forests were subjected to competing claims - not only from rulers, bureaucrats, businesses and landowners, but even from outlaws, poachers and cross-dressing peasants.

HIST2751
A Global History of Nightlife: From Moulin Rouge to Rave
School of History
Staff Contact: A Field
UOC6 HPW3 S1
Prerequisite/s: 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
Pilgrimage from Glastonbury to Graceland
School of History
Staff Contact: K Maclean
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

Examines pilgrimage throughout history, with special reference to the social and political implications of large numbers of people reverently moving towards, and then away from, a sacred centre. Explores medieval and/or modern pilgrimages in the Buddhist, Christian, Judaic, Hindu and Islamic traditions, as well as more secular pilgrimages such as The Grand Tour, Gallipoli, Graceland, Ground Zero, and other examples of 'civic' religion and personality cult pilgrimages.

HIST2760
A History of Sexualities
School of History
Staff Contact: M Azzolini
UOC6 HPW3 S2
Prerequisite/s: 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.

HIST2761
Gender, Race, Nature and Reason
School of History
Staff Contact: J Milfull
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit
Excluded: EURO2001, WOMS2002

Vital concepts like equality, freedom and emancipation seem inseparable from the European "Enlightenment". Yet the following century saw the development of a new and more subtle form of patriarchy, the increasing discrimination and exploitation of colonised peoples and minorities, and the emergence of nationalism and Fascism. Explores a range of texts in literature, philosophy and social history from the eighteenth century to the present, and seeks to analyse both the so-called "failure(s) of enlightenment" and the impact of the two central and inter-related concepts, nature and reason, that shaped its program.

HIST3900
Historiography of Southeast Asia
School of History
Staff Contact: J Gelman Taylor
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit including at least 6 units of credit in History 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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit including at least 6 units of credit in History at credit level or better;
Excluded: HIST3013

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
Staff Contact: G Karskens
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit including at least 6 units of credit in History 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
Staff Contact: G Minnerup
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit, including 6 units of credit in HIST at credit level or better;
Excluded: EURO3000

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.

HIST3912
Researching and Writing History
School of History
Staff Contact: R Frances
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit including at least 6 units of credit in History at credit level or better;
Excluded: HIST3002

A weekly seminar in which students are introduced to a variety of research methods and styles of writing, e.g. biography, family history, use of land titles, newspapers, parliamentary papers. Students will receive hands-on experience in dealing with primary sources and visit major archives in the Sydney region.

HIST4000
History Honours (Research) F/T
School of History
Staff Contact: R Bell
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 54 units of credit in HIST at 65% including 6 units of credit from HIST3000 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) P/T
School of History
Staff Contact: R Bell
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 54 units of credit in HIST at 65% including 6 units of credit from HIST3000 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) F/T
School of History
Staff Contact: R Bell
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 48 units of credit in HIST at 65% including 6 units of credit from HIST3000 courses and permission of head of school.

This program is undertaken in two schools, e.g. 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) P/T
School of History
Staff Contact: R Bell
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 48 units of credit in HIST at 65% including 6 units of credit from HIST3000 courses and permission of head of school.

This program is undertaken in two schools, e.g. 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
Staff Contact: A Corones
UOC6 HPW3 S1
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
Staff Contact: P Slezak
UOC6 HPW3 S2
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
Staff Contact: S Healy
UOC6 HPW3 S1
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
Staff Contact: S Healy
UOC6 HPW3 S2
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.

HPSC2100
The Scientific Revolution
School of History and Philosophy of Science
Staff Contact: J Schuster
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: HPST2111

Examines fundamental issues and techniques in the history and philosophy of science. Deals with the origins of modern European science, as exemplified in the work of Copernicus, Galileo, Newton and others. The social, religious, political and economic factors shaping the emergence and content of the new science are analysed. Emphasis is placed on critical historical thinking and use of tools from the sociology of scientific knowledge.

HPSC2200
Philosophy of Science
School of History and Philosophy of Science
Staff Contact: A Corones
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: D Miller
UOC6 HPW3 S2
Prerequisite/s: 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.

HPSC2400
Knowledge and Power
School of History and Philosophy of Science
Staff Contact: G Bindon
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: SCTS2106, SCTS2121

Examines the history of the idea of a special relationship between the possession of both knowledge and power. Through case studies and classroom simulations of scientific, technological and environmental policy issues, the processes by which power is exercised and knowledge used will be explored.

HPSC2500
Environment, Technology and Politics
School of History and Philosophy of Science
Staff Contact: P Brown
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: J Merson
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: COMD2050, SCTS3001, 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
Staff Contact: P Slezak
UOC6 HPW3 S1
Prerequisite/s: 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.

HPSC2605
Greek Science & Natural Philosophy: Roots of Western Thought
School of History and Philosophy of Science
Staff Contact: A Corones
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

Examines the development of ancient Greek science and natural philosophy. Attention will be paid to primary texts and their cultural and institutional contexts. Issues will be drawn from the following: Milesian materialism, the Pythagoreans, Parmenides and Zeno, the atomists, Plato, Aristotle, Hellenistic natural philosophies, the mathematical sciences, astronomy, medicine, magic, astrology and the pseudo-sciences, and the decline and re-establishment of Greek science in the West.

HPSC2610
Computers, Brains and Minds
School of History and Philosophy of Science
Staff Contact: P Slezak
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: P Slezak
UOC6 HPW3 S1
Prerequisite/s: 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.

HPSC2660
Cheating Death: A History of Medicine
School of History and Philosophy of Science
Staff Contact: P Hardy
UOC6 HPW3 S1
Prerequisite/s: 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.

HPSC2720
Evolutionary Theories and Change
School of History and Philosophy of Science
Staff Contact: G Bindon
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: SCTS2116, SCTS2122

Diffusion of evolutionary theories of change from biology to many areas in the natural and social sciences. Topics: science as an evolutionary process; evolution of technology; extended phenotype; evolutionary economics; innovation systems; technological and institutional coevolution; evolutionary psychology; evolutionary concepts in cognitive science; memetics; sociobiology; cultural evolution; technology as forms of life; criticisms of eugenics, social Darwinism, ultra-Darwinism; religion, creationism, ethics, animal liberation; 'Evolution / Darwin Wars' and the 'Science Wars'; chance and design; complexity, game theory, and ideas about self-organisation; information, knowledge, communications theories; exobiology and extraterrestrial life; evolutionary thinking and forecasting; genetic engineering; posthuman futures.

HPSC2800
The Challenge of the New Biotechnologies
School of History and Philosophy of Science
Staff Contact: N Rasmussen
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: SCTS2004, SCTS2109

Examines the new medical and agricultural technologies, stemming from the molecular biology revolution, in social context. Topics covered may include xenotransplantation, the Human Genome Project, new reproductive biotechnologies for humans, the genetic manipulation of food crops and animals for altered product qualities, and the impact of biotechnology on agricultural sustainability.

HPSC2881
Cultural Heritage Management
School of History and Philosophy of Science
Staff Contact: S Green
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: 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/s: Taught by the Aboriginal Research and Resource Centre.

HPSC3100
Advanced History of Science
School of History and Philosophy of Science
Staff Contact: J Schuster
UOC6 HPW3 S2
Prerequisite/s: 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.

HPSC3150
Life Science in the 20th Century
School of History and Philosophy of Science
Staff Contact: N Rasmussen
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: HPST2137

Explores the rise of the experimental biology disciplines, from the embryology, genetics, bacteriology and physiology of the early 20th century through the 'molecular revolution' of the period around the Second World War and the new sciences it spawned. These include sciences such as cell biology, immunology and above all molecular genetics - the science of the genetic code and the linchpin of current biotechnology.

HPSC3200
Topics in the Philosophy of Science
School of History and Philosophy of Science
Staff Contact: A Corones
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: D Miller
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: P Brown
UOC6 HPW3 S2
Prerequisite/s: 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/s: 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
Staff Contact: J Schuster
Enrolment requires School approval
UOC6 HPW3 S1 S2 X1 X2
Prerequisite/s: 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/s: Permission for enrolment in the reading option must be obtained from the Head of School.

HPSC4000
History and Philosophy of Science Honours (Research) F/T
School of History and Philosophy of Science
Staff Contact: J Schuster
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 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/s: 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) P/T
School of History and Philosophy of Science
Staff Contact: J Schuster
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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/s: 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) F/T
School of History and Philosophy of Science
Staff Contact: J Schuster
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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/s: 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) P/T
School of History and Philosophy of Science
Staff Contact: J Schuster
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 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/s: 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 F/T
School of History and Philosophy of Science
Staff Contact: P Brown
Enrolment requires School approval
UOC12 S1 S2

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/s: Students must meet the following requirements: 1. Combined Honours prerequisites in a discipline. 2. At least 48 units of credit from the list of nominated courses for 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.

HPSC4550
Combined Honours (Research) in Environmental Studies P/T
School of History and Philosophy of Science
Staff Contact: P Brown
Enrolment requires School approval
UOC6 S1 S2

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/s: Students must meet the following requirements: 1. Combined Honours prerequisites in a discipline. 2. At least 48 units of credit from the list of nominated courses for 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.

IBUS1001
Communicating in Business
School of International Business
Staff Contact: School Office
UOC6 HPW3 S1

This course aims at developing and extending students capacity for thinking ciritically and communicating effectively in business and professional contexts. It examines the different modes and principles of communicating, and through workshop participation, explores topics such as language and communication, interpersonal communication, group communication, intercultural communication, verbal and non-verbal communication, critical thinking, effective listening, and reasoning and argument in communication.

IBUS1101
Global Business Environment
School of International Business
Staff Contact: School Office
UOC6 HPW3 S1 S2
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.

IBUS1102
Managing Across Cultures
School of International Business
Staff Contact: School Office
UOC6 HPW3 S2
Excluded: IBUS1108

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.

IBUS2101
International Business and Multinational Operations
School of International Business
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s or Corequisite/s: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.

IBUS2103
Japanese Business
School of International Business
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 48 units of credit in Arts & Social Sciences, Law, Science or Commerce & Economics.

An introduction to Japanese economy and business practice. Topics include: recent Japanese business and economic performance; corporate strategy; organisational strategy and human resource management practices; impact of culture on management style and decision making; industrial organisation and business groups; corporate finance and governance; role of small and medium size enterprises quality control and just-in-time production; information structures in the Japanese firm; subcontracting and assembler-supplier relations; FDI and overseas production; human resource management transfer; government-business relations.

IBUS2104
Korean Business
School of International Business
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 48 units of credit in Arts & Social Sciences, Law, Science or Commerce & Economics.

An introduction to Korean economy and business practice. Topics include: Korea's economic development and growth; economic policies; government-business relations; corporate structure and enterprise groupings; Chaebol; industry system; workplace practices; decision-making procedures; business negotiations and; socio-cultural elements in business and management.

IBUS2105
Chinese Business Enterprise
School of International Business
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 48UOC in Arts or Law or Commerce & Economics
Excluded: 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.

IBUS3101
International Business Strategy
School of International Business
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: IBUS2101 or IBUS2107
Excluded: IBUS3105

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.

IBUS3102
Asia-Pacific Business
School of International Business
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: IBUS2101 or IBUS2107;
Excluded: IBUS3106

This course focuses on competitive strategy and the comparative management of businesses across the Asia Pacific and South Asia. The course is designed to provide a strategic perspective on the macro-micro issues impacting on Asian business today. It examines the regional factors impinging upon the behaviour of Asian businesses and provides strategic insights into successful business models in the region. Critical attention is given to the external and internal environments of Asian business, the nature and sources of competitive advantage of domestic enterprises, and to the organisational aspects of developing and managing multinational and domestic enterprises across the region. The course is designed to provide students with the conceptual tools to understand: the dynamic interaction between markets and public policy guiding the behaviour of multinational and domestic enterprises within the Asia-Pacific; comparative management systems and innovation behaviour across a selection of countries namely Japan, Korea, China, India and Southeast Asia, including Taiwan, Hong Kong, Singapore and Malaysia; and perspectives in foreign direct investment in the Asia-Pacific region.

IDES1012
Safe Workshop Practices
Industrial Design Program
Staff Contact: M Ramirez
UOC3 HPW2 S1

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
Design Studio 1
Industrial Design Program
Staff Contact: J Talbot
UOC6 HPW4 S2
Prerequisite/s: BENV1101.

To introduce students to 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
Staff Contact: L Green
UOC6 HPW4 S2

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
Staff Contact: J Talbot
UOC6 HPW4 S1

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. 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 including: colour, freehand drawing, sketching, painting, mixed media and 3D model making.

IDES1121
History of Industrial Design
Industrial Design Program
Staff Contact: B Pandolfo
UOC3 HPW2 S2

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
Staff Contact: S Ward
UOC6 HPW4 S1
Corequisite/s: IDES1012

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
Staff Contact: S Ward
UOC6 HPW4 S2
Prerequisite/s: IDES1161

This course is concerned with the representation of 3-dimensional form using a variety of techniques including free hand drawing and formal pictorial drawing. Studies include an introduction to computer-aided techniques. Practical experience is gained in the various 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
Staff Contact: School Office
UOC6 HPW3 S2

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
Staff Contact: B Pandolfo
UOC6 HPW3 S2
Prerequisite/s: IDES2162

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
Staff Contact: S Ward
UOC6 HPW4 S1
Prerequisite/s: 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
Staff Contact: S Ward
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: S Ward
UOC6 HPW4 S1
Prerequisite/s: IDES1101, IDES1162

This 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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: BENV1141;
Excluded: BENV2401.

Computer aided design and drafting systems and their applications in product development. Students gain experience with 2 dimensional and 3 dimensional CAD systems.

IDES2201
Ergonomics
Industrial Design Program
Staff Contact: J Talbot
UOC6 HPW3 S1

Physiological and psychological aspects of ergonomics and their application to product use, work, environment effects and human/machine interface. Principles of ergonomics research methods. Analysis of ergonomic requirements within the context of product development. Ergonomic methodology and experimental methods and their application in the product research and development process.

IDES3073
Materials and Technoloy Workshop C
Industrial Design Program
Staff Contact: S Ward
UOC6 HPW3 S1
Prerequisite/s: IDES2072

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
Industrial Design Program
Staff Contact: M Ramirez
UOC6 HPW4 S1
Prerequisite/s: IDES2162.

The course Industrial Design Studio 3A is aimed at introducing students to more complex design problems in order to develop a thorough and responsible approach to the design of products. Projects are chosen that build up on the undertaken project work in Industrial Design Studio 2, and include projects of "real-life" complexity.

IDES3222
Industrial Design Studio 3B
Industrial Design Program
Staff Contact: M Ramirez
UOC6 HPW4 S2
Prerequisite/s: 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
Computer Graphic Applications
Industrial Design Program
Staff Contact: J Talbot
UOC6 HPW4 S1
Prerequisite/s: IDES2171

3 dimensional modelling applications for Computer Aided Design and Manufacture including parametric modelling and 3D visualisation.

IDES4291
Industrial Design Studio 4
Industrial Design Program
Staff Contact: B Pandolfo
UOC6 HPW4 S1
Prerequisite/s: 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 are 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
Staff Contact: O Demirbilek
UOC6 HPW4 S1
Prerequisite/s: IDES3222.

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 endeavors. 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, and a comprehensive literature search constitute major activities in the course, with a strong emphasis on ethical research practices being fostered throughout.

IDES4311
Graphic Design
Industrial Design Program
Staff Contact: J Talbot
UOC3 HPW3 S2
Prerequisite/s: IDES1031

The major graphic production processes, and their application in graphic design. Type and typesetting systems. Graphic design projects.

IDES4321
Exhibition Design
Industrial Design Program
Staff Contact: B Pandolfo
UOC3 HPW2 S2
Prerequisite/s: IDES2162.

Understanding the nature of environmental space and spatial ambience, and the relationship of objects and products to the surrounding space. Exhibition design projects.

IDES4352
Industrial Design Project
Industrial Design Program
Staff Contact: School Office
UOC12 HPW4 S2
Prerequisite/s: IDES3222, IDES4301

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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: IDES2091

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 Eng and Industrial Chemistry
Staff Contact: J Heuts
UOC6 HPW6 S1
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: M Skyllas-Kazacos
UOC4 HPW4 S2
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: J Bao
UOC3 S1
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: School Office
Enrolment requires School approval
UOC4

INDC3110
Industrial & Environmental Chemistry
School of Chemical Eng and Industrial Chemistry
Staff Contact: P Crisp
UOC6 HPW6 S1
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: J Heuts
UOC6 HPW6 S2
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: T Tran
UOC4 HPW4 S1
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: T Tran
UOC4 HPW4 S1
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: J Heuts
UOC12 HPW11 S1 S2
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: J Heuts
UOC12 S1 S2
Prerequisite/s: INDC4091

The experimental investigation of some aspect of an elected topic area in Industrial Chemistry.

INDC4093
Small Research Project Theory
School of Chemical Eng and Industrial Chemistry
Staff Contact: J Heuts
UOC8 S1 S2
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: J Heuts
UOC8 S1 S2
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: P Crisp
UOC3 S1 S2
Prerequisite/s: CHEM1101, CHEM1201 or CHEM1011 and CHEM1021 or CHEM1031 and CHEM1041

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
Staff Contact: D Reeve
UOC6 HPW6 S1
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/s: 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
Staff Contact: D Reeve
UOC6 HPW6 S2
Prerequisite/s: INDO1001

Further consolidation and development of language skills acquired in INDO1001.
Note/s: 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
Staff Contact: R Machali
UOC6 HPW5 S1
Prerequisite/s: 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/s: Excluded HSC Indonesian LBS or equivalent.

INDO2002
Intermediate Indonesian 2
Department of Chinese & Indonesian Studies
Staff Contact: R Machali
UOC6 HPW5 S2
Prerequisite/s: INDO2001

Further development and consolidation of communicative skills and broad knowledge of contemporary Indonesian society.
Note/s: Excluded HSC Indonesian LBS or equivalent.

INDO3001
Advanced Indonesian 1
Department of Chinese & Indonesian Studies
Staff Contact: R Machali
UOC6 HPW4 S1
Prerequisite/s: 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 e.g. cultures of the main islands of the archipelago, technology, trade and Australian-Indonesian relations.
Note/s: Excluded HSC Indonesian LBS or equivalent.

INDO3002
Advanced Indonesian 2
Department of Chinese & Indonesian Studies
Staff Contact: R Machali
UOC6 HPW4 S2
Prerequisite/s: 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/s: Excluded HSC Indonesian LBS or equivalent.

INDO3035
Indonesian Popular Culture
Department of Chinese & Indonesian Studies
Staff Contact: D Reeve
UOC6 HPW3 S1
Prerequisite/s: 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/s: Open to native speakers.

INDO3500
Contemporary Indonesian Society A
Department of Chinese & Indonesian Studies
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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/s: Open to native speakers.

INDO3502
Islam in Indonesia
Department of Chinese & Indonesian Studies
Staff Contact: D Reeve
UOC6 HPW3 S1
Prerequisite/s: 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.

INDO3900
Introduction to Indonesian Studies
Department of Chinese & Indonesian Studies
Staff Contact: R Machali
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: R Machali
UOC6 HPW3 S2
Prerequisite/s: 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 F/T
Department of Chinese & Indonesian Studies
Staff Contact: D Reeve
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 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 P/T
Department of Chinese & Indonesian Studies
Staff Contact: D Reeve
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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 F/T
Department of Chinese & Indonesian Studies
Staff Contact: D Reeve
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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 P/T
Department of Chinese & Indonesian Studies
Staff Contact: D Reeve
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 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.

INFS1602
Computer Information Systems
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1 S2

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 Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1 S2

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 Info Systems, Technology & Management
Staff Contact: School Office
UOC3 HPW1.5 S2
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 Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1 S2

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 Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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 Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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 Info Systems, Technology & Management
Staff Contact: School Office
UOC3 HPW1.5 S2
Prerequisite/s: 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 Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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/s: Available only in Program 3971.

INFS2791
Industrial Training A
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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/s: Available only to BCom ISM Co-op students.

INFS3603
Business Intelligence Systems
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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 Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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 Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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.

INFS3606
Telecommunications for Electronics Commerce
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: INFS2607

This course considers the strategic issues in telecommunications in business; current and emerging technologies for data networking; and the specification of corporate networks including local and wide area networks; a detailed understanding of the Internet protocol suite; TCP/IP - IP version 4, subnets, TCP, UDP, inter-router protocols, multicasting, IP version 6; security threats, Internet application security issues, firewalls, encryption, digital signatures, network management; and an understanding of non TCP/IP peer to peer networking protocols.

INFS3608
Advanced Database Systems
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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 Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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.

INFS3621
Alternative System Design Methodologies
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC3 HPW1.5 S1
Prerequisite/s: INFS2603

This course reviews current systems analysis methodologies, including the process-driven approach, data-driven approach, object-oriented approach and general approaches such as Soft Systems Methodology. It examines the foundations and philosophies, lifecycle stages and resource demands, applied modeling tools and beneficial applications of each approach.

INFS3622
Distributed Application Design and Implementation
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC3 HPW1.5 S1
Prerequisite/s: INFS2603

This course considers the design and implementation of distributed and client/server applications. Specific topics include the design, coding, testing and implementation of distributed applications; middleware and its impact on the application design; and distributed computing environments.

INFS3623
Multimedia Systems Design
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC3 HPW1.5 S2
Prerequisite/s: INFS2603

This course teaches the cognitive principles, concepts and design techniques required in implementing multimedia information systems. Students also gain practical experience with the use of commercial multimedia design software.

INFS3685
Electronic Commerce Management
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: INFS2603

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 Info Systems, Technology & Management
Staff Contact: School Office
UOC12 HPW6 S2
Prerequisite/s: 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/s: Available only in Program 3971.

INFS3792
Industrial Training B
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC12 HPW6 S2
Prerequisite/s: 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/s: Available only to BCom ISM Co-op Students.

INFS4693
Industrial Training 3
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC12 HPW6 S1

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/s: Available only in program 3971.

INFS4774
Information Systems Security
School of Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: Entry to Honours plan majoring in Information Systems in Commerce or Science, programs 3971 and 3979.

Reviews concepts, theory, methodologies and techniques discussed in IS security literature and practice. Includes: information systems security management, risk analysis and management, physical and logical security, database and telecommunications security, continuity planning, computer abuse, internet and electronic commerce, legal and social issues. Case studies will provide students with an understanding of computerised security techniques in practice.

INFS4793
Industrial Training C
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC12 HPW6 S1
Prerequisite/s: 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/s: Available only to BCom ISM Co-op Students.

INFS4795
Thesis Part A
School of Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: Entry to Honours plan majoring in Information Systems in Commerce or Science, programs 3971 and 3979.

The thesis is undertaken in the last two semesters 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/s: Available only to Year 4 Honours students.

INFS4796
Thesis Part B
School of Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC18 S1 S2
Prerequisite/s: Entry to Honours plan majoring in Information Systems in Commerce or Science, programs 3971 and 3979.

The thesis is undertaken in the last two semesters 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/s: Available only to Year 4 Honours students.

INFS4805
Information Systems Auditing
School of Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2
Prerequisite/s: 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 comupter 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 Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: 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 Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2
Prerequisite/s: 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.

INFS4812
Software Engineering Management
School of Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: Entry to Honours plan majoring in Information Systems in Commerce or Science, programs 3971 and 3979.

Software engineering management and measurement of complex systems, software development maturity, project planning and management, estimation models and techniques, project scheduling, software quality, reliability, assurance, software productivity models.

INFS4848
Information Systems Project Management
School of Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2
Prerequisite/s: 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 Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2
Prerequisite/s: 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.

INFS4857
Information and Decision Technology
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: Entry to Honours plan majoring in Information Systems in Commerce or Science, programs 3971 and 3979.

In a knowledge-based economy, organisational prosperity will largely depend on how successful knowledge workers are at creating and applying new ideas productively and efficiently. This course examines the role of information and models of managerial decision making and prediction; the role of information systems in decision making; assessing the value of information systems and the contribution of information in decision making under uncertainty; the role of information in managerial prediction and forecasting; the development of computer based models to support tactical management.

INFS4886
Research Topics in Information Systems 1
School of Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: 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 Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2
Prerequisite/s: 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 Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: 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 exisiting 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 Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2
Prerequisite/s: 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 Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: Entry to Honours plan majoring in Information Systems in Commerce or Science, programs 3971 and 3979.

INOV2100
The Innovation Process
Faculty of Science
Staff Contact: W Bridge
UOC3 X2

The course gives students a fundamental and practical introduction to the innovation and commercialisation processes of the bioscience industry. 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/s: This course is only available to students enrolled in the Diploma of Innovation Management program. Coursework comprises 35 hours during Winter Session.

INOV2110
YAA Business Skills
Faculty of Science
Staff Contact: W Bridge
UOC3 HPW2 S2

The Young Achievement Australia (YAA) Business Skills program 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 selling shares to raise capital, 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 annual report, and at the completion of the program liquidate the company and distribute dividends.Throughout the program, students tackle typical issues and challenges which confront commerical operations and develop skills for decision making, negotiation, creativity, communication, teamwork and networking, leadership, responsibility and accountability, and financial management and planning.
Note/s: This course is only available to students enrolled in the Diploma of Innovation Management program.

INOV3100
Strategic Communication
Faculty of Science
Staff Contact: W Rifkin
UOC3 X1
Prerequisite/s: INOV2100 or INOV2101

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/s: This course is available to students either enrolled in the Diploma of 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
Staff Contact: W Bridge
UOC3 HPW2 S2
Prerequisite/s: 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 has 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/s: The course is only available to students enrolled in the Diploma in Innovation Management program.

INOV4001
The Bioentrepreneurial Process
Faculty of Science
Staff Contact: W Bridge
UOC6 X1
Prerequisite/s: INOV2100 or INOV2101

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 biotechnology 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/s: 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
Faculty of Science
Staff Contact: W Bridge
UOC6 S1 S2 X1
Prerequisite/s: INOV2100 or INOV2101

The course will require 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 will assist in the integration of experiences with previous theory and in the preparation of the project report.
Note/s: This course is only available to students enrolled in the Diploma in Innovation Management program.

INOV4201
Innovation in Practice B
Faculty of Science
Staff Contact: W Bridge
UOC12 S1 S2 X1
Prerequisite/s: INOV2100 or INOV2101

The course will require 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/s: This course is only available to students enrolled in the Diploma in Innovation Management program.

INOV4301
Innovation in Practice C
Faculty of Science
Staff Contact: W Bridge
UOC18 S1 S2 X1
Prerequisite/s: INOV2100 or INOV2101

The course will require 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/s: This course is only available to student enrolled in the Diploma in Innovation Management program.

INST1003
Introduction to Globalisation
School of Sociology
Staff Contact: M Humphrey
UOC6 HPW3 S1
Excluded: SOCA1006

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.

INST1004
World History 2: Global Change since 1500
School of History
Staff Contact: N Doumanis
UOC6 HPW3 S2
Prerequisite/s: Enrolment in program 3413 or 3414 or 3415 or 3416 or 4766 or 4767 or 4768 or 4769;
Excluded: HIST1019

Focuses on the main currents of human history following Columbus's sighting of the New World. Themes include: the European impact on the Americas, the growth of cross-hemispheric trade and biological exchange, the effects of growing inter-continental entanglements on China, India and Europe, the Gunpowder Empires and Europe, modern state formation, European colonialism, the Industrial Revolution, mass culture and politics, and the more salient features of recent global history.

INST2000
(Un)Making the Third World: History & Global Development A
Department of Spanish and Latin American
Staff Contact: School
UOC6 HPW3 S1
Prerequisite/s: Enrolment in program 3413 or 3415 or 3416 or 4768 and 36 units of credit;
Excluded: COMD2020, HIST2061, 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.

INST2001
Twentieth Century World History
School of History
Staff Contact: M Berger
UOC6 HPW3 S2
Prerequisite/s: Enrolment in program 3413 or 3415 or 3416 or 4768 and 36 units of credit;
Excluded: HIST2000, SPAN2432

Focuses on the major forces and features of twentieth century world history. Includes colonialism, nationalism, decolonisation, revolution and the Cold War. In particular, this course seeks to place the post-Cold War era within the context of twentieth century world history.

INST3000
Globalisation and the International System
School of Modern Language Studies
Staff Contact: M Berger
UOC6 HPW3 S2
Prerequisite/s: 96 units of credit and enrolment in program 3415 or 4768

Focuses on the nation-state system in an era of regionalisation/regionalism and globalisation/globalism. Looks at the role of warfare and military institutions in the rise and transformation of the international system. Various regions and the different forms of regionalism that have emerged in the post-Cold War era are examined, including Europe, the Americas and the Asia-Pacific. Of particular concern is the changing character of state sovereignty. The history and contemporary significance of the United Nations is examined, as is the question of 'failed states' and 'nation-building' in the post-Cold War era.

INST3001
Theorising International Political Economy
School of Politics and International Relations
Staff Contact: E Thurbon
UOC6 HPW3 S1
Prerequisite/s: Enrolment in program 3413 or 3414 or 3415 or 3416 or 4766 or 4767 or 4768 or 4769 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.

INST3101
Individual Study Program A
International Studies Unit
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1

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
Staff Contact: School Office
Enrolment requires School approval
UOC24 S2

An individual sessional program of study normally at an overseas institution as approved after consultation with the relevant coordinator.

INTA2101
Design Studio 1
Interior Architecture Program
Staff Contact: B Watson
UOC6 HPW5 S1

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
Staff Contact: B Watson
UOC6 HPW5 S2

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
Staff Contact: H Stephens
UOC3 HPW2 S1

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
Staff Contact: H Stephens
UOC3 HPW2 S2

An introduction to the process of designing by successive approximations of the whole. An inquiry into the appropriate relationship between the whole and the part in the natural order and in the designed artefact. The role of the central idea in design. An investigation of measure, number and geometry as a means of both quantifying and qualifying spatial arrangements for human habitation and participation.

INTA2114
Program Exhibition Design
Interior Architecture Program
Staff Contact: L Zamberlan
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: INTA2101, INTA2102.

This course will encompass the entirety of the creation, management, administration and organisation of the end of session student exhibition. A maximum of 10 students will be selected to liase with staff, industry and the student body to showcase excellence in the Interior Architecture program. This course serves as a precurser to the graduating student exhibition. Students need to submit expressions of interest to Lisa Zamberlan.

INTA2115
European Study Tour
Interior Architecture Program
Staff Contact: School Office
UOC6 S1 S2
Prerequisite/s: INTA2201, INTA2202.

An intensive two week tour in which students are required to participate in design based workshops/installations to be completed/exhibited on tour. A maximum of 15 students will be selected to participate in architectural tours, industry events and academic workshops. Students are required to submit expressions of interest to Lisa Zamberlan.

INTA2121
History 1
Interior Architecture Program
Staff Contact: J O'Callaghan
UOC3 HPW1 S1

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
Staff Contact: J O'Callaghan
UOC3 HPW1 S2

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
Staff Contact: B Watson
UOC6 HPW4 S1

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
Staff Contact: B Watson
UOC6 HPW4 S1 S2

An extension of fundamental presentation and communication skills established in Communications 1. Explorations of a variety of compositional modelling and media techniques will extend into discipline-specific drawing practices. A series of structured workshops will develop skills in freehand and technically constructed perspective, axonometric, isometric, skiagraphy and rendering techniques. Seminars on scholarly research and writing; report and letter writing; skills for working with and making oral presentations to large and small groups. Practical research project involving access issues.

INTA2171
Technology 1
Interior Architecture Program
Staff Contact: K Máté
UOC6 HPW4 S1

Environmental Science and Structures:- Environmental Science: Introduction to architectural environmental science and structures with particular focus upon concepts of social responsibility, environmental accountability and ecological sustainability and their implications for the urban/built and natural environments. Examples of various constructional systems and their relationship to ESD will be examined. Structures: an introduction to basic structural behaviour and its relationship to construction technology. 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.

INTA2172
Technology 2
Interior Architecture Program
Staff Contact: K Máté
UOC6 HPW4 S2

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. 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.

INTA2201
Design Studio 3
Interior Architecture Program
Staff Contact: L Zamberlan
UOC6 HPW5 S1
Prerequisite/s: 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; number, geometry and 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; the physics and poetics of natural and artificial lighting; construction detailing as a design activity.

INTA2202
Design Studio 4
Interior Architecture Program
Staff Contact: L Zamberlan
UOC6 HPW5 S2
Prerequisite/s: 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; responsible energy use; passive energy systems; construction detailing as a design activity.

INTA2211
Theory 3
Interior Architecture Program
Staff Contact: H Stephens
UOC3 HPW2 S1
Prerequisite/s: INTA2111, INTA2112.

Theory of Form. The ontological and causal basis of the antinomical 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
Staff Contact: H Stephens
UOC3 HPW2 S2
Prerequisite/s: INTA2111, INTA2112.

Meaning in architecture. The role of cosmology, anthropology and morphology in the development of sound theory. Instinct, emotion, memory, perception, conception, imagination, intuition and intellect as the means whereby we 'read' our world. The role of semiology, metaphor, analogy, allegory and symbolism in architecture. The spiritual dimension of humankind and the world and its reflection in the great works of art and architecture.

INTA2221
History 3
Interior Architecture Program
Staff Contact: J O'Callaghan
UOC3 HPW1 S1
Prerequisite/s: 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
Staff Contact: J O'Callaghan
UOC3 HPW1 S2
Prerequisite/s: 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
Staff Contact: L Zamberlan
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: K Máté
UOC3 HPW2 S1
Prerequisite/s: INTA2171, INTA2172.

Materials: Materials used within the built environment may be understood with reference to their 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.

INTA2272
Technology 4
Interior Architecture Program
Staff Contact: K Máté
UOC3 HPW2 S2
Prerequisite/s: INTA2171, INTA2172.

Structures: The structures component should include the introduction to an outline of structural systems and their resolution into safe and rigid structures. The mathematical description of structures shall be included in this course including the basic structural analysis techniques and problem solving tools; physical, graphical, numerical and computer assisted. An introduction to basic statics and the properties and strengths of materials including constructional and environmental issues in design. Construction: Advanced documentation using AutoCAD to produce a series of drawings.

INTA2301
Design Studio 5
Interior Architecture Program
Staff Contact: School Office
UOC6 HPW5 S1
Prerequisite/s: INTA2201, INTA2202.

Design projects dealing with small to medium scale commercial, retail or public facilities. Emphasis on the use of the computer in the design process. Core considerations: materials and meaning in architecture; furniture and fitments; 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
Staff Contact: School Office
UOC6 HPW5 S2
Prerequisite/s: 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; estimating, cost planning and budgeting.

INTA2371
Technology 5
Interior Architecture Program
Staff Contact: K Máté
UOC3 HPW2 S1
Prerequisite/s: INTA2271, INTA2272.

Lighting and Acoustics:- Lighting: Environment. Natural and artificial lighting. Quantitative and qualitative aspects of lighting design. Electric light sources, light control and prediction methods. Skills for carrying out a sun analysis 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.

INTA2372
Technology 6
Interior Architecture Program
Staff Contact: K Máté
UOC3 HPW2 S2
Prerequisite/s: INTA2271, INTA2272.

Thermal Design and Building Services: Thermal Design: Integration of passive design strategies into buildings. There will be an introduction to thermal evaluation and design tools, correlation and simulation models. Building Services: Building services, regulations and standards: air-conditioning, plumbing, telecommunications, 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
Staff Contact: M Lester
UOC3 HPW2 S2
Prerequisite/s: 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. It will comprise an introduction to all legal aspects that surround Interior Architecture practice and will cover the law of contract, torts, agency, trade practices, and property. It will also introduce the various types of companies, partnerships and sole practices and discuss issues of copyright, intellectual property, patents and trademarks. Allowance has been made for students to undertake a period 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. See the course description of INTA2482 for more information.

INTA2401
Design Studio 7
Interior Architecture Program
Staff Contact: School Office
UOC6 HPW5 S1
Prerequisite/s: 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
Staff Contact: J O'Callaghan
UOC15 HPW4 S2
Prerequisite/s: INTA2401, INTA2441, INTA2411 and 168 units of credit.

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
Staff Contact: School Office
UOC6 HPW3
Prerequisite/s: 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
Staff Contact: J O'Callaghan
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: M Lester
UOC3 HPW2 S2
Prerequisite/s: INTA2382.

The course will examine practical and legal aspects of design practice including issues of professional indemnity, professional liability, professional ethics and code of conduct; methods of fee structure, advanced issues in the conditions of engagement, contract variations and general project administration systems; costing and estimating principles, bills of quantities and general budgeting for project control. 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 Course 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.

IROB1701
Industrial Relations
School of Industrial Relations and Org Behaviour
Staff Contact: B Dabscheck J O'Brien
UOC6 HPW3 S1 S2

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.

IROB1702
Labour Organisation
School of Industrial Relations and Org Behaviour
Staff Contact: C Wright
UOC6 HPW3 S2

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.

IROB1712
Management of Organisations
School of Industrial Relations and Org Behaviour
Staff Contact: J Holt S Gregson
UOC6 HPW3 S1

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.

IROB2701
Professional Issues & Ethics
School of Industrial Relations and Org Behaviour
Staff Contact: School Office
Enrolment requires School approval
UOC3 S2

This course can not be undertaken by students majoring in HRM or students in the Faculty of Commerce. This course is designed to introduce students to professional ethics in work and society. With the greater reliance on advanced and specialised technical and scientific knowledge in modern industrial societies, there is an increase in the number of professionals and the scope of professional responsibilities. The role of the professions is unique as it spans both economic functions, through the effective application of specialised scientific knowledge and social responsibility (ethical practice in its application and effects of specialised knowledge). Indeed the rise and continued social and political support of modern professions is premised on the successful combination of these roles via professional education, development of relevant norms and the application of ethical codes of conduct. Moreover, the legal environment seeks to ensure that these roles are applied. As a new profession, computer engineering must both adapt these roles to new knowledge and situations, but also continued the traditions of the older professions. This is seen in the development of Codes of Ethical Practice by the Australian Computer Society, ACM, and other computer professional associations. Thus a central concern of this course is to provide future professionals with an understanding of these issues.

IROB2702
Industrial Law
School of Industrial Relations and Org Behaviour
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: IROB1701 or IROB1702 or IROB1712

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.

IROB2704
Social Organisation of Work
School of Industrial Relations and Org Behaviour
Staff Contact: D Fieldes
UOC6 HPW3 S2
Prerequisite/s: IROB1701 or IROB1702 or IROB1712

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.

IROB2715
Labour History
School of Industrial Relations and Org Behaviour
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: IROB1701 or IROB1702 or IROB1712
Excluded: 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.

IROB2718
Human Resource Management
School of Industrial Relations and Org Behaviour
Staff Contact: A Junor
UOC6 HPW3 S1
Prerequisite/s: IROB1701 or IROB1702 or IROB1712

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.

IROB2721
Managing People
School of Industrial Relations and Org Behaviour
Staff Contact: P Sheldon
Enrolment requires School approval
UOC6 HPW3 S1

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.

IROB2724
Health and Safety at Work
School of Industrial Relations and Org Behaviour
Staff Contact: M Quinlan
UOC6 HPW3 S1
Prerequisite/s: IROB1701 or IROB1702 or IROB1712

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.

IROB3702
International Human Resource Management Practice
School of Industrial Relations and Org Behaviour
Staff Contact: I Hampson
UOC6 HPW3 S1
Prerequisite/s: IROB1701 or IROB1702 or IROB1712 or IBUS2102

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.

IROB3705
Management and Employment Relations
School of Industrial Relations and Org Behaviour
Staff Contact: C Wright
UOC6 HPW3 S1
Prerequisite/s: IROB1701 or IROB1702 or IROB1712

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.

IROB3708
Research Methods in Employment and Management
School of Industrial Relations and Org Behaviour
Staff Contact: A Junor
Enrolment requires School approval
UOC6 HPW3 S2

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.

IROB3721
Negotiation Skills
School of Industrial Relations and Org Behaviour
Staff Contact: P Sheldon
UOC6 HPW3 S2

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 concepts: commercial; organisational; community; political and public policy; legal; and industrial relations. The 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 program is made up of negotiation role play exercises which develop in complexity as the course progresses.

IROB3724
Strategic Human Resource Management
School of Industrial Relations and Org Behaviour
Staff Contact: D Fieldes
UOC6 HPW3 S2
Prerequisite/s: IROB2718

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.

IROB3728
Managing Pay and Performance
School of Industrial Relations and Org Behaviour
Staff Contact: A Junor
UOC6 HPW3 S2
Prerequisite/s: IROB1701 or IROB1702 or IROB1712

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.

IROB3729
Managing Workplace Training
School of Industrial Relations and Org Behaviour
Staff Contact: I Hampson
UOC6 HPW3 S2
Prerequisite/s: IROB2718, IROB1701 or IROB1702 or IROB1712

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.

IROB4731
Case Studies A
School of Industrial Relations and Org Behaviour
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2
Prerequisite/s: IROB3706 or IROB3724

Case studies highlight a range of employment issues at the plant or local level. Students also prepare their own case study for seminar presentation.

IROB4732
Case Studies B
School of Industrial Relations and Org Behaviour
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2
Prerequisite/s: IROB3706 or IROB3724

Case studies highlight a range of employment issues at the industry and national level. Students also prepare their own case study for seminar presentation.

IROB4733
Honours Seminar
School of Industrial Relations and Org Behaviour
Staff Contact: S Gregson
Enrolment requires School approval
UOC12 HPW3 S1 S2
Prerequisite/s: Admission to Honours program in Industrial Relations.

IROB4734
Thesis (Industrial Relations)
School of Industrial Relations and Org Behaviour
Staff Contact: School Office
UOC12 HPW3 S2
Prerequisite/s: IROB3707 and admission to Honours in Industrial Relations.

IROB4736
Industrial Relations Honours
School of Industrial Relations and Org Behaviour
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1 S2

A thesis of 20,000 words, Industrial Relations seminar (both Sessions), and two approved IROB courses (one per Session). Details of approved courses may be obtained from the Head of School. Students undertaking this Honours year program should enrol only in IROB4736.

IROB4737
Industrial Relations 4 (Honours) P/T
School of Industrial Relations and Org Behaviour
Staff Contact: School Office
Enrolment requires School approval
UOC12 S1 S2

A thesis of 20,000 words, Industrial Relations seminar and two approved IROB courses. Details of approved courses may be obtained from the Head of School. Students undertaking this Honours program part time should enrol only in IROB4737.

IROB4738
Thesis (Human Resource Management)
School of Industrial Relations and Org Behaviour
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW3 S2
Prerequisite/s: IROB3708 and admission to Honours in Human Resource Management.

IROB4740
Human Resource Management 4 (Honours) F/T
School of Industrial Relations and Org Behaviour
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1 S2

A thesis of 20,000 words, Human Resource Management seminar (both Sessions), two approved IROB courses (one per Session). Details of approved courses may be obtained from the Head of School. Students undertaking this Honours year program should enrol only in IROB4740.

IROB4741
Human Resource Management 4 (Honours) P/T
School of Industrial Relations and Org Behaviour
Staff Contact: School Office
Enrolment requires School approval
UOC12 S1 S2

A thesis of 20,000 words, Human Resource Management seminar, two approved IROB courses. Details of approved courses may be obtained from the Head of School. Students undertaking this Honours program part time should enrol only in IROB4741.

IROB4744
Combined Honours in Human Resource Management P/T
School of Industrial Relations and Org Behaviour
Staff Contact: B Dabscheck
Enrolment requires School approval
UOC6 S1 S2

A thesis of 20,000 words, Industrial Relations seminar and one approved IROB course. Details of approved courses may be obtained from the Head of School. Students undertaking this Honours program part time should enrol only in IROB4744.

IRSH2001
Irish History from 1800
School of History
Staff Contact: J Gascoigne
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: HIST2021

Major developments in Irish History 1800-1995. Emphasis on social and economic history and emigration in the 19th century, and on political problems in the 20th.

IRSH2002
Identity, Culture, Politics: Ireland and Australia in the 20th Century
School of History
Staff Contact: J Gascoigne
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: P Kuch
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: 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
School of Theatre, Film and Dance
Staff Contact: J McCallum
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: THST2161

Studies recent developments in theatre and drama, in various countries, over the last 40 years.

IRSH3472
Modernism - Joyce
School of English
Staff Contact: P Kuch
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: ENGL2453, 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
Staff Contact: D Palaversich
UOC6 HPW5 S1
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/s: 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
Staff Contact: D Palaversich
UOC6 HPW5 S2
Prerequisite/s: 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.

ITAL2001
Intermediate Italian 1
School of Modern Language Studies
Staff Contact: D Palaversich
UOC6 HPW5 S1
Prerequisite/s: ITAL1002

Consolidates the main structures of Italian grammar and provides an overview of contemporary Italian history and society. The language component develops the four language skills, introducing complex structures. Reading, writing, and close analysis of appropriate texts are particular features of this section. The cultural component consists of a series of lectures which offer an insight into some of the salient issues of Italian history from Unification to the present, and a reading seminar which deals with a range of twentieth-century literary texts.
Note/s: Will be taught at the University of Sydney.

ITAL2002
Intermediate Italian 2
School of Modern Language Studies
Staff Contact: D Palaversich
UOC6 HPW5 S2
Prerequisite/s: ITAL2001

Continues ITAL2001. The cultural component explores aspects of twentieth-century Italian cultural, social, and political life through the presentation in a weekly lecture of major literary and cultural movements and figures, followed by a guided reading and analysis of relevant texts in a weekly reading seminar.
Note/s: Will be taught at the University of Sydney.

JAPN1000
Japanese Communication 1A
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW6 S1
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 and Korean Studies
Staff Contact: School Office
UOC6 HPW6 S2
Prerequisite/s: 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 and Korean Studies
Staff Contact: School Office
UOC6 HPW5 S1 X1
Prerequisite/s: 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 and Korean Studies
Staff Contact: School Office
UOC6 HPW5 S2 X1
Prerequisite/s: JAPN2000

Consolidation of oral-aural skills up to intermediate level. Development of reading and writing skills, with another 150 kanji introduced.

JAPN2300
Professional Japanese Communication
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: JAPN1001;
Excluded: JAPN3001.

Students develop communicative competence in spoken and written professional Japanese at early intermediate level, relevant to a variety of business and commercial situations. The course emphasises professional language use including both linguistic and para-linguistic politeness.

JAPN2500
Japanese Society, Culture and Economy
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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.

JAPN2501
Japan's Others: Assimilation, Exclusion and Resistance
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

Examines both theoretical and everyday issues faced by marginalised groups in contemporary Japan. Focuses on ideologies of homogeneity, assimilation, and resistance in relation to Ainu, Buraku, Koreans, and Okinawans, as well as more recent migrants. These issues are also placed in the wider context of discussions on multiculturalism, pluralism, nationalism, and globalisation.

JAPN2510
Japan and Korea: Cultures in Conflict
Department of Japanese and Korean Studies
Staff Contact: G Evon
UOC6 HPW3 S1
Prerequisite/s: 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.

JAPN2513
Cultures of War and Peace in Japan
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

Examines cultures of war and peace in Japan, viewed within the larger context of modernity, nationalism and total war. Focus on representations of collective memory, contests over national identity, and underlying themes of war, peace, the samurai spirit, and violence within popular culture. Works by such literary figures as Oe Kenzaburo and Mishima Yukio, the films of such directors as Imamura Shohei, and notions of Armageddon are examined. Also discussed in the wider context of debates over memory, identity, and responsibility in Japan and beyond.

JAPN2600
Hospitality Japanese
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: JAPN2000;
Excluded: JAPN4000.

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.

JAPN2700
Talking Japanese Pop Culture
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: JAPN1001 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.

JAPN3000
Japanese Communication 3A
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW5 S1
Prerequisite/s: 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 150 new Kanji are introduced.

JAPN3001
Japanese Communication 3B
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW5 S2
Prerequisite/s: 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 150 Kanji are introduced.

JAPN3300
Discover Japanese Grammar A
Department of Japanese and Korean Studies
Staff Contact: K Teruya
UOC6 HPW3 S1
Prerequisite/s: 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/s: Instruction will be given mainly in Japanese but also in English.

JAPN3301
Discover Japanese Grammar B
Department of Japanese and Korean Studies
Staff Contact: K Teruya
UOC6 HPW3 S2
Prerequisite/s: JAPN3300

The grammar of modern Japanese will be further investigated as an overall grammatical system. Expands the grammatical domains of enquiry of JAPN3300 by including some new areas of grammar and providing a more detailed map of the areas that are already familiar.
Note/s: Instruction will be given mainly in Japanese but also in English.

JAPN3500
Business Japanese
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: JAPN3000;
Excluded: JAPN4100.

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.

JAPN3501
Japanese Studies Internship
Department of Japanese and Korean Studies
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2 X1 X2
Prerequisite/s: JAPN2500 or JAPN3900 and JAPN3001 or equivalent

Fourteen days of internship placement in a Japanese or Japan-related government, other public, or commercial organisation. Students will use their skills and knowledge in Japan-specific professional communication tasks and enhance their Japan literacy and professionally relevant proficiency. They will also gain practical knowledge of Japanese work organisation and management styles.

JAPN3601
Cultural Studies and Japan
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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.

JAPN3602
Gender and Sexuality in Contemporary Japan
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

Students learn about gender and sexual ideologies, identities and experiences in contemporary Japan. First critically discusses analyses of (heterosexual) women and female gender roles. Consideration of sex work(ers) in Japan is also made. Masculinities in Japan are discussed, including descriptions of hegemonic masculinity, fatherhood, domestic violence, and youth cultures. Finally, analyses of gay, lesbian and other non-hegemonic gender and sexual identities are discussed.

JAPN3603
Japanese Literature and Language
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: JAPN3001

Offers a collage of great works of modern and contemporary Japanese literature. Through language-based reading of selected works of Japanese literature, the course provides students with an opportunity to "meet" great writers Japan has produced and also with a challenge to learn how their brilliance is reflected in the way they engage with the Japanese. The literary collage consists of a variety of literary texts, but it also includes verbal art in drama and films.

JAPN3605
Japan in the World
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

Examines international relations, power, and politics in contemporary Japan, with a particular focus on political, economic, and cultural relations with the United States and Asia. Emphasis is given to competing visions of: Japan's role in the world; Japan's national security; Japan's national identity; human rights and Japan; and Japan's response to contemporary global issues. These competing visions are viewed in the broader context of globalisation, rising nationalisms, and the legacies of imperialism.

JAPN3900
Introduction to Japanese Studies (Advanced)
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit including 6 units of Japanese at credit 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
Special Topics in Japanese (Advanced)
Department of Japanese and Korean Studies
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: JAPN2001 or equivalent plus Credit average in JAPN courses;
Excluded: JAPN4400.

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 (Pre-Honours)
Department of Japanese and Korean Studies
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2
Prerequisite/s: JAPN3000 or equivalent plus Credit average in JAPN courses;
Excluded: JAPN4401.

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.

JAPN4000
Japanese Communication 4A
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW5 S1
Prerequisite/s: JAPN3001

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.

JAPN4001
Japanese Communication 4B
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW5 S2
Prerequisite/s: JAPN4000

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.

JAPN4100
Japanese Communication 5A
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW5 S1
Prerequisite/s: JAPN4001

Focuses on mid-advanced Japanese interactive skills. Increasing emphasis is placed upon further development of reading and writing abilities. Autonomous learning is encouraged and assisted in acquisition of more advanced interactive skills. Students are given opportunities to improve on competence in professional and business settings. Approximately 250 new Kanji are introduced.

JAPN4101
Japanese Communication 5B
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW5 S2
Prerequisite/s: JAPN4100

Honing of reading and writing skills attained in JAPN4100. Continued instruction in more advanced conversational and grammatical structures and useful vocabulary for the purpose of business /professional and related areas of communication. A further 250 Kanji are introduced.

JAPN4200
Japanese Communication 6A
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: JAPN4101

Concentrates on further acquisition of interactive skills required in a wider variety of Australia-Japan contact situations. Continued emphasis on autonomous learning and self-monitoring of problem areas in interactive skills. Approximately 250 new Kanji are introduced.

JAPN4201
Japanese Communication 6B
Department of Japanese and Korean Studies
Staff Contact: Y Hashimoto
UOC6 HPW4 S2
Prerequisite/s: JAPN4200

Refining of linguistic and communicative skills acquired in JAPN4200. Another 250 Kanji are introduced, ie. the remaining Jooyoo Kanji.

JAPN4300
Advanced Reading in Japanese A
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: JAPN4201

Provides opportunity for advanced learners of Japanese with intensive and extensive reading in the language on selected topic(s). Accumulation of Kanji, vocabulary and idiomatic expressions is emphasised.

JAPN4301
Advanced Reading in Japanese B
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: JAPN4300

Learners are required to continue reading on the selected topic(s) from JAPN4300, prepare a paper and give a formal oral presentation to a group of native Japanese speakers.

JAPN4500
Japanese Honours (Research) F/T
Department of Japanese and Korean Studies
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 54 units of credit including JAPN3900, JAPN3901 and JAPN3902 at an average of at least 65% and permission of Head of Department.

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/s: 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 Honours (Research) F/T
Department of Japanese and Korean Studies
Staff Contact: School Office
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 48 units of credit including JAPN3900 and JAPN3901 or JAPN3902 at an average of at least 65% and permission of Head of Department.

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/s: Students who complete the Honours program with JAPN4101 or a higher level will be regarded as having completed the Japanese Studies Advanced Program.

JWST1000
The Modern Jewish Experience: Emancipation to the Holocaust
School of Politics and International Relations
Staff Contact: School Office
UOC6 HPW3 S1
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
Staff Contact: I Bickerton
UOC6 HPW3 S2
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.

JWST2000
Jews in Modern Society
School of Politics and International Relations
Staff Contact: G Levey
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: POLS2033.

Introduces students to the social scientific study of the Jews and their communities in the modern period. Focus is on the different paths of Jewish emancipation in Western societies, the impact of modernisation on Jewish life, and the significance of the Holocaust and the establishment of the State of Israel for contemporary Jewish identity. Themes include: occupational, educational, and social class transformations; religious, ethnic, and communal forms of Jewish identification; Jews and others; political allegiances; Israel-Diaspora relations; and assimilation and intermarriage.

JWST2001
Jews, States and Citizenship
School of Politics and International Relations
Staff Contact: G Levey
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: POLS2034.

Examines tensions in the relationship of Jews to the governing principles of liberal states. Focuses on cases and controversies in France, Britain, Australia, Canada, the United States and Israel about the political recognition of Jewish religious practices and group interests. Topics include: church-state separation; affirmative action; free speech; state recognition and support of Jewish practices; multiculturalism as a new public policy and a challenge to Jews; Israel as a liberal and a Jewish state.

JWST2100
Modern Jewish History
School of Politics and International Relations
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: HIST2073.

Investigates the history of the systematic mass murder of Europe s Jews during World War II, commonly known as the Holocaust. Main issues include: how was it possible for a modern state to initiate and carry out the destruction of European Jewry? How did the Jews actually live in Eastern and Western Europe prior to their near annihilation? How might one characterise the Jews experiences of life and death in the Holocaust? How does the Holocaust fit into German history and historiography? How did Nazi racism affect other European communities? How has the Holocaust influenced Jewish communal life and consciousness in modern Israel and the Diaspora?

JWST2101
Holocaust and Genocide in Historical Perspective
School of Politics and International Relations
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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.

JWST2102
History of the Arab-Israeli Conflict
School of History
Staff Contact: I Bickerton
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: HIST2023, HIST2030.

Examines the historical background and present state of Arab-Israeli relations. Topics include: early Zionism, the Balfour Declaration, Jewish settlement before and after World War I; the Mandate period; the Holocaust; the creation of Israel; major issues in Arab-Israeli relations since 1948.

JWST2105
Religions: Judaism, Christianity, Islam
School of Sociology
Staff Contact: C Kessler
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: SOCA3202, SOCI3711.

An investigation of the cultural, social and historical as well as doctrinal relations between the three 'Abrahamic' monotheistic religions and the distinct communities of faith arising from them, as well as of contemporary scripturalist or 'fundamentalist' reassertions of those faiths in movements or ideologies of resistance to modernity.

JWST2108
Jerusalem: One City, Three Faiths
School of Sociology
Staff Contact: C Kessler
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: SOCA3200

An investigation of the historical, religious and symbolic significance of Jerusalem in the Jewish, Christian and Muslim religious traditions and to the members of the human faith communities based upon them.

KORE1000
Korean Communication 1A
Department of Japanese and Korean Studies
Staff Contact: G Evon
UOC6 HPW6 S1
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 and Korean Studies
Staff Contact: G Evon
UOC6 HPW6 S2
Prerequisite/s: 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 and Korean Studies
Staff Contact: S Shin
UOC6 HPW5 S1
Prerequisite/s: 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 and Korean Studies
Staff Contact: S Shin
UOC6 HPW5 S2
Prerequisite/s: 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 and Korean Studies
Staff Contact: G Evon
UOC6 HPW3 S1
Prerequisite/s: 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.

KORE2602
Korean Literature: A Survey in English
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

A broad overview of the literary forms that have been practiced in Korea from early times to present, throughout all segments of society. Will include elite literature as well as folk literary forms. Special attention will be given to the social implications literature has had in the Korean context.

KORE3000
Korean Communication 3A
Department of Japanese and Korean Studies
Staff Contact: S Shin
UOC6 HPW5 S1
Prerequisite/s: 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 and Korean Studies
Staff Contact: S Shin
UOC6 HPW5 S2
Prerequisite/s: 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 and Korean Studies
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: KORE3001;
Excluded: KORE2100.

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 and Korean Studies
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: 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 and Korean Studies
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: KORE3401;
Excluded: KORE3100.

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 and Korean Studies
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: KORE3500;
Excluded: KORE3101.

Continuation of KORE3500. 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 and Korean Studies
Staff Contact: S Shin
UOC6 HPW3 S1
Prerequisite/s: KORE3501 or equivalent

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 and Korean Studies
Staff Contact: S Shin
UOC6 HPW3 S2
Prerequisite/s: KORE3600 or equivalent

Builds upon skills from KORE3600 with concentration 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 and Korean Studies
Staff Contact: G Evon
UOC6 HPW3 S1
Prerequisite/s: 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
Special Topics in Korean Studies (Advanced)
Department of Japanese and Korean Studies
Staff Contact: G Evon
UOC6 HPW3 S1
Prerequisite/s: 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) F/T
Department of Japanese and Korean Studies
Staff Contact: G Evon
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 54 units of credit, including KORE3900 and KORE3901, plus either KORE2600, KORE2601, KORE2602, KORE2603 or IBUS2104 at 65% and permission of Head of Department.

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
Staff Contact: School Office
UOC9 HPW6 S1

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
Staff Contact: L Corkery
UOC6 HPW4 S2
Prerequisite/s: LAND1101
Corequisite/s: 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
Staff Contact: J Weirick
UOC3 HPW2 S1

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
Staff Contact: J Weirick
UOC3 HPW2 S2

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
Staff Contact: L Corkery
UOC3 HPW3 S2
Prerequisite/s: BENV1141;
Corequisite/s: 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
Staff Contact: L Corkery
UOC3 HPW3 S1

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
Staff Contact: C Evans
UOC8 HPW6 S2
Prerequisite/s: 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
Staff Contact: G Fletcher
UOC3 HPW3 S2

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
Staff Contact: C Evans
UOC9 HPW6 S1
Prerequisite/s: 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
Staff Contact: L Corkery
UOC9 HPW7 S2
Prerequisite/s: 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
Staff Contact: L Corkery
UOC3 HPW2 S1

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
Staff Contact: School Office
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/s: LAND1222 is not a course and should not appear on your enrolment.

LAND1251
Advanced Horticulture
Landscape Architecture Program
Staff Contact: L Corkery
UOC3 HPW2 S1
Prerequisite/s: 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
Staff Contact: L Corkery
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: G Fletcher
UOC3 HPW3 S2
Prerequisite/s: 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.

LAND1281
Professional Practice 1
Landscape Architecture Program
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: LAND1121

An introduction to the practice of landscape architecture, its scope and potential. The framework of commercial and environmental law. Project stages and procedures. Contracts, consultancy and client relationships. Current issues in landscape practice.

LAND1301
Landscape Design 5: Design Resolution and Documentation
Landscape Architecture Program
Staff Contact: L Corkery
UOC9 HPW6 S1
Prerequisite/s: LAND1202, LAND1272, BENV1242, LAND1381

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
Staff Contact: L Corkery
UOC9 HPW6 S2
Prerequisite/s: 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
Staff Contact: C Evans
UOC3 HPW2 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC4 HPW2
Prerequisite/s: 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
Staff Contact: L Corkery
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: L Corkery
UOC12 S1 S2

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.

LAND1382
Professional Practice 2
Landscape Architecture Program
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: LAND1281, LAND1381

Understanding of legal and professional responsibilities with specific reference to negligence and risk. Understanding of contract law and tender procedures. Application of specific statutes. Specialist areas include tree law, copyright and business practice.

LAND1401
Landscape Design 7: Urban Landscape Design
Landscape Architecture Program
Staff Contact: J Weirick
UOC12 HPW8 S2
Corequisite/s: LAND1402; Prerequisite: LAND1302, LAND1382, LAND1481

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
Staff Contact: J Weirick
UOC12 HPW8 S2
Corequisite/s: LAND1401; Prerequisite: LAND1302, LAND1382, LAND1481

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
Staff Contact: C Evans
UOC15 S1 S2
Prerequisite/s: 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, organisation 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 in week 14. 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
Staff Contact: C Evans
UOC9 HPW2 S1
Prerequisite/s: 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
Staff Contact: L Corkery
UOC12 S1 S2
Prerequisite/s: LAND1381

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.

LATN1000
Introductory Latin A
School of Modern Language Studies
Staff Contact: R Pitcher
UOC6 HPW5 S1
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/s: Excluded HSC Latin or equivalent.

LATN1001
Introductory Latin B
School of Modern Language Studies
Staff Contact: R Pitcher
UOC6 HPW5 S2
Prerequisite/s: 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/s: Excluded HSC Latin or equivalent.

LATN2001
Reinventing the Past: Roman Mythological Epic
School of Modern Language Studies
Staff Contact: R Pitcher
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: R Pitcher
UOC6 HPW2 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW4 S1

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
Staff Contact: D Brown
UOC8 HPW4 S2
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: 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
Staff Contact: School Office
UOC8 HPW4
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: 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.

LAWS1011
Criminal Law 2
Faculty of Law
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: M DeVilliers
UOC8 HPW4 S1 S2
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: 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 (www2.austlii.edu.au/itlaw/).

LAWS1033
Communications Law
Faculty of Law
Staff Contact: School Office
UOC8 HPW4 S2
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: 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
Staff Contact: School Office
UOC6 HPW5 S1

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
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC3 HPW2 S1

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
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: 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 performatory 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
Staff Contact: R Potok
UOC6 HPW4 S1
Prerequisite/s: LAWS1051, LAWS1061, LAWS2140, LAWS1071, LAWS1072

Property, Equity and Trusts 1 is one of the compulsory "core" courses of the law program. One objective of the course is to ensure that students gain a sound understanding of basic principles of the law of property, including an introduction to equitable concepts. 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; creation and assignment of proprietary interests in land at law and in equity; the history of equity and the nature of equitable interests in land; the express, implied and constructive trust; express trusts and powers and duties of trustees; estoppel as founding interests in land; priority between competing legal and equitable interests in land.

LAWS1082
Property and Equity 2
Faculty of Law
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: LAWS1051, LAWS1061, LAWS1071, LAWS1072, LAWS1081, LAWS2140, or LAWS1120, or LAWS1420

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 I. 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 doctrines of accretion and erosion; 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
Staff Contact: School Office
Enrolment requires School approval
UOC8 HPW4 S1 S2

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/s: If taken as a compulsory course, it is LAWS4010 UOC6.

LAWS1092
Business Associations 2
Faculty of Law
Staff Contact: A Corbett
UOC8 HPW4 S2
Prerequisite/s: 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, i.e. 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, i.e. 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, i.e. the issue and content of prospectuses; The structure and regulation of the market for corporate control (i.e. 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.

LAWS1720
Crime and Society
Faculty of Law
Staff Contact: School Office
UOC6 S1

Some of the issues arising from the relationship of crime to society. Crime as a dividing practice in the construction of normality. A critical history of traditional and current accounts of crime and delinquency. The subject is sourced from a variety of literatures. Topics include: the dramatisation of evil and the politics of social control; a genealogy of delinquency and its psychological and sociological explanations; theories of conformity and alienation; crime and discipline; women, crime and power.

LAWS1812
Sport and the Law
Faculty of Law
Staff Contact: T Hickie
UOC8 HPW4 X1

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.

LAWS2021
Industrial and Intellectual Property
Faculty of Law
Staff Contact: J McKeough
UOC8 HPW4 S1 S2
Prerequisite/s: 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
Staff Contact: D Healey
UOC8 HPW3 S1
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: 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
Staff Contact: K Sin
UOC8 HPW4 S1
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: 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
Staff Contact: R Potok
UOC8 HPW4 S1 S2
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: 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.

LAWS2025
Advanced Contract Law
Faculty of Law
Staff Contact: D Harley
UOC8 HPW4 S1 X2
Prerequisite/s: 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
Staff Contact: G Pearson
UOC8 HPW4 S1
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: 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
Staff Contact: School Office
UOC8 HPW4 S2

The Commonwealth and NSW systems of regulation of industrial disputes. The Commonwealth and NSW systems of workplace bargaining. The Commonwealth and NSW legislation regulating the activities of trade and industrial unions, including their internal administration. The Commonwealth and NSW systems for arbitration of unfair dismissals.

LAWS2028
The Law of Employment
Faculty of Law
Staff Contact: School Office
UOC8 HPW4 X1

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.

LAWS2035
Land Dealings: Residential and Commercial Contracts
Faculty of Law
Staff Contact: C Rossiter
UOC8 HPW4 S1

The law of vendor and purchaser with special emphasis on the standard form contract for sale of land in use in NSW. 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.

LAWS2051
Elements of Income Tax Law
Faculty of Law
Staff Contact: P Burgess
UOC8 HPW4 S1
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: 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
Staff Contact: P Burgess
UOC8 HPW4 S2
Prerequisite/s: 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/s: 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
Staff Contact: A Marfording
UOC6 HPW4 X2

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, e.g. 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
Staff Contact: S Degeling
UOC8 HPW4 X2
Prerequisite/s: LAWS1051, LAWS1061, LAWS2140, LAWS1071, LAWS1072

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
Staff Contact: R Rayfuse
UOC8 HPW4 S1 S2
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: 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
Staff Contact: R Potok
UOC8 HPW4 S2
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: 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 NSW 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 Practice of the WTO
Faculty of Law
Staff Contact: B Mercurio
UOC8 HPW4 S1

This course introduces students to the legal, business and policy aspects of international trade, focusing on the complex legal framework of the various WTO Agreements. This course analyses the legal framework of the WTO by studying 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 clauses, regional trading blocs, national treatment clauses and exceptions for environmental, health and safety and other policies, anti-dumping, export subsidies, countervailing duties, international rules on patents and copyrights and other topics of contemporary importance currently being debated. The course should give 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
Staff Contact: A Marfording
Enrolment requires School approval
UOC8 X2
Prerequisite/s: LAWS1001

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
Staff Contact: D Hovell
Enrolment requires School approval
UOC8 S1 S2 X1
Prerequisite/s: LAWS2081

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
Staff Contact: D Hovell
Enrolment requires School approval
UOC8 HPW4 S1
Corequisite/s: 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.

LAWS2090
Issues in Space Law
Faculty of Law
Staff Contact: S Freeland
UOC8 HPW4 S1
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: LAWS2311 or LAWS1010.

This course examines the underlying legal principles that specifically regulate the use, exploration and exploitation of space, and how these and other principles of International Law can and should be applied to the many different State and private commercial uses of outer space. It examines the evolution, legal framework and organisational structures of this area of law, so as to comprehend the legal context in which the diverse range of space activities take place and to understand and examine the various legal vacuums that have arisen. The course looks at 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. Students are encouraged to examine and suggest ways in which the laws and principles regulating Space should be expanded to deal with many emerging issues.

LAWS2091
Introduction to Space Law
Faculty of Law
Staff Contact: S Freeland
UOC4 S1
Prerequisite/s: LAWS1001

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.

LAWS2140
Public Law
Faculty of Law
Staff Contact: School Office
UOC3 HPW2 S1

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.

LAWS2149
Sir Harry Gibbs National Moot Competition
Faculty of Law
Staff Contact: G Winterton
Enrolment requires School approval
UOC8 S2

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
Staff Contact: School Office
UOC6 HPW4 S1 S2

Federal constitutional law, stressing the legislative and judicial powers of the Commonwealth and the judicial interpretation by the High Court of the extent of those powers, in particular: trade and commerce, external affairs, corporations, appropriation, grants and taxation powers, inconsistency of Commonwealth and State laws, freedom of interstate trade and commerce, excise and implied limitations on Commonwealth and State powers, including implied rights. Techniques and approaches adopted by the High Court in interpreting the Australian Constitution. Further study of constitutional law may be undertaken in LAWS2292 The High Court of Australia, LAWS 429 Comparative Constitutional Law and LAWS2156 Issues in Australian Constitutional Law.

LAWS2154
Human Rights in Ancient Rome
Faculty of Law
Staff Contact: R Bauman
UOC4 HPW2 S2
Prerequisite/s: LAWS1001

An in-depth examination of a proposition enunciated in Richard A. Bauman, Human Rights in Ancient Rome. The argument will be that human rights are, at best, a derivative of the Roman model. The course will include comparisons of selected aspects of the Roman and modern versions. The base line for the latter is the United Nations? Declaration of Human Rights in 1948.

LAWS2155
Federal Constitutional Law
Faculty of Law
Staff Contact: G Winterton
UOC8 HPW4

Federal constitutional law, stressing the legislative and judicial powers of the Commonwealth and the judicial interpretation by the High Court of the extent of those powers, in particular: trade and commerce, external affairs, corporations, appropriation, grants and taxation powers, inconsistency of Commonwealth and State laws, freedom of interstate trade and commerce, excise and implied limitations on Commonwealth and State powers, including implied rights. Techniques and approaches adopted by the High Court in interpreting the Australian Constitution. Further study of constitutional law may be undertaken in LAWS2292 The High Court of Australia, LAWS 429 Comparative Constitutional Law and LAWS2156 Issues in Australian Constitutional Law.

LAWS2156
Issues in Australian Constitutional Law
Faculty of Law
Staff Contact: K Booker
UOC4 HPW4 S2
Prerequisite/s: 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.

LAWS2157
Roman Law: A Guide to Legal Thinking
Faculty of Law
Staff Contact: R Bauman
UOC4 HPW2 S1
Prerequisite/s: LAWS1001

There are no prerequisites and no knowledge of Latin is required as all necessary material is available in English translation. The course begins with a brief introduction showing how the law of Ancient Rome adapted to changing social, political and economic conditions, finally evolving into what proved to be the foundation of modern law. The course then turns to three topics in which Roman law supplied detailed and indispensable guidance to modern legal systems, with special reference to Australian law. The three topics are Obligations (Contract and Tort), Succession, Criminal Law. The assessment is a take home exam in the examination period.

LAWS2160
Administrative Law
Faculty of Law
Staff Contact: School Office
UOC6 HPW4 S1 S2

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
Staff Contact: D Hovell
UOC8 HPW4 S2
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: 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
Staff Contact: G Moon
UOC8 HPW4 S1
Prerequisite/s: LAWS1001

A study of the fundamental legal principles and institutions of international human rights, through the medium of contemporary human rights concerns. The course focuses particularly on economic and social rights in the context of rapid economic globalisation and technological development. The course is taught by staff with both academic expertise and advocacy experience, as well as by distinguished guest speakers. The course examines the impact on economic and social rights of major international forces for change, including trade and investment liberalisation, the expansion of multinational corporations, mass movements of people and the rise of terrorism. Special attention is given to developing countries, the rights of women, "cultural relativism," the rights of Indigenous peoples, enforcement of economic and social rights and the role of non-government organisations in promoting and protecting human rights.

LAWS2183
Australian Journal of Human Rights
Faculty of Law
Staff Contact: School Office
Enrolment requires School approval
UOC8 S1 S2 X1

A student may be deemed, on the recommendation of the Head of School and the Faculty Advisors 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.

LAWS2212
Australian Indigenous Law Reporter
Faculty of Law
Staff Contact: R Nettheim
Enrolment requires School approval
UOC8 S1

A student may be deemed, on the recommendation of the Head of School and the Faculty Advisors to the AILR, 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
Staff Contact: School Office
UOC2 HPW2 S1

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
Staff Contact: School Office
Enrolment requires School approval
UOC2 HPW2 S1

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

LAWS2232
Law After Communism
Faculty of Law
Staff Contact: M Krygier
UOC8 HPW4 S1
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
Staff Contact: School Office
UOC8 HPW4 S1

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.

LAWS2272
Australian Immigration Law and Practice
Faculty of Law
Staff Contact: A Glass
UOC8 HPW4 S2
Prerequisite/s: LAWS1081, LAWS1082; or LAWS3010

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.

LAWS2282
Advanced Administrative Law: Adapting to Regulatory Change
Faculty of Law
Staff Contact: M Aronson
UOC8 HPW4 S2

This course deals at an advanced level with administrative law issues, and issues of regulatory design, emerging from the relatively recent changes to the ways in which the state makes and implements policy and delivers services. The course focus is on the legal consequences of downsizing the state, politicising its senior public servants, and corporatising government agencies, and the legal consequences of adopting alternative modes of regulation, outsourcing and privatisation. The course includes both theoretical and applied materials, ranging from distinctions between public and private power to administrative law's reactions to privatised prisons.

LAWS2292
The High Court of Australia
Faculty of Law
Staff Contact: G Winterton
UOC8 HPW4 S1

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.

LAWS2301
Remedies
Faculty of Law
Staff Contact: S Degeling
UOC8 HPW4 S1 X2
Prerequisite/s: LAWS1081, LAWS1082; or LAWS3010

A study of the principal private law remedies evolved by the common law and by equity through an examination of relevant historical, economic and political perspectives and the use of appropriate case studies. 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
Staff Contact: F Gibson
Enrolment requires School approval
UOC16 HPW16 S1 S2 X1

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
Staff Contact: F Gibson
Enrolment requires School approval
UOC8 HPW8 S1 S2 X1

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
Staff Contact: F Gibson
Enrolment requires School approval
UOC16 HPW16 S1 S2 X1

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.

LAWS2307
Social Justice Intern Program
Faculty of Law
Staff Contact: J Disney
Enrolment requires School approval
UOC8 S1 S2

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).

LAWS2311
Litigation 1
Faculty of Law
Staff Contact: School Office
UOC6 HPW4 S1

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.

LAWS2313
Evidence and Advocacy
Faculty of Law
Staff Contact: J Hunter
UOC8 HPW4 S1
Prerequisite/s: (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
Staff Contact: R Howell
UOC8 S1 S2
Prerequisite/s: 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 review 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
Staff Contact: J Staples
UOC8 HPW4 S2
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: 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.

LAWS2321
Litigation 2
Faculty of Law
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: 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 (Clth) and (NSW) form the backbone to the course.

LAWS2331
Legal Theory
Faculty of Law
Staff Contact: School Office
UOC8 HPW4 S1 S2

For details, see LAWS8320 Legal Theory earlier in the compulsory course section.

LAWS2332
Law and Social Theory
Faculty of Law
Staff Contact: School Office
UOC8 HPW4 S1 S2

For details, see LAWS8820 Law and Social Theory earlier in the compulsory course section.

LAWS2341
Feminist Legal Theory
Faculty of Law
Staff Contact: M San Roque
UOC8 HPW4 S2

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
Staff Contact: W Kalinko
UOC8 HPW4 S1 S2
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: 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 (e.g. 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
Staff Contact: O Jessep
UOC8 HPW4 S2 X2
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: 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
Staff Contact: O Jessep
UOC8 HPW4 S2

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 NSW 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
Staff Contact: P Vines
UOC8 HPW4 S1
Prerequisite/s: 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.

LAWS2401
Health and Medical Law
Faculty of Law
Staff Contact: C Forster
UOC8 HPW4 X2
Prerequisite/s: LAWS1001, LAWS1011; or LAWS1610;
Corequisite/s: 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.

LAWS2421
Research Project
Faculty of Law
Staff Contact: School Office
Enrolment requires School approval
UOC2 S1 S2

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
Staff Contact: School Office
Enrolment requires School approval
UOC16

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
Staff Contact: School Office
Enrolment requires School approval
UOC8 S1 S2

LAWS2424
Research Thesis: Two Session Elective
Faculty of Law
Staff Contact: School Office
Enrolment requires School approval
UOC8 S1 S2

LAWS2425
Research Thesis
Faculty of Law
Staff Contact: School Office
Enrolment requires School approval
UOC4 S1 S2

LAWS2441
Law Journal
Faculty of Law
Staff Contact: G Winterton
Enrolment requires School approval
UOC8 S1 S2

A student may be deemed, on the recommendation of the Dean and the Faculty Advisors to the Law Journal, to have satisfactorily completed this course on the basis of work done as an editor of UNSW Law Journal.

LAWS2719
Community Corrections
Faculty of Law
Staff Contact: D Brown
UOC6 HPW3 S2

Examines legal and social issues in relation to various forms of community corrections. Topics include: the development of community corrections, community corrections as social control. Analysis of the legal foundation and operation of a range of specialist diversionary schemes. An examination of the agencies gathering information used in determining eligibility for such schemes. Probation, community service orders, parole, parole supervision. The legal, social and ethical issues surrounding the development of home detention schemes and forms of electronic monitoring of people on conditional release. The development in the USA of extensive privatisation of corrective functions and personnel, Australian developments. Examination of reform directions.
Note/s: Not offered every year.

LAWS2759
Crime Prevention Policy
Faculty of Law
Staff Contact: D Brown
UOC6 HPW3 S2
Prerequisite/s: Enrolment in program 3422.

Examines various policy approaches to crime prevention. Topics include: The nature of crime prevention policy. Forms of victimisation - gender, age, race and class aspects. Crime victim surveys. Community policing strategies. The private security industry. Crime prevention in the planning, design and construction of public housing; the concept of 'defensible space', the provision of security hardware and insurance. Crime problems on public transport. Environmental town planning, local government and the development of crime impact statements. Crime prevention impact of employment programs, especially youth programs. Crime prevention impact of child care policies and services, community arts policies, neighbourhood crime prevention committees, refuges, educational facilities. Crime control effects of liquor licensing and drug prohibition.
Note/s: Not offered every year.

LAWS4010
Business Associations 1
Faculty of Law
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW4 S1 S2
Prerequisite/s: LAWS1081, LAWS1082, or LAWS3010.

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/s: If taken as an elective, it is LAWS1091 UOC8.

LAWS6210
Law, Lawyers and Society
Faculty of Law
Staff Contact: School Office
UOC6 HPW4 S1 S2 X1

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
Staff Contact: School Office
UOC2 HPW2 X1 S2 X2

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.

LAWS8320
Legal Theory
Faculty of Law
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW4 S1 S2

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.

LAWS8820
Law and Social Theory
Faculty of Law
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW4 S1 S2

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 societiese, 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-modernists 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.

LAWX1720
Crime and Society
Faculty of Law
Staff Contact: A Cossins
UOC6 HPW2 S1

Some of the issues arising from the relationship of crime to society. Crime as a dividing practice in the construction of normality. A critical history of traditional and current accounts of crime and delinquency. The subject is sourced from a variety of literatures. Topics include: the dramatisation of evil and the politics of social control; a genealogy of delinquency and its psychological and sociological explanations; theories of conformity and alienation; crime and discipline; women, crime and power.

LAWX1789
Issues in Policing
Faculty of Law
Staff Contact: D Dixon
UOC6 HPW2 S1

This course focuses on policing as a set of social and legal practices and institutions. It is particularly concerned with the potential role of law in policing, both as a resource and as a regulator. Comparative material is used, drawing out similarities and contrasts between policing in NSW and elsewhere. The course's approach is inter-disciplinary, drawing on a wide range of historical, socio-legal and criminological research. Policing is placed in its social and historical contexts by assessing conflicting interpretations of its history and of police public relations. This leads to an investigation of some developments in modern policing. In particular, the course investigates 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. Classes will also discuss 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 in the wake of the Royal Commission into the NSW Police Service.

LEGT1711
Legal Environment of Commerce
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1 S2

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.

LEGT1732
Franchising
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1
Excluded: LEGT1733

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.

LEGT2712
Business, Ethics and the Law
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: LEGT1711 or 12UOC offered by Commerce and Economics or the approval of Head of School;
Excluded: LEGT1712, LEGT1730

Society increasingly demands ethical and social responsibilty. This course provides an ethical dimension to the conduct of contemporary commerce in Australia. Although ethics exists 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
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: LEGT1711:
Excluded: LEGT7721

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
Staff Contact: School Office
UOC6 S1 S2
Prerequisite/s: LEGT1711 or 12UOC offered by Commerce and Economics or approval of the Head of School;
Excluded: LEGT1731

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.

LEGT2761
Law of Banking and Finance
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: LEGT1711 or 12UOC offered by Commerce and Economics or the approval of the Head of School;
Excluded: LEGT1761

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
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: LEGT1711 or INFS1602;
Excluded: LEGT7771

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.

LEGT2781
Regulation of Govt Agencies
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: LEGT1711;
Excluded: LEGT7781

The executive arm of government possesses wide regulatory and administrative powers. This course examines the law controlling the bureaucracy in the exercise of these powers. It covers delegated legislation, the control and review of administrative action and discretionary powers, and freedom of information. The roles, powers and functions of major regulatory agencies with particular reference to the Australian Competition and Consumer Commission, the Australian Securities and Investment Commission and the Australian Taxation Office are also examined.

LEGT2791
International Business Law
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: LEGT1711 or 12UOC offered by Commerce and Economics or the approval of the Head of School;
Excluded: LEGT1715, LEGT1791

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.

LEGT3741
Business Entities
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: LEGT2721 or LEGT7721;
Excluded: LEGT7741.

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 Law. 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.

LEGT3744
Corporate Fraud and Crime
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S2
Corequisite/s: LEGT3741 or LEGT7721, LEGT7741;
Excluded: LEGT7812.

Corporate fraud costs Australian business tens of billions of dollars every year. This subject 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.

LEGT3751
Business Taxation
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW4 S1 S2
Prerequisite/s: LEGT2721 or LEGT7721;
Excluded: LEGT7751.

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.

LEGT3752
Capital Gains Tax
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: LEGT3751;
Excluded: LEGT7753

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.

LEGT3754
Tax Policy and Administration
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: LEGT3751;
Excluded: LEGT7755

An understanding of tax policy issues and of tax administration procedures is increasingly important if business is to understand and cope with likely future developments in taxation in an era of rapid change. This subject examines justifications for taxation; criteria for evaluating a tax system; tax policy objectives; alternative tax bases; international tax policy objectives; tax policy in entity taxation; access to information; assessment; appeals and enforcement.

LEGT3755
Taxation of Business Entities
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: LEGT3751;
Excluded: LEGT7752

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.

LEGT3756
International Business Tax.
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: LEGT3751or permission of the Head of School;
Excluded: LEGT7791

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.

LEGT3757
Corporate Law,Tax &Strategy
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: LEGT3741, LEGT3751 or LEGT7741, LEGT7751 or permission of the Head of School;
Excluded: LEGT7811.

What are the legal and tax implications of the different financing alternatives available to corporations? Are all the different methods of profit distribution from a company equally tax effective? What are the different strategies available to a takeover bidder and when should they be used? How should a corporate reorganisation be structured? This course will examine these and similar questions, relating to the interaction between legal and tax questions in corporate governance, through a series of case studies and simulation games.

LEGT4721
Special Topic in Business Law
School of Business Law and Tax
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2
Prerequisite/s: LEGT1711 and approval from the Head of School;
Excluded: LEGT7821

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
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2
Prerequisite/s: LEGT1711 and approval from Head of School;
Excluded: LEGT7822

A specially assigned project, program or set of readings relating to research in taxation.

LIFE1001
Life Science Advanced Seminar 1
Faculty of Science, Science Communication
Staff Contact: W Rifkin
UOC3 HPW2 S2

An introduction to key advances that have taken place in research across the broad range of Life Sciences, and their impacts on their fields. Examples of the latest research and future directions from a broad range of disciplines will be examined critically, with fields covered including biomedical science, environmental science, biotechnology and psychology. Library and WWW searches will consolidate material, which will focus on research activities and facilities within the University, including laboratory visits, and discussions with laboratory staff.
Note/s: Restricted to Advanced Science students.

LIFE2001
Life Science Advanced Seminar 2
Faculty of Science, Science Communication
Staff Contact: W Rifkin
UOC3 HPW2 S1

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 and written communication of science are introduced. Critical evaluation of scientific data and its presentation is dicussed. Small group analysis of a specialised and innovative aspect of research.
Note/s: Restricted to Advanced Science Students

LIFE2101
Introductory Biochemistry & Microbiology
School of Biotechnology and Biomolecular Sciences
Staff Contact: B Gaeta
UOC6 HPW6 S1
Prerequisite/s: BIOS1201, CHEM1011 and (BIOS1011 or CHEM1021)

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.

LING1000
The Structure of Language
Linguistics
Staff Contact: P Collins
UOC6 HPW3 S1

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
Staff Contact: M Amberber
UOC6 HPW3 S2

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.

LING2200
Foundations of Language
Linguistics
Staff Contact: C Hollo
UOC6 HPW3 S2
Prerequisite/s: LING1000 or LING1500;
Excluded: LING3902.

Locates the study of grammar within its broader context and explains in step-by-step fashion the various categories that are used in describing the grammatical structure of sentences. Applies the analytical methods presented to the analysis of texts representing a range of different genres, to issues of good and bad usage, and to the development of writing.
Note/s: LING2200 may be taken after, but not before, LING2550.

LING2400
Language, Meaning and Context
Linguistics
Staff Contact: L Ravelli
UOC6 HPW3 S1
Prerequisite/s: LING1000 or LING1500;
Excluded: ENGL2503, 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 everday texts. Explores how language in use constructs social interpretations of our world(s) and positions readers in various ways.

LING2500
Theoretical and Descriptive Linguistics
Linguistics
Staff Contact: M Amberber
UOC6 HPW3 S1
Prerequisite/s: LING1000 or LING1500;
Excluded: LING3900

Examines the various schools and movements in linguistics, including traditional approaches to language study (from antiquity to the neogrammarians), structrual linguistics, generative linguistics, typological linguistics, functional linguistics and cognitive linguistics. The course aims to acquaint students with some of the main theoretical, methodological and descriptive issues in contemporary linguistics.

LING2510
Analysing Talk
Linguistics
Staff Contact: R Gardner
UOC6 HPW3 S1
Prerequisite/s: 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 record and 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.

LING2525
Language in Professional Contexts
Linguistics
Staff Contact: L Ravelli
UOC6 HPW3 S2
Prerequisite/s: LING1000 or LING1500;
Excluded: LING2607

Examines the language and linguistic practices of a number of professional contexts, including business, public institutions (such as museums and art galleries), law and the media. "Professional" is used in two ways, referring both to the specialised contexts being examined, and to the (potential) role of the linguist, providing intervention and critique in some or all of these areas.

LING2535
Sociolinguistics
Linguistics
Staff Contact: P Collins
UOC6 HPW3 S2
Prerequisite/s: LING1000 or LING1500;
Excluded: LING2601

A general introduction to sociolinguistics. Examines language in relation to society, with particular reference to the linguistic situation in Australia, and investigates the correlations between linguistic variables and non-linguistic variables such as gender, age and social class. Topics include: regional and social variation, gender differences, language contact, multilingualism, language maintenance and shift, language policy and planning, and linguistic aspects of bilingualism (e.g. grammatical constraints on code-switching).

LING2540
Semantics and Pragmatics
Linguistics
Staff Contact: P Collins
UOC6 HPW3 S1
Prerequisite/s: 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: are meaning and cognition the same; can meanings be defined independently of language use? Particular attention is paid to the different theoretical approaches to lexical semantics, the relationship between semantics and grammar, semantic typology 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 deixis, speech act theory, conversational maxims, politeness theory, and notions of context and culture.

LING2550
Introducing Grammar
Linguistics
Staff Contact: P Collins
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

A basic introduction to the concepts, categories and terminology of grammar, beginning with the parts-of-speech and progressing - through phrases and clauses - to the sentence and beyond. The approach will be quite traditional, but informed by the work of contemporary descriptive grammarians. Designed both for those interested in the workings of English and for those interested in foreign languages, especially students of Linguistics, Modern languages, and English language and literature. Also relevant to the needs of those seeking to develop their writing skills.
Note/s: LING2550 may be taken before, but not after, LING2200 or LING2800.

LING2590
The English Language: Its first Millenium
Linguistics
Staff Contact: C Hollo
UOC6 HPW3 S1
Prerequisite/s: 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.

LING2670
Phonology: Theory and Descriptiion
Linguistics
Staff Contact: M Amberber
UOC6 HPW3 S2
Prerequisite/s: LING1000 or LING1500;
Excluded: LING2670

Explores some basic phonological concepts and problems. Examines techniques of phonological analysis, including discovery procedures. Topics include phonological processes, distinctive features, syllables and syllabification and phonological rules and derivations.

LING2800
Current Issues in English Grammar
Linguistics
Staff Contact: P Collins
UOC6 HPW3 S2
Prerequisite/s: LING1000 or LING1500;
Excluded: ENGL2654.

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.

LING3900
Theoretical and Descriptive Linguistics (Advanced)
Linguistics
Staff Contact: M Amberber
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit including 6 units of Linguistics at credit level.
Excluded: LING2500.

Examines the various schools and movements in linguistics, including traditional approaches to language study (from antiquity to the neogrammarians), structural linguistics, general linguistics, typological linguistics, functional linguistics and cognitive linguistics. Aims to acquaint students with some of the main theoretical, methodological and descriptive issues in contemporary linguistics. Involves an advanced level tutorial and assessment tasks.

LING3902
Foundations of Language (Advanced)
Linguistics
Staff Contact: C Hollo
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit including 6 units of Linguistics at credit level.
Excluded: LING2200.

Locates the study of grammar within its broader context and explores in detail a range of grammatical categories. Applies the analytical methods presented to the analysis of texts representing a range of different genres and to the development of writing. Involves an advanced level tutorial and assessment tasks.

LING3903
Language, Meaning & Context (Advanced)
Linguistics
Staff Contact: L Ravelli
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit including 6 units of Linguistics at credit level.
Excluded: LING2400, ENGL2503.

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. Involves an advanced level tutorial and assessment tasks.

LING4000
Linguistics Honours (Research) F/T
Linguistics
Staff Contact: P Collins
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 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) P/T
Linguistics
Staff Contact: P Collins
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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 F/T
Linguistics
Staff Contact: P Collins
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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 P/T
Linguistics
Staff Contact: P Collins
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 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
Staff Contact: A Kayis
UOC6 HPW6 S1
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
Staff Contact: C Reidsema
UOC6 HPW7 S2
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/s: Protective items eg 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
Staff Contact: P Mathew
UOC6 HPW6 S1
Prerequisite/s: MANF1120 or MANF1130
Corequisite/s: 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
Staff Contact: S Kara
UOC6 HPW4 S2
Corequisite/s: 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
Staff Contact: P Mathew
UOC3 HPW2 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC3 HPW3 S2
Prerequisite/s: ELEC0807, MANF1120 or 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
Staff Contact: M Hasan
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: H Kaebernick
UOC3 HPW2 S1

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
Staff Contact: H Kaebernick
UOC3 HPW2 S2
Prerequisite/s: MANF4011

Further project work, continuing from activities in MANF4011 Manufacturing Systems A.

MANF4300
Design of Manufacturing Facilities 2
School of Mechanical and Manufacturing Engineering
Staff Contact: C Reidsema
UOC6 HPW4 S2
Corequisite/s: 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
Staff Contact: A Kayis
UOC6 HPW6 S1
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
Staff Contact: School Office
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC3 HPW3 S1
Prerequisite/s: 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 manufaturing, computer aided process planning.

MANF4601
Computer Aided Production Management A
School of Mechanical and Manufacturing Engineering
Staff Contact: S Kara
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: M Hasan
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW4 S1 S2

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
Staff Contact: School Office
UOC6 HPW3 S2

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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: MARK1012;
Corequisite/s: 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
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: MARK1012;
Corequisite/s: 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
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: MARK2051;
Corequisite/s: 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
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: MARK2052;
Corequisite/s: 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 subject 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.

MARK2999
Industrial Training 1 (Co-op)
School of Marketing
Staff Contact: School Office
UOC12 S1
Prerequisite/s: MARK1012;
Corequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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 Channel
School of Marketing
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 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, retailerr'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
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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.

MARK3999
Industrial Training 2 (Co-op)
School of Marketing
Staff Contact: School Office
UOC18 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC18 S1
Prerequisite/s: MARK3999

Students consider the practical application of the fundamental principles of marketing in an industry environment

MARK7204
Thesis (Marketing) Part A
School of Marketing
Staff Contact: School Office
Enrolment requires School approval
UOC6 S1
Prerequisite/s: Admission to BCom Honours in Marketing.

MARK7205
Thesis (Marketing) Part B
School of Marketing
Staff Contact: School Office
Enrolment requires School approval
UOC18 S2

Note: Admission to BCom Honours in Marketing is required.

MARK7210
Business Research Methods in Marketing
School of Marketing
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW2 S1
Prerequisite/s: 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
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW2 S1
Prerequisite/s: 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 knowlege, 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
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW2 S1
Prerequisite/s: Admission to BCom Honours in Marketing.

Extention 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
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW2 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC3 HPW2 S2

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/s: Restricted to students in Advanced Science.

MATH1011
General Mathematics 1B
School of Mathematics
Staff Contact: School Office
UOC6 HPW6 S1 S2
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/s: 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.

MATH1021
General Mathematics 1C
School of Mathematics
Staff Contact: School Office
UOC6 HPW6 S2
Prerequisite/s: MATH1011 or MATH1131 or MATH1141;
Excluded: MATH1031, MATH1231, MATH1241, MATH1251, ECON1202, ECON2291.

Techniques for integration, improper integrals; Taylor's theorem; first order differential equations and applications; introduction to multivariable calculus; conics; finite sets; probability; vectors, matrices and linear equations.
Note/s: 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.

MATH1031
Mathematics for Life Sciences
School of Mathematics
Staff Contact: School Office
UOC6 HPW6 S1 S2
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/s: 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
Staff Contact: School Office
UOC6 HPW6 S2
Excluded: MATH1049, MATH1059, MATH2829, MATH2839, 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/s: 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.

MATH1060
Mathematics for Prosthetics and Orthotics
School of Mathematics
Staff Contact: M Pahor
Enrolment requires School approval
UOC3 S1

MATH1060 develops the essential mathematical skills required for the study and eventual practice in the field of Prosthetic and Orthotics. The Revision/Probability strand begins with a review of fundamental algebraic constructions and techniques and continues with regression theory, data analysis, probability and the normal distribution. The Vector strand deals with vectors, forces and equilibrium in two and three dimentions, Cartesian and spherical coordinates, vector dot products and projections. Extensive use is made of WebCT and multimedia/virtual reality learning objects.

MATH1081
Discrete Mathematics
School of Mathematics
Staff Contact: School Office
UOC6 HPW6 S1 S2
Corequisite/s: 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.

MATH1090
Discrete Mathematics for Electrical Engineers
School of Mathematics
Staff Contact: School Office
UOC3 HPW3 S1
Corequisite/s: MATH1131 or MATH1141;
Excluded: MATH1081.

The 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. Recursion, recursive logic, recurrence 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.
Note/s: Available only to students for whom it is specifically required as part of their program.

MATH1131
Mathematics 1A
School of Mathematics
Staff Contact: School Office
UOC6 HPW6 S1 S2
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
Staff Contact: School Office
UOC6 HPW6 S1
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
Staff Contact: School Office
UOC6 HPW6 S1
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
Staff Contact: School Office
UOC6 HPW6 S2 X1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW6 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW6 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW5 S1 S2
Prerequisite/s: 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, del, 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
Staff Contact: School Office
UOC6 HPW5 S2
Prerequisite/s: 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/s: Available only to students for whom it is specifically required as part of their program.

MATH2020
Mathematics 2A
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S1
Prerequisite/s: MATH1021(CR) or MATH1031(CR) or MATH1231 or MATH1241

Revision of integration. Differential equations, use of Laplace transforms, solutions by series.
Note/s: 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
Staff Contact: School Office
UOC6 HPW6 S1
Prerequisite/s: MATH1231 or MATH1241;
Excluded: MATH2120, MATH2130.

Partial differentiation, ordinary differential equations, matrices, Laplace transforms, Fourier series, partial differential equations.
Note/s: Available only to students for whom it is specifically required as part of their program.

MATH2030
Mathematics 2B
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: 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/s: 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
Staff Contact: School Office
UOC3 HPW3 S2
Prerequisite/s: MATH1231 or MATH1241;
Excluded: MATH2011, MATH2111, MATH2510, MATH2610.

Multiple integrals, vector calculus, extrema of functions of several variables.
Note/s: 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
Staff Contact: School Office
UOC3 HPW3 S1
Prerequisite/s: 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/s: Available only to students for whom it is specifically required as part of their program.

MATH2059
Mathematics for Materials Science B
School of Mathematics
Staff Contact: School Office
UOC3 HPW3 S2
Prerequisite/s: MATH1231 or MATH1241;
Excluded: MATH2120, MATH2130.

Ordinary differential equations. Partial differential equations. Fourier series.
Note/s: 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
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW5 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC3 HPW2.5 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC3 HPW2.5 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC3 HPW2 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: 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.

MATH2280
Biomathematics
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S1
Prerequisite/s: MATH1031(CR) or MATH1231 or MATH1241 or MATH1251

Introduction to mathematical modelling of biological and biomedical systems. Examples include: the spread of diseases such as HIV/AIDS and hepatitis C through the community, the interaction between pathogens and the immune system in the body, the growth of tumours, population dynamics, pharmacokinetics, renewable and non-renewable resources, and other biological and biomedical applications. Computer simulation, differential equation methods, data analysis methods and other mathematical techniques will play important roles.

MATH2301
Mathematical Computing
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC3 HPW2 S1 S2
Prerequisite/s: 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/s: MATH1081 Discrete Mathematics is recommended.

MATH2430
Symbolic Computing
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: MATH1081 or MATH1231 or MATH1241 or MATH1251

This course considers various topics in how computers represent and manipulate symbolic and exact data. We consider the mathematics and algorithms behind the methods used by computer algebra systems to represent and treat exact numbers with unlimited precision. We also consider the algorithms they use to manipulate polynomials and to perform calculus. Most of the course is based on MAPLE, but other computer algebra systems will be discussed.
Note/s: MATH1081 is recommended.

MATH2501
Linear Algebra
School of Mathematics
Staff Contact: School Office
UOC6 HPW5 S1 S2
Prerequisite/s: MATH1231 or MATH1241 or MATH1251;
Excluded: MATH2509, MATH2601.

Vector spaces, linear transformations, change of basis. Inner products, orthogonalisation, reflections and QR factorisations. Eigenvalues and eigenvectors, diagonalisation. Jordan forms and functions of matrices. Applications to linear systems of differential equations, quadratics, rotations.

MATH2509
Linear Algebra for Engineers
School of Mathematics
Staff Contact: School Office
UOC3 HPW3 S2
Prerequisite/s: MATH1231 or MATH1241;
Excluded: MATH2501, MATH2601.

Vector spaces, linear transformations, change of basis. Orthogonalisation, least squares approximation, QR factorisation. Determinants. Eigenvalues and eigenvectors, diagonalisation. Singular value decompositions. Jordan forms. Matrix exponentials and applications to systems of differential equations.
Note/s: Available only to students for whom it is specifically required as part of their program.

MATH2510
Real Analysis
School of Mathematics
Staff Contact: School Office
UOC3 HPW2.5 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC3 HPW2.5 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW5 S2
Prerequisite/s: 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.

MATH2610
Higher Real Analysis
School of Mathematics
Staff Contact: School Office
UOC3 HPW2.5 S1
Prerequisite/s: MATH1231 or MATH1241 or MATH1251 each with a mark of at least 70;
Excluded: MATH2019, MATH2039, MATH2049, MATH2011, MATH2111, MATH2510.

As for MATH2510 but in greater depth.

MATH2620
Higher Complex Analysis
School of Mathematics
Staff Contact: School Office
UOC3 HPW2.5 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 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.

MATH2810
Statistical Computing for Categorical Data
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: MATH2801 or MATH2901;
Excluded: MATH2910.

This course will focus on the statistical computing tools appropriate for discrete-valued data. Exploratory and graphical analysis of data using modern statistical packages. Data visualisation. Analysis of cross-tabulated data. Logistic and Poisson regression for analysis of binary and count data. Log-linear models for contingency tables.

MATH2829
Statistics SU
School of Mathematics
Staff Contact: School Office
UOC3 HPW3 S1
Prerequisite/s: 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/s: Available only to students for whom it is specifically required as part of their program.

MATH2831
Linear Models
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC3 HPW3 S2
Prerequisite/s: MATH1021 or 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 mechanical and mining engineering and industrial design.
Note/s: Available only to students for whom it is specifically required as part of their program.

MATH2841
Statistics SS
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: MATH1021 or MATH1031 or MATH1231 or MATH1241 or MATH1251;
Excluded: MATH2049, MATH2801, MATH2829, MATH2839, MATH2841, MATH2859, MATH2899, MATH2901, BIOS2041, BEES2041, ECON2215.

An introduction to the theory of probability, with finite, discrete and continuous sample spaces. The standard univariate distributions: binomial, Poisson and normal, an introduction to multivariate distributions. Standard sampling distributions, including those of chi-square, t and F. Estimation by moments and maximum likelihood (including sampling variance formulae, and regression); confidence interval estimation. The standard tests of significance based on the above distributions, with a discussion of power where appropriate. An introduction to experimental design: fixed, random effect models.
Note/s: 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
Staff Contact: School Office
UOC3 HPW3 S1 S2
Prerequisite/s: MATH1231 or MATH1241 (or, in program 3648 or 3651 or 3652, 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/s: Available only to students for whom it is specifically required as part of their program.

MATH2899
Applied Statistics for Chemical Engineers
School of Mathematics
Staff Contact: School Office
UOC3 HPW3 S2
Prerequisite/s: 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/s: Available only to students for whom it is specifically required as part of their program.

MATH2901
Higher Theory of Statistics
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 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.

MATH2910
Higher Statistical Computing for Categorical Data
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: MATH2901;
Excluded: MATH2810.

As for MATH2810 but in greater depth.

MATH2931
Higher Linear Models
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: MATH2901;
Excluded: MATH2831, BIOS2041, BEES2041.

As for MATH2831 but in greater depth

MATH3000
Mathematics/Statistics Project
School of Mathematics
Staff Contact: School Office
Enrolment requires School approval
UOC3 HPW2 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW4 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW8 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 12 units of credit in Level 2 Maths courses.

Why are no two snowfakes 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
Computer Methods for Differential Equations
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 12 units of credit in Level 2 Math courses;
Excluded: MATH3141.

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/s: This course includes a substantial computing component, and assumes some familiarity with Matlab.

MATH3121
Mathematical Methods
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 12 units of credit in Level 2 Math courses including MATH2120 or MATH2130;
Excluded: MATH3141, MATH3150.

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/s: MATH2520 or MATH2620 is recommended.

MATH3161
Optimization Methods
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 12 units of credit in Level 2 Math courses including MATH2501 or MATH2601 and MATH2011 or MATH2100 or MATH2110 or MATH2111 or MATH2510 or MATH2610.

Development, analysis and application of methods for optimization problems. Theory of multivariable optimization; including necessary and sufficient optimality conditions, stationary points, Lagrange multipliers, Kuhn-Tucker conditions, convexity and duality. Numerical methods for one dimensional minimization, unconstrained multivariable minimization (including steepest descent, Newton, quasi-Newton and conjugate gradient methods) and constrained multi-variable minimization (including linear programming and quadratic programming).

MATH3181
Optimal Control
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: 12 units of credit in Level 2 Math courses including MATH2011 or MATH2100 or MATH2110 or MATH2111 or MATH2510 or MATH2610.

An introduction to the optimal control of dynamical systems. Mathematical descriptions of dynamical systems. Stability, controllability, and observability. Optimal control. Calculus of variations. Dynamic programming. Examples and applications are selected from biological, economical and physical systems.

MATH3201
Dynamical Systems and Chaos
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: 12 units of credit in Level 2 Math courses including MATH2120 or MATH2130 or MATH3541 or MATH3641.

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.

MATH3241
Fluid Dynamics
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 12 units of credit in Level 2 Math courses including MATH2011 or MATH2100 or MATH2110 or MATH2111 and MATH2120 or MATH2130.

The mathematical modelling and theory of problems arising in the flow of fluids. Cartesian tensors, kinematics, mass conservation, vorticity, Navier-Stokes equation. Topics from inviscid and viscous fluid flow, gas dynamics, sound waves, water waves.

MATH3261
Atmosphere-Ocean Dynamics
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: 12 units of credit in Level 2 Math courses including MATH2011 or MATH2100 or MATH2110 or MATH2111 and MATH2120 or MATH2130;
Excluded: MATH3270.

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 variablity is examined using models for buoyant forcing, quasi-geostrophy and baroclinic instability.

MATH3301
Advanced Mathematical Computing
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 12 units of credit in Level 2 Math courses including MATH2120 or MATH2130 and MATH2301;
Excluded: MATH3311.

The course has a number of streams dealing with theoretical and practical aspects of floating-point computation as it is needed in numerical simulations for scientific, engineering and financial applications. The mathematical content consists of some essential topics from numerical linear algebra and partial differential equations. However, the main focus of the course is on understanding how numerical application programs can best exploit the capabilities of the available computing hardware, which might be anything from a desktop PC to a high performance computer with multiple processors. The importance of high quality optimizing compilers, numerical libraries and visualization software is also emphasized. Students will learn Fortran 90 and use this language for programming assignments

MATH3311
Mathematical Computing for Finance
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: MATH2120 or MATH2130 and MATH2501 or MATH2601 and 6 units of credit in Level 2 Statistics;
Excluded: MATH3301

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
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: MATH1081 or MATH1090.

Discrete communication channels: information theory, compresssion and error control coding, cryptography.

MATH3421
Logic and Computability
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: MATH1081 or MATH1090.

Software is written in the language of logic, and logic is the science on which computing is based. This course develops the classical mathematics of propositional and predicate logic and automata, which inspired the founders of computing such as Turing and von Neumann. Topics include Propositional calculus: formal proofs and the Deduction theorem; consistency, completeness, compactness, independence of axioms. Predicate calculus: interpretations; axiomatisations; soundness, completeness and compactness theorems; nonstandard analysis; Peano arithmetic and Godel's incompleteness theorems. Automata: deterministic and non-deterministic finite automata, regular languages. Computability: algorithms; Turing machines, computable and uncomputable functions; Church's thesis, different formalisations of computation; unsolvable problems; recursive functions:

MATH3511
Transformations, Groups and Geometry
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: 12 units of credit in Level 2 Math courses;
Excluded: MATH3710, MATH3780.

Euclidean geometry, geometry of triangles, transformations, groups, symmetries, projective geometry.
Note/s: Offered in even numbered years only.

MATH3521
Algebraic Techniques in Number Theory
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 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 Z[i], quadratic residues, algebraic number fields, extensions, Eisenstein's test, ruler and compass constructions.

MATH3531
Topology and Differential Geometry
School of Mathematics
Staff Contact: School Office
UOC6 HPW4
Prerequisite/s: 12 units of credit in Level 2 Math courses including MATH2011 or MATH2111or 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/s: Offered in odd numbered years only.

MATH3541
Differential Equations
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 12 units of credit in Level 2 Math courses including MATH2501 or MATH2601and MATH2520 or MATH2620;
Excluded: MATH3641.

Initial value problems, linear systems, variation of parameters, applications to physical and biological systems, autonomous nonlinear systems, Lyapunov's method, linear approximations, plane autonomous systems, cycles and bifurcations, the Poincare-Bendixson theorem, introduction to first order PDEs, classification and normal forms for second order equations, the Cauchy-Kowalewski Theorem, Dirichlet and Neumann problems associated with the Laplace operator in two variables.

MATH3560
History of Mathematics
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: 12 units of credit in Level 2 Math 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
Staff Contact: School Office
UOC3 HPW2 S1
Prerequisite/s: 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.

MATH3610
Higher Analysis 1: Real Analysis
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S1
Prerequisite/s: 12 units of credit in Level 2 Math courses including MATH2111 or MATH2610 or MATH2011(CR) or MATH2510(CR), with an average mark of at least 75 or permission from the Head of Department;
Excluded: MATH3570.

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, compactness and connectedness. This is not a 'computational' course, but rather one in which you will develop your ability to think abstractly, precisely and creatively.
Note/s: Students wishing to enrol in Level III Higher Pure Mathematics courses should consult with the Pure Mathematics Department before enrolling.

MATH3620
Higher Analysis 2: Functional Analysis
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: MATH3610 and MATH2601 or MATH2501(CR)

Functional analysis is the discipline which has arisen out of the attempt to extract from diverse problems of analysis their common underlying features and to develop an abstract theory which is applicable to these diverse problems as particular cases. The purpose of the course is to introduce students to part of the vast field of functional anlysis in such a manner that they will see that the theory was stimulated by concrete problems. The course should also be helpful to students of disciplines other than mathematics who must make effective use of a somewhat limited mathematical training. The course covers Hilbert spaces, the theory of compact operators, Banach spaces, the closed graph theorem, the Hahn-Banach theorem, Fourier series and Plancherel's theorem.
Note/s: Students wishing to enrol in Level III Higher Pure Mathematics courses should consult with the Pure Mathematics Department before enrolling.

MATH3630
Higher Analysis 3: Integration
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: MATH3610

Rings and algebras of sets, Lebesgue integration, dominated convergence theorem, Lp-spaces, Borel-Cantelli theorem, Riesz representation theorem, Fubini's theorem, stochastic processes, random variables, martingales.
Note/s: Students wishing to enrol in Level III Higher Pure Mathematics courses should consult with the Pure Mathematics Department before enrolling.

MATH3641
Higher Differential Equations
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 12 units of credit in Level 2 Math courses including MATH2601 or MATH2501(CR) and MATH2620 or MATH2520(CR), with an average mark of at least 75 or permission from the Head of Department;
Excluded: MATH3541.

As for MATH3541 but in greater depth.
Note/s: Students wishing to enrol in Level III Higher Pure Mathematics courses should consult with the Pure Mathematics Department before enrolling.

MATH3680
Higher Complex Analysis
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S1
Prerequisite/s: 12 units of credit in Level 2 Math courses including MATH2620 or MATH2520(CR), with an average mark of at least 75 or permission from the Head of Department.

Topics in advanced complex function theory from: conformal mappings, analytic continuation, entire and meromorphic functions, elliptic functions, asymptotic methods, integral formulae, harmonic functions, Riemann surfaces.
Note/s: MATH3610 is recommended. Offered in even numbered years only. Students wishing to enrol in Level III Higher Pure Mathematics courses should consult with the Pure Mathematics Department before enrolling.

MATH3690
Higher Algebraic Topology
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: MATH3610, MATH3710;
Excluded: MATH3760.

Algebraic topology is about associating algebraic structures (for example, groups) to topological spaces in such a way that continuous mappings naturally give rise to homomorphisms between the associated algebraic objects. Intractable topological problems (like determining the maximum number of linearly independent tangent vector fields on a sphere of given dimension) can be translated into algebraic problems and solved by exploiting the greater rigidity of algebraic structures. The course begins by establishing the combinatorial classification of surfaces and uses this as a readily accessible context for introducing some basic ideas of algebraic topology. It then develops the fundamental aspects of homotopy and homology theories.
Note/s: Students wishing to enrol in Level III Higher Pure Mathematics courses should consult with the Pure Mathematics Department before enrolling.

MATH3700
Higher Differential Geometry
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S1
Prerequisite/s: 12 units of credit in Level 2 Math courses including MATH2111 or MATH2610 or MATH2011(CR) or MATH2510(CR) and MATH2601 or MATH2501(CR), with an average mark of 75 or permission from the Head of Department;
Excluded: MATH3531, MATH3760.

The course begins with a study of curves and how they bend and twist in space. It then considers surfaces, studying the classical fundamental forms introduced by Gauss, the various measures of curvature for surfaces and what they mean for the internal and external appearance and properties of surfaces. A closer look at the intrinsic geometry of surfaces leads to Gauss' famous "Remarkable Theorem" on curvature and provides the starting point that would lead to the fundamental uses of differential geometry in, for example, Einstein's general relativity. In relation to surfaces, the course also covers geodesics, the Gauss-Bonnet theorem and the Euler characteristic. This leads to a consideration of non-Euclidean geometries, especially the hyperbolic plane.
Note/s: Students wishing to enrol in Level III Higher Pure Mathematics courses should consult with the Pure Mathematics Department before enrolling.

MATH3710
Higher Algebra 1: Group Theory
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S1
Prerequisite/s: 12 units of credit in Level 2 Math courses including MATH2601 or MATH2501(CR), with an average mark of at least 75 or permission from the Head of Department;
Excluded: MATH3511, MATH3521.

Apart from its intrinsic value as an attractive branch of abstract algebra, group theory has many practical applications in physics (especially quantum mechanics, the theory of fundamental particles and crystal structure) and in all areas of science where consideration of symmetry is involved. Topics covered in this course will include groups, subgroups, factor groups, isomorphism theorems, permutation groups, matrix groups, symmetry groups, generators and relations, characters of finite Abelian groups and the Sylow theorems.
Note/s: Students wishing to enrol in Level III Higher Pure Mathematics courses should consult with the Pure Mathematics Department before enrolling.

MATH3720
Higher Algebra 2: Rings And Fields
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: MATH3710

The theory of rings and fields holds the key to questions which frustrated mathematicians for hundreds of years, including the impossibility of squaring a circle or trisecting an angle with ruler and compass or finding a formula for solving quintic equations. It also forms the basis for algebraic aspects of number theory, with applications to encryption. Topics covered in the course will include subrings, ideals, quotient rings, integral domains, fields of fractions, factorization in various special types of rings, Gaussian and algebraic integers, extension fields, splitting fields and Galois theory.
Note/s: Students wishing to enrol in Level III Higher Pure Mathematics courses should consult with the Pure Mathematics Department before enrolling.

MATH3740
Higher Number Theory
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: 12 units of credit in Level 2 Math courses with an average mark of at least 75 or permission from the Head of Department;
Excluded: MATH3521.

Topics from: elementary number theory, prime numbers, number theoretic functions, Dirichlet series, prime number theorem, continued fractions, Diophantine approximation, quadratic reciprocity, algebraic number theory, class number theorem.
Note/s: Offered in even numbered years only. Students wishing to enrol in Level III Higher Pure Mathematics courses should consult with the Pure Mathematics Department before enrolling.

MATH3780
Higher Geometry
School of Mathematics
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: MATH3710;
Excluded: MATH3511.

Axiomatic geometry, affine geometry, Desargues theorem, projective geometry, spherical and hyperbolic geometry.
Note/s: Offered in odd numbered years only. Students wishing to enrol in Level III Higher Pure Mathematics courses should consult with the Pure Mathematics Department before enrolling.

MATH3790
Higher Computational Combinatorics
School of Mathematics
Staff Contact: School Office
UOC3 HPW2
Prerequisite/s: MATH1081 and 12 units of credit in Level 2 Math courses with an average mark of at least 75 or permission from the Head of Department

This content of this course includes topics in mathematics which have important applications in computer science. Topics to be covered include the structure of posets and lattices, generating functions and counting techniques, symmetric functions and tableaux, group actions and representations of the symmetric group, graph theory and Ramsey theory.
Note/s: Offered in odd numbered years only. 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
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: 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.

MATH3830
Design and Analysis of Experiments
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S1
Prerequisite/s: MATH2831 or MATH2931;
Excluded: MATH3930.

Principles of good experimental design with a focus on industrial quality improvement. Factorial designs and their analysis. Response surface designs for product and process optimisation. Random effects models and components of variance.

MATH3831
Statistical Methods in Social and Market Research
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: 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.

MATH3880
Advanced Probability
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: MATH3801 or MATH3901;
Excluded: MATH3980.

Measure spaces. Probability spaces. Random variables. Independence. Expectation. Conditional expectation. Martingales.

MATH3890
Special Topics in Statistics
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: MATH2831 or MATH2931

New developments in statistical science theory and methods.

MATH3901
Higher Probability and Stochastic Processes
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: MATH2931;
Excluded: MATH3811, MATH3840, MATH3850, MATH3940, MATH3950.

As for MATH3811 but in greater depth.

MATH3930
Higher Design and Analysis of Experiments
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S1
Prerequisite/s: MATH2901;
Excluded: MATH3830.

As for MATH3830 but in greater depth.

MATH3931
Higher Statistical Methods in Social and Market Research
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: MATH2901;
Excluded: MATH2840, MATH2940, MATH3831.

As for MATH3831 but in greater depth.

MATH3941
Higher Statistical Analysis of Dependent Data
School of Mathematics
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: MATH3911;
Excluded: MATH3820, MATH3870, MATH3841, MATH3920, MATH3970.

As for MATH3841 but in greater depth.

MATH3980
Higher Advanced Probability
School of Mathematics
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: MATH3901;
Excluded: MATH3880.

As for MATH3880 but in greater depth.

MATH4003
Mathematics and Computer Science Honours (F/T)
School of Mathematics
Staff Contact: School Office
Enrolment requires School approval
UOC24 HPW24 S1 S2

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/s: To enter Mathematics Level IV, students must be 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 (P/T)
School of Mathematics
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW12 S1 S2

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/s: See notes for MATH4003.

MATH4012
Mathematics and Finance Thesis Project
School of Mathematics
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW5 S1 S2

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 (F/T)
School of Mathematics
Staff Contact: School Office
Enrolment requires School approval
UOC24 HPW24 S1 S2

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/s: See notes for MATH4003.

MATH4104
Applied Mathematics Honours (P/T)
School of Mathematics
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW12 S1 S2

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/s: See notes for MATH4003.

MATH4603
Pure Mathematics Honours(F/T)
School of Mathematics
Staff Contact: School Office
Enrolment requires School approval
UOC24 HPW24 S1 S2

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/s: See notes for MATH4003. Some Higher level Mathematics courses should normally be included at Levels II and III.

MATH4604
Pure Mathematics Honours (P/T)
School of Mathematics
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW12 S1 S2

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/s: See notes for MATH4003. Some Higher level Mathematics courses should normally be included at Levels II and III.

MATH4903
Statistics Honours (F/T)
School of Mathematics
Staff Contact: School Office
Enrolment requires School approval
UOC24 HPW24 S1 S2

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/s: See notes for MATH4003.

MATH4904
Statistics Honours (P/T)
School of Mathematics
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW12 S1 S2

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/s: See notes for MATH4003.

MATS1002
Microstructure Analysis
School of Materials Science and Engineering
Staff Contact: O Standard
UOC3 HPW3 S2

Specimen preparation techniques. Principles of optical microscopy. Quantitative microscopy and stereology. Electron microscopy. Microchemical analysis.
Note/s: Restricted to Combined degree program 3681.

MATS1013
Diffusion and Kinetics
School of Materials Science and Engineering
Staff Contact: D Young
UOC3 HPW2 S1

Unit 1 Diffusion Staff Contact: Professor David YoungFick'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: Professor Oleg OstrovskiElementary 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
Staff Contact: M Hoffman
UOC3 HPW3 S1 S2

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.

MATS1082
Thermodynamics of Materials 1
School of Materials Science and Engineering
Staff Contact: School Office
UOC4 HPW3 S2

Fundamental principles of the thermodynamics of closed and open systems. Phase equilibria, the stability and composition of coexisting phases. Chemical potential, fugacities and activities of gases and gas mixtures. The thermodynamics of nucleation and growth of precipitates and spinodal decomposition. Order-disorder in phases. Tabular, analytical and diagrammatic representation of thermodynamic properties. Mass and energy balances. Application of thermodynamics to materials properties and preparation.

MATS1092
Materials and Design 1
School of Materials Science and Engineering
Staff Contact: A Crosky
UOC3 HPW2 S1

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.

MATS1093
Thermodynamics of Materials 2
School of Materials Science and Engineering
Staff Contact: O Ostrovski
UOC3 HPW2 S1
Prerequisite/s: MATS1082 or MATS1182.

Thermodynamics of solutions. Partial and integral thermodynamic functions, excess functions. Thermo-dynamic activity and activity coefficient. Standard states for solute components. Models of solutions. Thermo-dynamic stability. Calculation of phase diagrams. Perfect and regular ionic solutions. Calculation of chemical equilibria in complex systems.

MATS1111
Materials Science 1
School of Materials Science and Engineering
Staff Contact: V Sahajwalla
UOC3 HPW3 S1 S2

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
Staff Contact: C Sorrell
UOC3 HPW2 S2

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
Staff Contact: M Ferry
UOC3 HPW3 S2

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
Staff Contact: A Yu
UOC6 HPW4 S1 S2

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.

MATS1162
Mechanical Properties of Materials
School of Materials Science and Engineering
Staff Contact: S Bandyopadhyay
UOC4 HPW3 S1

Nature and significance of mechanical properties. Stress-strain-time relationships for organic and inorganic solids; effects of stress state, temperature and strain rate. Mechanical testing: tension, compression, hardness and impact tests. Analysis of stress and strain: stress and strain transformation, Mohr's circle, elastic stress-strain relationships, failure criteria, application to metalworking processes.

MATS1163
Chemistry of the Solid State
School of Materials Science and Engineering
Staff Contact: C Sorrell
UOC3 HPW2 S2

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
Staff Contact: M Ferry
UOC3 HPW3 S2

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.

MATS1182
Thermodynamics of Materials and Phase Equilibria
School of Materials Science and Engineering
Staff Contact: O Ostrovski
UOC6 HPW4 S2
Prerequisite/s: CHEM2817.

Unit 1Thermodynamics of Materials Staff Contact: Professor Oleg Ostrovski. Thermodynamic functions and systems. The first thermodynamic law and its applications. Heat of formation and reaction. The second thermodynamic law and its applications. Heat capacity and entropy of gases, solids and liquids. Direction and extent of chemical reaction. Transitions of the first and second order. Ellingham and Pourbaix diagrams. Unit 2 Phase Equilibria Staff Contact: Dr Michael Ferry. Phase rule. Two component systems: free energy-composition and temperature-composition diagrams, solubility limits, compound formation. Three-component systems: isothermal sections and liquidus projections. Solidification and crystallization; cooling curves, crystallization paths.

MATS1213
Design for Corrosion Control
School of Materials Science and Engineering
Staff Contact: D Young
UOC3 HPW2 S2

Electrochemical corrosion, types of corrosion, influence of alloying and heat treatment, influence of stress. Corrosion prevention, cathodic protection, passivation and inhibitors, selection of materials, designing against corrosion.

MATS1232
Materials Engineering 1A
School of Materials Science and Engineering
Staff Contact: V Sahajwalla
UOC3 HPW3 S1

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.

MATS1242
Crystallographic and Microstructural Characteristics
School of Materials Science and Engineering
Staff Contact: P Munroe
UOC6 HPW6 S2

Introduction to crystallography, crystal structure, Bravais lattices, Miller indices, Miller-Bravais indices. Production, adsorption 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. Specimen preparation techniques. Principles of optical microscopy. Quantitative microscopy and sterology. Electron microscopy. Microchemical analysis.

MATS1243
Management 1
School of Materials Science and Engineering
Staff Contact: School Office
UOC4 HPW3 S2

Micro-economic principles. Supply and demand analysis. Comparison of benefits and costs. Macro-economic principles. Fiscal policy. Investment and monetary policy. Inflation and unemployment. Basic accounting concepts. Interpreting financial statements. Management accounting. The legal environment of business. Contracts. Products and services liability. Industrial relations. Industrial conflict. Wage determination. Operations management: systems, strategies and benefits. Quality assurance, and quality management systems. The elements of total quality management, TQM.

MATS1244
Materials Industry Management A
School of Materials Science and Engineering
Staff Contact: S Bandyopadhyay
UOC6 HPW4 S1

Unit 1 Industrial management in the materials industry. Major issues, research findings and strategies relating to management of people in organisations. Topics include management and power, leadership, managerial decision-making, stress at work, group dynamics and inter-group conflict, organisational design, goal setting and performance appraisal, personal and organisational development, occupational health and safety, risk management. Marketing: principles of marketing and selling; marketing research, pricing strategies and marketing programs. Project management: project definition, planning and scheduling, esimating cost, project control, modification and closure. Unit 2 Industrial Training. Students are required to complete a minimum of twelve weeks of approved industrial training prior to the commencement of the final year of the program.

MATS1262
Mechanical Properties of Materials
School of Materials Science and Engineering
Staff Contact: S Bandyopadhyay
UOC6 HPW5 S1

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.

MATS1283
Ferrous Physical Metallurgy
School of Materials Science and Engineering
Staff Contact: School Office
UOC3 HPW3 S1

Binary and ternary iron-carbon equilibria. Carbon steel, phase transformation, microstructures, heat treatment and mechanical properties. Microstructure and properties of grey, white, malleable, ductile and alloy cast irons.

MATS1343
Materials Industry Management B
School of Materials Science and Engineering
Staff Contact: School Office
UOC3 HPW3 S2

Application of micro-economic principles in industrial organisations: supply and demand analysis, comparison of benefits and costs. Macro-economic principles: fiscal policy, investment and monetary policy, Inflation and unemployment. Basic accounting concepts, interpreting financial statements. Management accounting. The legal environment of business: contracts, products and services liability. Industrial relations: industrial conflict, wage determination. Operations management: systems, strategies and benefits. Quality assurance, and quality management systems, elements of total quality management, TQM.

MATS1354
Design Project
School of Materials Science and Engineering
Staff Contact: A Crosky
UOC3 HPW3 S1

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.

MATS1464
Professional Communication and Presentation
School of Materials Science and Engineering
Staff Contact: C Sorrell
UOC3 HPW2 S1

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
Staff Contact: School Office
UOC24 S1

Industrial Training (Co-op IT. 2)

MATS1903
Industrial Training B
School of Materials Science and Engineering
Staff Contact: School Office
UOC24 S2

Industrial Training (Co-op IT. 3)

MATS2013
Ceramic Materials
School of Materials Science and Engineering
Staff Contact: C Sorrell
UOC3 HPW3 S1
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
Staff Contact: O Standard
UOC3 HPW3 S2

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
Staff Contact: C Sorrell
UOC3 HPW2 S2

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.

MATS2213
Diffusion
School of Materials Science and Engineering
Staff Contact: D Young
UOC3 HPW2 S1

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.

MATS2313
Chemistry of Ceramics
School of Materials Science and Engineering
Staff Contact: C Sorrell
UOC3 HPW2 S2

Geological origin and classification of ceramic raw materials. Composition, crystal structures, physical properties, chemical reactions, and physical aspects of production of: clay minerals and commercial clays, silicates, porcelain, whitewares, cements and plaster, advanced high purity ceramics, refractory oxides, and cermets.

MATS2363
Ceramic Processing and Design
School of Materials Science and Engineering
Staff Contact: O Standard
UOC3 HPW3 S2
Prerequisite/s: MATS5013;
Excluded: MATS2353.

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.

MATS3443
Polymer Science and Engineering
School of Materials Science and Engineering
Staff Contact: S Bandyopadhyay
UOC3 HPW3 S1

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
Staff Contact: O Standard
UOC6 S1 S2

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
Staff Contact: S Bandyopadhyay
UOC3 HPW3 S2

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.

MATS3733
Structural Analysis
School of Materials Science and Engineering
Staff Contact: C Sorrell
UOC6 HPW6 S2
Excluded: MATS1163.

Bonding in solids. Silicate structures. Glass and glass-ceramics. Reactions with solids; grain boundary and interfacial effects. Ceramic reactions and polymorphic transformations. Spectroscopic techniques for characterisation of solids. FTIR and Raman techniques and applications. NMR spectroscopy of inorganic solids.

MATS4013
Physical Metallurgy
School of Materials Science and Engineering
Staff Contact: M Ferry
UOC3 HPW3 S1

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
Staff Contact: M Ferry
UOC3 HPW2 S2

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
Staff Contact: M Ferry
UOC3 HPW2 S2

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
Staff Contact: M Ferry
UOC3 HPW3 S2

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.

MATS4133
Deformation and Strengthening Mechanisms
School of Materials Science and Engineering
Staff Contact: P Munroe
UOC3 HPW2 S2
Prerequisite/s: 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
Staff Contact: A Crosky
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: M Hoffman
UOC3 HPW2 S2

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.

MATS4613
Deformation of Metals and Strengthening Mechanisms
School of Materials Science and Engineering
Staff Contact: P Munroe
UOC3 HPW2 S2

Unit 1 Deformation of Metals Atomic and molecular description of deformation. Introduction to dislocation theory and its application to mechanical properties. Unit 2 Strengthening Mechanisms in Metals Strengthening mechanisms, creep, fracture, grain size dependence of strength. Introduction to generation of deformation and recrystallisation textures. Measurements of age-hardening, activiation energy of strain ageing.

MATS4714
Electrochemistry and Corrosion
School of Materials Science and Engineering
Staff Contact: D Young
UOC6 HPW6 S2
Prerequisite/s: CHEM2011:
Excluded: MATS1213.

The nature of interfaces, double layers, potential, ions, and electrolytes. Nernst and Butler-Volmer equations. Electrochemical experiments; voltammetry; organic electrochemistry. Electrochemical corrosion, types of corrosion. Factors affecting corrosion. Corrosion prevention; cathodic protection; passivation. Designing against corrosion.

MATS5013
Materials Processing
School of Materials Science and Engineering
Staff Contact: O Ostrovski
UOC6 HPW6 S1

Unit 1: Pyrometallurgical ProcessesStaff Contact: Professor Oleg OstrovskiRoasting 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 CroskyDeformation and workability. Hot working, cold working , recrystallisation. Casting, forging, rolling, extrusion, wire drawing. Processing defects and their avoidance. Unit 3: Ceramic Processing TechnologiesStaff Contact: Dr Owen StandardOverview 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
Staff Contact: School Office
UOC3 HPW2 S2
Prerequisite/s: MATS5013;
Excluded: MATS5273.

Unit 1 Hydrometallurgical Processes- Staff Contact: A/Professor Tam Tran, School of Chemical Engineering and Industrial Chemistry. Application of principles of aqueous thermodynamics, electrochemistry, chemical and electrochemica kinetics to hydrometallurgial 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- Staff Contact: Professor Oleg Ostrovski 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
Staff Contact: V Sahajwalla
UOC3 HPW2 S2
Prerequisite/s: 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.

MATS5323
Modelling in Materials Engineering 1
School of Materials Science and Engineering
Staff Contact: M Hoffman
UOC3 HPW2 S1
Prerequisite/s: MATH1131 or MATH1141 or MATH1231 or MATH1241, MATS1021, MATH2021, MATS1092, MATS1132, MATS1163.

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.

MATS5413
Kinetics of Metallurgical Processes
School of Materials Science and Engineering
Staff Contact: O Ostrovski
UOC3 HPW2 S2
Prerequisite/s: 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
Staff Contact: O Ostrovski
UOC3 HPW4 S2
Prerequisite/s: MATS5013;
Excluded: MATS1323.

The course includes two units: Unit 1: Extractive Metallurgy Laboratory, and Unit 2: Metallurgical Plant Practice.

MATS9081
Materials in Prosthetics and Orthotics 1
School of Materials Science and Engineering
Staff Contact: School Office
Enrolment requires School approval
UOC3 S2

Introduces students to the chemistry and engineering sciences involved in commonly utilized consumables used in the prosthetic and orthotic industry. This course will also introduce the student to basic technical procedures required to allow for the standard fabrication of prosthetic and orthotic devices. Occupational Health and Safety issues will be addressed as well as commonly used policy and procedures experienced in a typical fabrication facility

MATS9082
Materials in Prosthetics & Orthotics II
School of Materials Science and Engineering
Staff Contact: School Office
Enrolment requires School approval
UOC3 S2

Students will continue with materials for prosthetic and orthotics in an advanced teaching course. Students will cover advanced chemistry and engineering sciences involved in the prosthetic and orthotic industry. Students will be introduced to the latest technologies and techniques used in the industry and will learn to use systems such as CADCAM and advanced composites. This course will also outline the principles of Prosthetic and Orthotic evaluation and design. A variety of topics are discussed including the evaluation and design process, designing for persons with disabilities, international standards, ethical considerations in research and computer applications. Emphasis is placed on research methods, literature review, analysing design needs and variables and developing a research project proposal.

MATS9410
Materials for Mining Engineers
School of Materials Science and Engineering
Staff Contact: A Crosky
UOC3 HPW3 S2

Microstructures and properties of the main types of engineering materials including metals, ceramics, polymers and composites. Micro-mechanisms of elastic and plastic deformation. Fracture mechanisms for ductile, brittle, creep and fatigue modes of failure in service; corrosion; microstructural control by thermo-mechanical processing and its application to the behaviour of engineering materials. Adhesive and abrasive wear: gouging, high stress and low stress abrasion. Factors affecting abrasive wear, mitigation of abrasion and selection of materials against abrasion.

MATS9520
Engineering Materials
School of Materials Science and Engineering
Staff Contact: A Crosky
UOC3 HPW3 S1 S2

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
Staff Contact: C Sorrell
UOC3 HPW3 S2
Prerequisite/s: 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 and Communications
Staff Contact: S Shaner
UOC6 HPW3 S1
Prerequisite/s: Enrolment in program 3402 or 3994

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 and Communications
Staff Contact: B Costello
UOC6 HPW3 S2
Prerequisite/s: 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 and Communications
Staff Contact: G Fuller
UOC6 HPW3 S1
Prerequisite/s: MDCM1000

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 and Communications
Staff Contact: R Harley
UOC6 HPW3 S1
Prerequisite/s: 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 and Communications
Staff Contact: R Harley
UOC6 HPW3 S2
Prerequisite/s: 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.

MDCM2101
Media Tastes and Values
School of Media and Communications
Staff Contact: G Hawkins
UOC6 HPW4 S1
Prerequisite/s: 36 units of credit;
Excluded: SOCA3105, SOCA3705, SOCA3704.

How do we become enchanted by media and what is the nature of this enchantment? What is happening to the self when we swoon, drift into the story, recoil, laugh, jump out of our skins, weep? Investigates valuing as a dynamic relation, as exchange and communication, rather than intrinsic quality. Explores how our tastes for particular media are formed and the various economic, institutional and discursive contingencies that shape these tastes. Also considers how our media tastes and values mark us, how they generate particular styles of life, identities and ethical systems.

MDCM2102
Media Contexts: Political and Cultural
School of Media and Communications
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: MDCM1001

Introduces students to theoretical issues relating to the historical significance of media in terms of cultural practices and citizenship. Influential writings on the media and media institutions, from the printing press to the internet, are examined. Methods of on-line, library and field research are developed. Essay and other academic writing genres are examined in the context of current media-based cultures.

MDCM3000
Media Forms
School of Media and Communications
Staff Contact: A Murphie
UOC6 HPW3 S1
Prerequisite/s: MDCM2000

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 and Communications
Staff Contact: B Costello
UOC6 HPW3 S1
Prerequisite/s: 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 and Communications
Staff Contact: C Chesher
UOC6 HPW3 S2
Prerequisite/s: 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.

MDCM3100
Introduction to Legal Issues for the Media and the Arts
School of Media and Communications
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

Explains the structure of the Australian legal system - the processes of making and changing laws, the courts, the profession. Introduces the areas of law which a practitioner in media and the arts is likely to encounter, providing an overview of the legal rights and obligations of producers of media 'content' (journalists, writers, radio presenters, film and television program makers, multimedia producers, managers of media and arts organisations). Also considers legal aspects of the media as they affect audiences and consumers of media content.

MDCM3102
Digital Aesthetics
School of Media and Communications
Staff Contact: A Murphie
UOC6 HPW4 S1
Prerequisite/s: 36 units of credit

Investigates the realm of art as it now occurs at the intersection of new media and virtual culture. First it looks at the new arts made possible by new media technologies and at the kinds of technical, cultural and conceptual shifts involved. It considers the relation of aesthetics to culture in general and asks how it might be changing as the result of new media technologies. General theoretical approaches to virtual or digital aesthetics will be studied as well as the numerous examples given in the course.

MDCM4000
Media and Communications Honours (Research) F/T
School of Media and Communications
Staff Contact: A Murphie
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 54 units of credit in MDCM at an average of 65% and permission from Head of School

Consists of two seminars: Media Theory and Research Methodology S1 and New Media: Cultural and Social Change S2, 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)P/T
School of Media and Communications
Staff Contact: A Murphie
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 54 units of credit in MDCM at an average of 65% and permission from Head of School

Consists of two seminars: Media Theory and Research Methodology S1 and New Media: Cultural and Social Change S2, 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.

MDCM4500
Combined Media and Communications Honours (Research) F/T
School of Media and Communications
Staff Contact: A Murphie
UOC12 S1 S2
Prerequisite/s: 48 units of credit in MDCM at an average of 65% and permission from Head of School

Coursework and seminars and preparation of a combined thesis. In the first session students are required to take one coursework course in Media and Communications and one coursework 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.

MDCM4550
Combined Media and Comunications Honours (Research) P/T
School of Media and Communications
Staff Contact: A Murphie
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 48 units of credit in MDCM at an average of 65% and permission from Head of School

Coursework and seminars and preparation of a combined thesis. In the first session students are required to take one coursework course in Media and Communications and one coursework 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.

MDSG2001
Clinical Studies 2
Faculty of Medicine
Staff Contact: J Dwyer
UOC2 HPW2 S1 S2
Prerequisite/s: MFAC1001

Objectives: To extend knowledge and understanding of normal structure and function by demonstrating the disturbances which occur in disease. These studies are closely integrated with Anatomy, Physiology and Biochemistry so that the application of basic medical science to the clinical situation can be clearly seen. Students will attend a teaching hospital for half a day each week to see patients from whom they will take histories. To demonstrate how symptoms and signs can be interpreted as disorders of function and how this knowledge aids in the process of diagnosis. By the end of the year it is important that students are familiar with the basic requirements of a medical history and have seen a number of examples of disordered anatomy and physiology. Assessment: Examination of two written clinical histories per session and examination of a student s ability to present these histories orally. In Session 2, students are required to submit a case study.

MDSG3001
Clinical Studies 3
Faculty of Medicine
Staff Contact: J Dwyer
UOC4 HPW4 S1 S2
Prerequisite/s: MDSG2001

Objectives: To acquire and practice the skills of history taking and physical examination in order to elicit the features of common diseases. Interpretation of the mechanisms of production of the presenting signs and symptoms requires the integration of clinical skills with basic sciences, a concept introduced in Year 2. Clinical Studies in Year 3 builds on this experience and introduces the student to clinically relevant pathophysiology, with particular emphasis on the mechanisms associated with the development of symptoms and physical signs which indicate disease. The components of the course are: 1. Lectures in medicine and surgery which introduce the student to the more common diseases and clinical problems, with emphasis on material relevant to history taking and to physical examination. The teaching builds on and compliments related discussions in physiology, pathology, pharmacology and microbiology and where possible is integrated with these disciplines. 2. One surgical and one medical tutorial at a teaching hospital each week. Tutors will be building on the communication skills learnt in the first and second years of the program. By the end of third year, students must be able to obtain a full history from patients in a disciplined and prescribed manner and present that history both orally and in writing. Physical examination skills will be taught during the third year. Students are expected to master the routine associated with conducting an examination of the major body systems and be able to recognise and understand the significance of those major signs which indicate the presence of pathophysiology. Assessment: Continuous assessment of written case histories and clinical skills is carried out by surgical and medical tutors. The end of year examinations will include a multiple choice question paper (MCQ) and an objective structured clinical examination (OSCE).

MDSG4001
Integrated Clinical and Community Studies
Faculty of Medicine
Staff Contact: J Dwyer
UOC24 S1 S2
Prerequisite/s: 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
Staff Contact: J Dwyer
UOC22 S1 S2
Prerequisite/s: 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 students 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
Staff Contact: C Reidsema
UOC3 HPW3 S1

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
Staff Contact: S Leong
UOC4 HPW4 S2
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
Staff Contact: S Leong
UOC3 HPW3 S2
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
Staff Contact: C Reidsema
UOC3 HPW3 S1

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
Staff Contact: R Ford
UOC6 HPW4 S1 S2
Corequisite/s: 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
Staff Contact: R Randall
UOC6 HPW4 S1 S2
Corequisite/s: 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
Staff Contact: I MacLaine Cross
UOC3 HPW3 S1

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
Staff Contact: N Feng
UOC3 HPW3 S1
Prerequisite/s: MANF1130, MECH1400
Corequisite/s: 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
Staff Contact: N Feng
UOC3 HPW3 S2
Prerequisite/s: MECH1120, MECH2101
Corequisite/s: 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
Staff Contact: S Leong
UOC3 HPW3 S1 S2
Prerequisite/s: 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
Staff Contact: H Stark
UOC3 HPW3 S1 S2
Prerequisite/s: MATH1231 or MATH1241
Corequisite/s: 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
Staff Contact: School Office
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: G Morrison
UOC3 HPW2 S1
Prerequisite/s: MATH1131 or MATH1141, 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
Staff Contact: YC Chen
UOC3 HPW2 S2
Prerequisite/s: 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
Staff Contact: J Olsen
UOC3 HPW2 S1
Prerequisite/s: MATH1131 or MATH1141, 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
Staff Contact: J Olsen
UOC3 HPW2 S2
Prerequisite/s: 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
Staff Contact: R Willgoss
UOC3 HPW3 S2

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
Staff Contact: N Feng
UOC24 S1
Prerequisite/s: 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
Staff Contact: N Feng
UOC24 S2
Prerequisite/s: 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
Staff Contact: S Hall
UOC3 HPW3 S1
Prerequisite/s: MECH2102, MECH2300, MECH2412
Corequisite/s: 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
Staff Contact: S Hall
UOC3 HPW3 S2
Prerequisite/s: MECH2102, MECH2300, MECH2412
Corequisite/s: 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
Staff Contact: T Furukawa
UOC3 HPW2 S1
Prerequisite/s: ELEC0807, MECH2411, MECH2602 or MECH2612 and 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
Staff Contact: M Tordon
UOC3 HPW2 S2
Prerequisite/s: ELEC0807, MECH2411, MECH2602 or MECH2612 and 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
Staff Contact: Z Vulovic
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: N Feng
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: N Kessissoglou
UOC3 HPW3 S2
Prerequisite/s: MATH2029, MECH2300
Excluded: MECH2310, MECH3310, MECH9311

Single-degree of freedom vibrating systems: free/forced, undamped/damped response, transmissibility. Whirling of shafts. Harmonic analysis. Vibration measuring instruments. Linear vibrations of multi-degree-of-freedom systems: normal modes. Introduction to the analysis of continuous systems.

MECH3400
Mechanics of Solids 3
School of Mechanical and Manufacturing Engineering
Staff Contact: K Zarrabi
UOC3 HPW3 S1
Prerequisite/s: MECH 2411, MATH2029 , MATH2039

Deflections of beams and structures. Introduction to theory of elasticity; stress, strain, torsion. Membrane analogy. Finite element stress analysis. Basic concepts; statically indeterminate beams and structures stiffness method; bar, triangular and rectangular finite elements.

MECH3520
Programming and Numerical Methods
School of Mechanical and Manufacturing Engineering
Staff Contact: I MacLaine Cross
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: YC Chen
UOC3 HPW3 S1
Prerequisite/s: MECH2612, MECH2712 or MECH8200

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
Staff Contact: J Olsen
UOC3 HPW3 S2
Prerequisite/s: MECH2612, MECH2712 or MECH8200

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
Staff Contact: T Barber
UOC3 HPW3 S2
Prerequisite/s: MECH3000
Corequisite/s: 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/s: Corequisites may be adjusted for some mid-course entry plans.

MECH4003
Thesis A
School of Mechanical and Manufacturing Engineering
Staff Contact: M Chowdhury
UOC6 S1 S2
Prerequisite/s: 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
Staff Contact: M Chowdhury
UOC9 S1 S2
Prerequisite/s: MECH4003
Corequisite/s: 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.

MECH9310
Advanced Vibration Analysis
School of Mechanical and Manufacturing Engineering
Staff Contact: R Randall
UOC6 HPW3 S2
Prerequisite/s: MECH3330

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.

MECH9312
Fundamentals of Noise and Vibration Measurement
School of Mechanical and Manufacturing Engineering
Staff Contact: R Randall
UOC6 HPW3 S1
Excluded: MECH8312

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.

MECH9325
Fundamentals of Noise
School of Mechanical and Manufacturing Engineering
Staff Contact: N Kessissoglou
UOC6 HPW3 S1
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.

MECH9400
Mechanics of Fracture and Fatigue
School of Mechanical and Manufacturing Engineering
Staff Contact: K Zarrabi
UOC6 HPW3 S1
Prerequisite/s: MECH3400
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
Staff Contact: D Kelly
UOC6 HPW3 S1
Prerequisite/s: MECH3400
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
Staff Contact: E Leonardi
UOC6 HPW3 S1
Prerequisite/s: MECH2612, MECH2712 or MECH8200

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
Staff Contact: G Morrison
UOC6 HPW3 S2
Prerequisite/s: MECH2612, MECH2712 or MECH8200

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
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: MECH3601, MECH3602

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
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: MECH3601, MECH3602

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
Staff Contact: E Leonardi
UOC6 HPW3 S1
Prerequisite/s: MECH2612, MECH2712 or MECH8200

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.

MECH9752
Refrigeration and Air Conditioning 2
School of Mechanical and Manufacturing Engineering
Staff Contact: E Leonardi
UOC6 HPW3 S2
Prerequisite/s: MECH8751 or MECH9751

Psychrometrics; application to air conditioning design. Direct contact heat and mass transfer; application to the design of cooling towers and air washers. Cooling and dehumidifying coils. Properties of homogeneous binary solutions; steady flow processes with binary mixtures. Rectification of a binary mixture. Analysis of absorption systems. Production of low temperatures. Liquefaction and rectification of gases. Magnetic cooling. ***Note/s:*** Candidates wishing to specialise in Refigeration and Air Conditioning should select this course.

MECH9758
Refrigeration and Air Conditioning Design
School of Mechanical and Manufacturing Engineering
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: MECH2612, MECH2712 or MECH8200

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
Staff Contact: J Olsen
UOC6 HPW3 S1

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.

MEDM8001
Principles of Medicine for Optometry Students
Faculty of Medicine
Staff Contact: M Coroneo
UOC3 HPW3 S1

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/s:*** Students normally take the course in Year 4 of course 3950. Restricted to program 3950.

MFAC1501
Foundations
Faculty of Medicine
Staff Contact: M Ho
UOC12 HPW15 S1

To provide students with an approach to the learning process in the 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, through health scenarios involving immunisation and cancer. The teaching and learning methods are designed to incorporate issues such as information management, research methodology, and communication. The Foundations program 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
Staff Contact: D Black
UOC12 HPW15 S1
Corequisite: 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, inflammation, the structural properties of human tissues, the health status of populations, normal human behaviour, and the structure, function, and clinical skills related to the respiratory system. 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 integrated examination.

MFAC1503
Beginnings, Growth & Development 1
Faculty of Medicine
Staff Contact: K Gibson
UOC12 HPW15 S2
Prerequisite/s: 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, adolescence, sexuality and relationships; and nutrition, growth and body image. These themes will be explored by further studies of relevant aspects of cell biology focusing on growth, differentiation, and developmental biology, fundamental immunology, formation of cellular elements of the blood, the pathology of fractures and healing, and reproduction. Other topic areas include the effects of economic determinants of health and disease on these key developmental stages of life, sexuality and risk-taking behaviour, and the clinical skills involved in 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 integrated examination.

MFAC1504
Health Maintenance 1
Faculty of Medicine
Staff Contact: P Waite
UOC12 HPW15 S2
Prerequisite: MFAC1501

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 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 internal and external mechanisms that maintain a state of health. 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. 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 the structure and function of the gastrointestinal system, liver and renal systems, the pharmacology of drug metabolism, and the consequences of failure and/or degeneration of these vital organs. Clinical skills will focus on examination of the gastrointestinal system.Additional topic areas will include mechanisms that maintain body temperature, fundamentals of immune defence, and physical and psychological responses to stress.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 integrated examination.

MFAC1505
Ageing and Endings 1
Faculty of Medicine
Staff Contact: E Tancred
UOC12 HPW15 S1
Prerequisite/s: MFAC1501, MFAC1502, MFAC1503 & MFAC1504

The two courses, Regressions 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 bowel cancer and anaemia.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 integrated examination.

MFAC1506
Society and Health 2
Faculty of Medicine
Staff Contact: D Black
UOC10 HPW15 S1
Prerequisite/s: MFAC1501, MFAC1502, MFAC1503 & MFAC1504

Please refer to course description for MFAC1502.

MFAC1507
Beginnings, Growth and Development 2
Faculty of Medicine
Staff Contact: K Gibson
UOC10 HPW15 S2
Prerequisite/s: MFAC1501, MFAC1502, MFAC1503 & MFAC1504

Please refer to the course description for MFAC1503.

MFAC1508
Health Maintenance 2
Faculty of Medicine
Staff Contact: P Waite
UOC10 HPW15 S2
Prerequisite/s: MFAC1501, MFAC1502, MFAC1503 & MFAC1504

Please refer to the course description for MFAC1504.

MFAC1509
Ageing and Endings 2
Faculty of Medicine
Staff Contact: E Tancred
UOC10 HPW15 S1
Prerequisite/s: MFAC1505, MFAC1506, MFAC1507 & MFAC1508

Please refer to the course description for MFAC1505.

MFAC1510
Ageing and Endings 2 plus extension
Faculty of Medicine
Staff Contact: E Tancred
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
Staff Contact: School Office
UOC10 HPW15 S1
Pre/Corequisites: MFAC1512, MFAC1513
Prerequisites: MFAC1511

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 relationship between the health of an individual or population and the environment. 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. Typical environments and/or experiences will include primary care practice, patients with infectious diseases or lifestyle-induced health problems, and health issues that illustrate preventative approaches. Some learning will require students to view health issues they encounter from a population rather than individual perspective. 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.

MFAC2502
Beginnings, Growth and Development 3
Faculty of Medicine
Staff Contact: School Office
UOC10 HPW15 S2
Prerequisites: MFAC1511, MFAC1512, MFAC1513

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. These will typically include health issues in children including asthma, infective illnesses, diabetes, and adolescent behavioural problems, reproductive and other aspects of women's health, and a range of issues relevant to diet and nutrition. 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
Staff Contact: School Office
UOC10 HPW15 S1
Prerequisites: MFAC1511, MFAC1512, MFAC1513

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, mental health disorders, 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
Staff Contact: School Office
UOC10 HPW15 S1
Prerequisites: MFAC1511, MFAC1512, MFAC1513

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.

MFAC2509
Clinical Skills Refresher
Faculty of Medicine
Staff Contact: School Office
UOC4 HPW25

This short course will be offered in intensive mode and will include clinical work and classes in a clinical skills laboratory. Assessment will be by evidence of satisfactory participation in each of the various activities undertaken.

MFAC3501-12
Clinical Modules 1-12
Faculty of Medicine
Staff Contact: School Office
UOC10 HPW10

These courses collectively comprise the Phase 3 clinical program. All students will enrol in MFAC 3501-3509 and may enrol in additional courses, depending on whether they have undertaken earlier individualised study programs or have been granted any exemptions. Objectives: By completion of Phase 3, students will be expected to demonstrate an integrated achievement of the eight desired capabilities specified as appropriate for graduates to practice as interns. These include a thorough understanding of the biomedical science mechanisms and bio-social determinants that maintain health, contribute to illness, and underlie appropriate management strategies; application of a scientific approach to clinical medicine and medical practice; excellent communicative, teamwork, psychomotor and cognitive skills to assess health issues and patient problems and develop patient-centred management approaches; and demonstrated abilities to work independently, reflectively and within appropriate ethical and legal frameworks. Clinical learning in Phase 3 will be predominantly located in clinical environments associated with the Faculty in a range of metropolitan and rural locations throughout NSW. Most modules will be available in a variety of clinical locations and students will be able to select an individualised learning program from a menu offered by clinical teaching units, or they may be able to negotiate their program with their clinical supervisors. Students will generally be able to indicate a preference to do the majority of their clinical training attached to one geographical region, but final allocation will be determined by a number of factors including availability of attachments to particular locations, and is ultimately the responsibility and decision of the Faculty. Students are required to complete one each of six clinical modules with a specified major focus, these being in the clinical disciplines of Children's Health; Women's Health; Mental Health; Internal Medicine; Surgery; and Primary Care, although some choice of the structure, case-mix and location of

each of these will generally be possible. In addition to these specified modules, students may choose from a range of other available clinical modules to complete Phase 3 requirements. The order and content of work undertaken in these courses will be organised for each student on an individual basis through the relevant Clinical School(s). All clinical modules in phase 3 adopt the principles of clinical clerkship, in which students learn through experience and participation in the treatment of patients under the care of medical practitioners and/or medical teams to which they are attached. Although structured teaching activities are generally limited to an average of 10 hours per week, which will include teaching of relevant biomedical sciences and social sciences, students are required to work under supervision as part of the health care delivery unit. Students' responsibilities as part of the team will increase gradually as new skills are developed. Each module will have demonstrable links to those aspects of basic biomedical and social sciences relevant to the health issues encountered. Assessment for each module will focus on the performance of students relative to the desired graduate capabilities. The mark awarded in the summative assessment at the end of the module will be based on the extent to which the agreed goals of the module's learning program and project were met.

MFAC4501-3
Independent Learning Projects 1-3
Faculty of Medicine
Staff Contact: School Office
UOC8 HPW12

These three courses collectively comprise the Independent Learning Project and may be taken consecutively, or in any other appropriate sequence, by arrangement with the Office of the Dean and the relevant Clinical School(s). Objectives: To enhance students' abilities for independent learning, critical analysis and research methodology, by engaging in an in-depth study of a selected topic relevant to health or medical practice.After completing Phase 1, all students (unless exempt) will be required to undertake an independent learning project (ILP) comprising 3 x 8-week blocks which may or may not be taken consecutively during the remainder of the program. 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, which must include personal reflection on the process. Assessment will include two 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/Subspecialities
School of Public Health and Community Medicine
Staff Contact: M Harris
UOC12 S1 S2
Prerequisite/s: MDSG4001

This 9 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 and an approach to the GP consultation; management of common problems and preventive care; communication skills, chronic disease management; rural practice and issues in rural health. Assessment: Students will complete an assignment at the end of their first GP attachment, 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 6-8 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 6-8 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
Staff Contact: P Herring
UOC4 S1 S2
Prerequisite/s: 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 Industrial Relations and Org Behaviour
Staff Contact: C Wright
UOC6 HPW3 S1

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 Industrial Relations and Org Behaviour
Staff Contact: G Schwarz
UOC6 HPW3 S2
Prerequisite/s: 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 strucutres, 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.

MGMT2001
Managing Innovation and Organisational Change
School of Industrial Relations and Org Behaviour
Staff Contact: G Schwarz
UOC6 HPW3 S1
Prerequisite/s: 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, (e.g. TQM, business processes); the role of enterpreneurship, creativity, leadership and managerialism; and change agency. Case studies and exercises are used to explore central issues.

MGMT2002
Managing Business Communication
School of International Business
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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.

MGMT3001
Managing Business Strategy
School of International Business
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: MGMT1001, MGMT1002, MGMT2001, MGMT2002;
Corequisite/s: MGMT2002

This course provides a detailed analysis of the latest developments in the theory and practice of strategic management. The course covers concepts of strategy; goals, values and performance including shareholder value and balanced scorecard approaches; analysis of the industry environment; analysis of resources and capabilities; organisational structure and managament systems; analysis of competitive advantage; industry evolution; technology-based industries; vertical integration strategies; game theory and competitive behaviour; global strategies and multinational enterprises; diversification strategy; managing the multibusiness corporation. Case studies are used to illustrate strategy making in practice by corporations from around the world.

MICM3228
Microbiology for Medical Students
School of Biotechnology and Biomolecular Sciences
Staff Contact: H Mitchell
UOC4 HPW4 S1 S2

The overall objective is for students to understand the nature of the interactions between parasites and their human hosts, and the fundamentals of human immunology. Early lectures and tutorials are concerned with the basics of the scientific discipline of immunology. In order to achieve the microbiology requirement, students will know the causative agents of common microbial diseases and how they produce their effects, comprehend host defence processes, understand the epidemiology of infectious diseases, understand the basis of prevention and treatment of microbial diseases, appreciate the role of the microbiologist in the diagnosis and management of microbial disease and where appropriate, integrate these objectives with a knowledge of pathology and immunology. Emphasis is given to the nature of the response of pathogens to various physical, chemical and antibiotic agents which can be used to interrupt their normal function. An analytical approach is taken to the means by which microorganisms exist in association with humans and their environment and how they gain access to tissues and produce disease. Attention is given to the mechanisms of host defence against microbial infection. Emphasis throughout the course is placed on diseases of body systems. Laboratory based classes emphasise the role of the laboratory in diagnosis and include the use of problem solving approaches to the study of microbial diseases.Assessment: This is based on mid-year and end of year examinations as well as a major assignment and practical examination.

MICR2011
Microbiology 1
School of Biotechnology and Biomolecular Sciences
Staff Contact: P March
UOC6 HPW6 S2
Prerequisite/s: MICR2201;
Corequisite/s: 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 Sciences
Staff Contact: K Takayama
UOC6 HPW6 S1
Prerequisite/s: BIOS1201 (Except for Postgraduate Students).

This course is designed to give undergraduate and postgraduate students a solid background in fundamentals of microbiology and immunology. It 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. Immunisation, environmental pollution, food hygiene, food spoilage causes and prevention etc.
Note/s: BIOS1101 is recommended. No prerequisites/corequisites are required for Postgraduate students.

MICR3021
Microbial Genetics
School of Biotechnology and Biomolecular Sciences
Staff Contact: R Cavicchioli
UOC6 HPW6 S1
Prerequisite/s: 12 units of credit from MICR2011 or MICR2611 or BIOS2021 or BIOS2621 or BIOC2201;
Excluded: BIOT3031, 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 in intended for students interested in gaining a background in molecular biology/ genetics and those considering Molecular Biology, Microbiolgy, 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 transpon 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/s: Replaces BIOT3031

MICR3031
Eukaryotic Microbiology (UTS)
School of Biotechnology and Biomolecular Sciences
Staff Contact: M Cooley
UOC6 HPW6 S2
Prerequisite/s: 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/s: 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 Sciences
Staff Contact: M Cooley
UOC6 HPW6 S1
Prerequisite/s: BIOC2101 or (BIOC2181and 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 Sciences
Staff Contact: A Collins
UOC6 HPW6 S2
Prerequisite/s: 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 Sciences
Staff Contact: P White
UOC6 HPW6 S2
Prerequisite/s: MICR2011

The course explores the biology of viruses and their unique strategic properties that enable their persistance. 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 persistance, 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/s: Highly recommended: BIOC2201

MICR3071
Environmental Microbiology
School of Biotechnology and Biomolecular Sciences
Staff Contact: S Egan
UOC6 HPW6 S1
Prerequisite/s: 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 microbiolgy 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/s: Highly recommended: MICR2011, BIOC2201, BIOS2021 or BIOS2621.

MICR3081
Bacteria and Disease
School of Biotechnology and Biomolecular Sciences
Staff Contact: H Mitchell
UOC6 HPW6 S1
Prerequisite/s: 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/s: 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 (Advanced)
School of Biotechnology and Biomolecular Sciences
Staff Contact: R Cavicchioli
UOC6 HPW6 S2
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 Sciences
Staff Contact: R Cavicchioli
UOC6 HPW6 S1
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 transpon 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/s: Replaces BIOT3031

MICR3641
Immunology 1 (Advanced)
School of Biotechnology and Biomolecular Sciences
Staff Contact: M Cooley
UOC6 HPW6 S1
Prerequisite/s: 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 form other degree programs with a particular interest in Immunology and a Credit average in relevant courses.
Note/s: Maximum enrolment limited to 25 students.

MICR4013
Microbiology Honours F/T
School of Biotechnology and Biomolecular Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1 S2

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
Staff Contact: P Hagan
UOC6 HPW4 S1

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
Staff Contact: P Hagan
UOC6 HPW4 S2

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
Staff Contact: P Hagan
UOC6 HPW4 S1

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
Staff Contact: P Hagan
UOC6 HPW4 S2

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
Staff Contact: P Hagan
UOC6 HPW4 S1

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
Staff Contact: P Hagan
UOC3 HPW3 S2

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
Staff Contact: P Hagan
UOC6 HPW4 S1

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
Staff Contact: P Hagan
UOC3 HPW2 S1

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.

MINE3300
Mining Geomechanics
School of Mining Engineering
Staff Contact: P Hagan
UOC6 HPW4 S1

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

MINE3400
Mining Systems
School of Mining Engineering
Staff Contact: P Hagan
UOC6 HPW5 S2

This course provides a comprehensive understanding of mining systems that are used in coal mines, metal mines and extractive industries. History, significance and characteristics of global and Australian mining industry; location of mines; political and environmental constraints to mining; Australia's mineral potential; advanced ore reserve estimation; geostatistics and orebody modelling. Mining systems and selection criteria for various mining methods including thick seam coal mining, heap leach, solution mining, undersea mining, and placer mining. Mining sequence; production planning and scheduling; equipment selection: systems approach; ancillary operations; productivity; capital and operating costs. Environment, health and safety and risk management techniques applied to mining systems. Case studies and scope will include coal, metalliferous and extractive industries.Note: Site visits and industry lectures are a requirement of this course and may involve additional personal expense.Assumed knowledge: MINE2010

MINE3500
Mine Workplace Environment
School of Mining Engineering
Staff Contact: P Hagan
UOC6 HPW5 S1

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 operationsother 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
Staff Contact: P Hagan
UOC6 HPW5 S2

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.
Notes: 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
Staff Contact: P Hagan
UOC3 HPW3 S1

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.
Notes: 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
Staff Contact: P Hagan
UOC6 HPW4 S1

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.

MINE3720
Mining Management 1
School of Mining Engineering
Staff Contact: P Hagan
UOC6 HPW4 S2

The course covers the techniques to manage projects, processes, contracts, contractors and people; Change hazards and risks - MISHC Component 3: Minerals Industry Risk Analysis Methodology, Introduction to Major Hazards; Loss control. The course is underpinned by a range of case studies.

MINE3800
Mineral Processing
School of Mining Engineering
Staff Contact: P Hagan
UOC3 HPW3 S2

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
Staff Contact: P Hagan
UOC6 HPW5 S1

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: Mine planning parameters; Reserve optimisation; Mine design and scheduling; Equipment selection; Feasibility studies; Mine systems selection; Operations benchmarks; Environment and mine site rehabiliation planning; Economic modelling; Introduction to mine planning tools. On completion of the course a student will have be able to create several design options for a mine, develop several production schedule, evaluate the economics of the design option and determine the optimum design.
Assumed Knowledge: MINE3710, MINE3400

MINE4220
Coal Mine Design and Evaluation Project
School of Mining Engineering
Staff Contact: P Hagan
Enrolment requires School approval
UOC9 HPW7 S2

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 program; 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
Staff Contact: P Hagan
Enrolment requires School approval
UOC9 HPW7 S2

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 program; 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
Staff Contact: P Hagan
UOC9 HPW7 S2

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 program; 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
Staff Contact: P Hagan
UOC6 HPW4 S1

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
Staff Contact: P Hagan
UOC6 HPW4 S1

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
Staff Contact: P Hagan
UOC9 HPW4 S1 S2

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
Staff Contact: P Hagan
Enrolment requires School approval
UOC6 HPW4 S1 S2

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
Environmental and Social Impacts of Mining
School of Mining Engineering
Staff Contact: P Hagan
UOC3 HPW2 S2

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 Management 2
School of Mining Engineering
Staff Contact: P Hagan
UOC6 HPW5 S1

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
Staff Contact: P Hagan
UOC3 HPW3 S2

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
Staff Contact: P Hagan
UOC3 HPW3 S2

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
Staff Contact: P Hagan
UOC3 HPW3 S2

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
Cross-Cultural Communication
School of Modern Language Studies
Staff Contact: J Battestini-Newman
UOC6 HPW3 S1
Prerequisite/s: 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 in different cultures. Aims to identify and compare (1) factors which lead to communication breakdown; (2) expressions of formality, politeness and emotion in European and Asian languages. Designed to complement courses offered within the School of Modern Language Studies by developing learners' cross-cultural communication skills. Lectures will be in English with language specific work included in tutorials. It will also be of interest to any students whose work involves dealing with people of different cultures.

MSCI2001
Introductory Marine Science
Centre for Marine and Coastal Studies
Staff Contact: E Johnston
UOC6 HPW4 S2

Ocean basins, sediments, properties of seawater, ocean circulation, coasts and coastal processes. Marine biology and ecology, primary and secondary productivity. Personal expenses will be incurred.
Note/s: Field work.

MSCI2051
Coral Reef: Environment and Ecology
Centre for Marine and Coastal Studies
Staff Contact: E Johnston
Enrolment requires School approval
UOC3 S1 S2

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. Personal expenses will be incurred.
Note/s: Available February and July

MSCI3001
Physical Oceanography
Centre for Marine and Coastal Studies
Staff Contact: M England
UOC6 HPW4 S2

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 oceanprocesses, including waves, tides, beach currents and the El-Nino/ Southern Oscillation. Oceanographic instrumentation and the design of ocean measuring programs.
Assumed Knowledge: Any 6 units of credit of Level I Mathematics.
Note/s: Laboratory and field work.

MSCI4003
Marine Science 4 Honours F/T
Centre for Marine and Coastal Studies
Staff Contact: J Benzie
Enrolment requires School approval
UOC24 HPW30 S1 S2

The General Education requirements are met within the Honours program by seminars, an essay and participation in discussion groups.

MSCI6200
Coastal Monitoring Techniques
Centre for Marine and Coastal Studies
Staff Contact: A Albani
UOC6 HPW5 S1

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/s: Field work of up to 4 days is a compulsory part of this course. Students will incur personal costs.

MSCI6300
Coastal Environmental Assessment
Centre for Marine and Coastal Studies
Staff Contact: A Albani
UOC6 HPW5 S1

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/s: 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
Staff Contact: J Katupitiya
UOC3 HPW3 S1
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
Staff Contact: M Tordon
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: T Furukawa
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: J Katupitiya
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: R Willgoss
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: J Katupitiya
UOC6 HPW3 S2
Prerequisite/s: MTRN3212

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
Staff Contact: R Willgoss
UOC6 HPW3 S1
Prerequisite/s: MTRN3530

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
Staff Contact: R Randall
UOC6 HPW3 S1
Prerequisite/s: MECH3204, MTRN3212

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.

MUSC1001
Music Fundamentals
School of Music and Music Education
Staff Contact: C Logan
UOC6 HPW3 S1
Excluded: MUSI1103, MUSI1301, MUSI1141, MUSI1142

Provides an opportunity for students to develop their musicianship and their understanding of the technical details of music. Requires participation in a performance ensemble.

MUSC1101
Music Reinvented
School of Music and Music Education
Staff Contact: J Napier
UOC6 HPW3 S1
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
Staff Contact: C Watts
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: C Watts
UOC6 HPW3 S2
Prerequisite/s: MUSC1001 or MUSC1101;
Excluded: MUSI1241, MUSI1003

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
Staff Contact: C Logan
UOC6 HPW5 S1
Prerequisite/s: 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
Staff Contact: C Logan
UOC6 HPW5 S2
Prerequisite/s: MUSC1401;
Excluded: MUSI1402

Continuation of MUSC1401.

MUSC1501
Music Performance 1A
School of Music and Music Education
Staff Contact: School Office
UOC6 HPW5 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW5 S2
Prerequisite/s: MUSC1501 or MUSI1501;
Excluded: MUSI1502

Continuation of MUSC1501.

MUSC1601
Introduction to Music Education
School of Music and Music Education
Staff Contact: A Walker
UOC6 HPW3 S1
Prerequisite/s: Enrolment in program 3426;
Excluded: MUSI1600, 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/s: Includes three weeks of practice teaching in primary schools.

MUSC2111
Introduction to Musicology
School of Music and Music Education
Staff Contact: J Napier
UOC6 HPW3 S1
Prerequisite/s: MUSC1001, MUSC1312;
Excluded: MUSI1003, 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
Staff Contact: D Fabian
UOC6 HPW3 S2
Prerequisite/s: 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.

MUSC2201
Music of Aboriginal Australians
School of Music and Music Education
Staff Contact: G Stubington
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: C Watts
UOC6 HPW3 S1
Prerequisite/s: MUSC2301 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
Staff Contact: C Watts
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: C Watts
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: C Watts
UOC6 HPW3 S2
Prerequisite/s: 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/s: Includes one hour of performance ensemble participation.

MUSC2401
Professional Practices C
School of Music and Music Education
Staff Contact: C Logan
UOC6 HPW5 S1
Prerequisite/s: 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
Staff Contact: C Logan
UOC6 HPW5 S2
Prerequisite/s: MUSC2401 or MUSI2401;
Excluded: MUSI2402

Continuation of MUSC2401.

MUSC2501
Music Performance 2A
School of Music and Music Education
Staff Contact: School Office
UOC6 HPW5 S1
Prerequisite/s: MUSI1502 or MUSI1700;
Excluded: MUSI2700.

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
Staff Contact: School Office
UOC6 HPW5 S2
Prerequisite/s: MUSI2501

Continuation of MUSC2501.

MUSC2601
Introduction to Secondary Music Education
School of Music and Music Education
Staff Contact: A Walker
UOC6 HPW3 S1
Prerequisite/s: MUSC1601;
Excluded: MUSI1801, MUSI1802, 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.

MUSC3101
Professional and Ethical Practices in Music
School of Music and Music Education
Staff Contact: G Stubington
UOC6 HPW3 S1
Prerequisite/s: 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 Music
School of Music and Music Education
Staff Contact: G Stubington
UOC6 HPW3 S2
Prerequisite/s: MUSC3101;
Excluded: MUSI3112

Continuation of MUSC3101, a seminar devoted to exploring the processes in research on music through discussion, and the development of individually chosed 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
Staff Contact: J Napier
UOC6 HPW3 S1
Prerequisite/s: MUSC1302 or MUSC1312 or MUSC2111 or MUSI1142;
Excluded: MUSI3121

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
Staff Contact: C Logan
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: J Napier
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: C Watts
UOC6 HPW3 S2
Prerequisite/s: MUSC2302 or MUSI2312;
Excluded: MUSI2241, MUSI2242

Examines the structure and processes of music, focussing on the study of analytical techniques and their application in various styles and periods. Includes development of sight-reading and keyboard improvisation skills, orchestral score reading, plus completion of music literature tests.

MUSC3311
Electronic Music
School of Music and Music Education
Staff Contact: E Schubert
UOC6 HPW3 S2
Prerequisite/s: MUSC2302 or MUSC2312 or MUSI2242;
Excluded: 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.

MUSC3331
Advanced Electronic Music
School of Music and Music Education
Staff Contact: E Schubert
UOC6 HPW3 S1
Prerequisite/s: MUSC3311;
Excluded: MUSI3141, MUSI3142

Continuation of MUSC3311 with 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
Staff Contact: C Logan
UOC6 HPW5 S1
Prerequisite/s: 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
Staff Contact: C Logan
UOC6 HPW5 S2
Prerequisite/s: (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
Staff Contact: School Office
UOC6 HPW5 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC6 HPW5 S2
Prerequisite/s: MUSC3501 or MUSI3501;
Excluded: MUSC3502

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
Staff Contact: A Walker
UOC6 HPW3 S1
Prerequisite/s: MUSC2601 or MUSI1802;
Excluded: MUSI2801, MUSI2802, 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
Staff Contact: A Walker
UOC6 HPW4 S2
Prerequisite/s: MUSI2802 or MUSC3601;
Excluded: MUSI2801, 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
Staff Contact: A Walker
UOC6 HPW3 S2
Prerequisite/s: MUSC3601 or MUSI2802;
Excluded: MUSI3812

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/s: At the discretion of the Program Coordinator, this course can be used to replace one Education elective.

MUSC4000
Bachelor of Music Honours F/T
School of Music and Music Education
Staff Contact: C Logan
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 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/s: For BMus and BMusBA students only.

MUSC4001
Music Honours (BA)
School of Music and Music Education
Staff Contact: C Logan
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 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
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 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.

NANO1001
Nanotechnology 1
School of Materials Science and Engineering
Staff Contact: P Munroe
UOC3 HPW3 S2

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/s: Available only to students enrolled in program 3617

NANO2002
Nanotechnology 2
School of Materials Science and Engineering
Staff Contact: School Office
UOC3 HPW3 S1

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/s: Available only to students enrolled in program 3617.

NANO3003
Nanotechnology 3
School of Materials Science and Engineering
Staff Contact: School Office
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.
Note/s: Available only to students enrolled in program 3617.

NANO3410
Chemistry of Surfaces
School of Chemical Sciences
Staff Contact: School Office
UOC3 HPW3
Prerequisite/s: NANO2002.

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
Staff Contact: P Munroe
UOC3 HPW2 S2

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 Chemical Sciences
Staff Contact: School Office
UOC3 HPW3
Prerequisite/s: CHEM2041.

Principles of transduction, immobilization of biomolecules, affinity sensors, catalytic sensors, practical realities of their construction, electrochemical sensors, evanscent wave and other optical sensors.

NANO4004
Nanotechnology Project
School of Materials Science and Engineering
Staff Contact: School Office
Enrolment requires School approval
UOC36 HPW18

This course will require a major piece of research undertaken by students in the fourth year of the Nanotechnology program 3617. A range of interdisciplinary projects will be offered by contributing schools, Chemistry, Physics, Material Science and Biochemistry, enabling students to carry out experimental investigations in an area of nanotechnology.
Note/s: This course will not run in 2004. Enrolment in and completion of Stages 1-3 of program 3617 Nanotechnology is required.

NAVL3100
Principles of Ship Design
School of Mechanical and Manufacturing Engineering
Staff Contact: P Helmore
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: P Helmore
UOC3 HPW3 S1
Corequisite/s: 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
Staff Contact: M Chowdhury
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: L Doctors
UOC6 HPW6 S1
Prerequisite/s: 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
Staff Contact: L Doctors
UOC3 HPW3 S2
Prerequisite/s: NAVL3603
Corequisite/s: 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
Staff Contact: P Helmore
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: L Doctors
UOC3 HPW3 S1
Prerequisite/s: NAVL3100, NAVL3602 or NAVL3604
Corequisite/s: 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
Staff Contact: L Doctors
UOC3 HPW3 S2
Prerequisite/s: NAVL3100, NAVL3604
Corequisite/s: 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
Staff Contact: L Doctors
UOC3 HPW3 S1
Prerequisite/s: NAVL3700
Corequisite/s: 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
Staff Contact: L Doctors
UOC3 HPW3 S2
Prerequisite/s: NAVL4111
Corequisite/s: 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
Staff Contact: D Kelly
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: M Chowdhury
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: P Helmore
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: P Helmore
UOC3 HPW3 S2
Prerequisite/s: 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 & Children's Health
Staff Contact: M Bennett
UOC12 S1 S2
Prerequisite/s: MDSG4001

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
Staff Contact: K Avudainayagam
UOC8 HPW8 S1

Objectives: Understanding of physical and geometrical optics, and the measurement of optical radiation preliminary to ocular hazard assessment, colour measurement and specification and lighting design. Brief Curriculum: Physical Optics, the nature of light, interference, diffraction, polarisation. Reflection, refraction, thin lenses. Analysis of lens systems: thick lenses, telescopes, microscopes. Factors affecting visual resolution. Standard reduced eye and 3-surface schematic eye. Sources of optical radiation. Sunlight and daylight. Detectors. The eye as a detector. Principles and practice of photometry. Principles and practice 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
Staff Contact: School Office
UOC4 HPW4 S2
Prerequisite/s: 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 studies 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
Staff Contact: H Swarbrick
UOC6 HPW6 S2

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
Staff Contact: C Avudainayagam
UOC4 HPW4 S2
Prerequisite/s: OPTM1105, PHYS1199;
Corequisite/s: OPTM1201

Objectives: Understanding of the optics of the eye and spectacle lenses. Brief Curriculum: Visual Resolution: measurement and notation, optical and retinal limits, contrast sensitivity. Refraction at curved surfaces: cornea. Standard reduced eye. Retinal image analysis. Errors of refraction. Accommodation. Ocular aberrations. Modulation transfer function. Projection of the retina: relative size and distance magnification, entoptic field. Reflection at curved surfaces: cornea, keratometry. 3-surface schematic eye: components of refraction, phakometry, step-along vergence analysis, reduced eye derivation. Optics of the measurement and correction of errors of refraction. Ophthalmic prisms. Spectacle correction, lens forms, prismatic effects, spectacle magnification, effectivity, spectacle aberrations.

OPTM1207
Foundations of Hygiene & Infectious Disease in Optometric Practice
School of Optometry and Vision Science
Staff Contact: School Office
UOC4 HPW4 S2
Prerequisite/s: BIOS1401, CHEM1819
Corequisite/s: 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
Staff Contact: School Office
UOC6 HPW6 S1
Prerequisite/s: OPTM1201, CHEM1829
Corequisite/s: 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
Staff Contact: B Junghans
UOC6 HPW6 S1
Prerequisite/s: OPTM1201, OPTM1202, OPTM1205
Corequisite/s: OPTM2101, OPTM2105

Objectives: 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
Staff Contact: K Avudainayagam
UOC3 HPW3 S1
Prerequisite/s: OPTM1202, OPTM1205
Corequisite/s: OPTM2101.

Objectives: Understanding of clinical optics applied to spectacle lenses and ophthalmic instruments. Brief Curriculum: Clinical management of subsidiary effects of spectacle lenses. Optics of clinical ophthalmic instruments. Low vision aids. Optics of components of refraction, intraocular implants and corneal refractive surgery. Optics of contact lenses.

OPTM2201
Ocular and Visual Science 2B
School of Optometry and Vision Science
Staff Contact: C Suttle
UOC6 HPW6 S2
Prerequisite/s: OPTM2101, OPTM2102
Corequisite/s: 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
Staff Contact: B Junghans
UOC6 HPW6 S2
Prerequisite/s: OPTM2101, OPTM2102, OPTM2105
Corequisite/s: 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
Staff Contact: P Herse
UOC3 HPW3 S2
Prerequisite/s: 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.

OPTM3102
Clinical Optometry 3A
School of Optometry and Vision Science
Staff Contact: L Asper
UOC12 HPW12 S1
Prerequisite/s: OPTM2201, OPTM2202, OPTM2206;
Corequisite/s: 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
Staff Contact: P Herse
UOC6 HPW6 S1
Prerequisite/s: 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.

OPTM3203
Clinical Optometry 3B
School of Optometry and Vision Science
Staff Contact: L Asper
UOC3 HPW3 S2
Prerequisite/s: OPTM3102, OPTM3108, PSYC3516;
Corequisite/s: 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 ofa 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
Staff Contact: L Asper
UOC8 HPW8 S2
Prerequisite/s: OPTM3102, OPTM3108, PSYC3516;
Corequisite/s: 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
Staff Contact: S Dain
UOC6 HPW6 S2
Prerequisite/s: 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.

OPTM4114
Optometry and the Professional Environment A
School of Optometry and Vision Science
Staff Contact: D Pye
UOC3 HPW3 S1
Corequisite/s: 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.

OPTM4210
Research Project
School of Optometry and Vision Science
Staff Contact: P Herse
UOC3 HPW3 S2
Prerequisite/s: 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.

OPTM4214
Optometry and the Professional Environment B
School of Optometry and Vision Science
Staff Contact: D Pye
UOC3 HPW3 S2
Prerequisite/s: OPTM4114
Corequisite/s: 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.

OPTM4311
Clinical Optometry 4A
School of Optometry and Vision Science
Staff Contact: D Pye
UOC6 HPW6 S1 S2
Prerequisite/s: OPTM3108, OPTM3203, OPTM3204, OPTM3209, PSYC3516, PHPH3302;
Corequisite/s: 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
Staff Contact: D Pye
UOC6 HPW6 S1 S2
Prerequisite/s: OPTM3108, OPTM3203, OPTM3204, OPTM3209, PSYC3516, PHPH3302;
Corequisite/s: 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, 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
Staff Contact: D Pye
UOC6 HPW6 S1 S2
Prerequisite/s: OPTM3108, OPTM3203, OPTM3204, OPTM3209, PSYC3516, PHPH3302;
Corequisite/s: 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.

PAED5101
Paediatrics
School of Women's & Children's Health
Staff Contact: R Henry
UOC12 S1 S2
Prerequisite/s: 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 F/T
School of Medical Sciences
Staff Contact: C Geczy
Enrolment requires school approval
UOC24 S1 S2

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 P/T
School of Medical Sciences
Staff Contact: School Office
Enrolment requires school approval
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
Staff Contact: W Lipworth
UOC6 HPW4 S2
Prerequisite/s: BIOS1101, BIOS1201, any 2 of ANAT2200, ANAT2111, PHPH2101, BIOC2101/BIOC2181.

Lectures, tutorials and museum study sessions aimed at increasing understanding of important disease processes. Comparisons between normal and abnormal cell, tisssue and organ function will be made. Includes processess 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
Staff Contact: M Dziegielewski
UOC6 HPW4 S1
Prerequisite/s: 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/s: 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
Staff Contact: M Dziegielewski
UOC6 HPW4 S2
Prerequisite/s: 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/s: Advantage in having undertaken previous study in ANAT3231 Cell Biology.

PATH3207
Musculoskeletal Diseases
School of Medical Sciences
Staff Contact: N Tedla
UOC6 HPW4 S2
Prerequisite/s: 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.

PATM3101
Pathology
School of Medical Sciences
Staff Contact: G Velan
UOC5 HPW5 S1 S2

The discipline of Pathology forms a continuous stream of teaching of the pathogenesis of disease throughout the 3rd, 4th, 5th and 6th years of the medical curriculum. In Year 3, the course PATH3101 comprises an introduction to basic disease processes (General Pathology), i.e. those fundamental processes which are common to all tissues and organs of the body. The course covers classification of disease, and deals with both congenital and acquired diseases. The program comprises lectures, tutorials, practical classes and demonstrations on responses of cells to injury, inflammation, aberrations of the blood and vascular system and specific related effects of embolism and infarction, as well as studies of normal and abnormal growth, and of healing and regenerative processes. In addition, it includes consideration of the basic processes of neoplasia and carcinogenesis, as well as an introduction to the pathobiology of such contemporary health problems as environmental toxicology. In order to integrate the teaching of pathology with clinical studies, each fundamental process will be exemplified by references to examples of diseases of organ systems (Systemic Pathology) of practical importance.Assessment: Proficiency in the course, sufficient to proceed to Year 4, will be assessed by mid-year and end of year examinations which will comprise 30% and 70% respectively of the total mark in Pathology. Both assessments will comprise theory and practical components. Progress self-assessments with automated feedback will be made available on the web.

PFST2000
Dance Analysis and Composition 1
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW4 S1
Prerequisite/s: DANC1002 or DANC1103 or FILM1101 or PFST1103 or THFI1002 or THST1101;
Excluded: THST2140, DANC2000

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.

PFST2002
Theatre Production
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW4 S2
Prerequisite/s: DANC1002 or FILM1101 or PFST1103 or THFI1002 or THST1101;
Excluded: DANC2002

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.

PFST2005
Dance Analysis and Composition 2
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW4 S2
Prerequisite/s: DANC2000 or PFST2000;
Excluded: DANC2005

A detailed study of the nature and role of composition in dance and the relationship between composition and the process and product of choreography.

PFST2007
History of Dance
School of Theatre, Film and Dance
Staff Contact: D Spurgeon
UOC6 HPW3 S1
Prerequisite/s: DANC1002 or FILM1101 or PFST1103 or THFI1002 or THST1101;
Excluded: DANC2001, DANC2007

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 Australia ballet, modern and jazz dance.

PFST2009
Performance and Culture
School of Theatre, Film and Dance
Staff Contact: M Meyer
UOC6 HPW3 S2
Prerequisite/s: 48 units of credit in Arts and Social Sciences;
Excluded: DANC2009.

A survey of general concepts in Performance Studies through and examination of the performative bases of culture and the ways in which individuals and groups enact and perform social realities. Primary areas of study include: performance semiotics, ritual studies, performance ethnography, and the performance of everyday life.

PFST2149
Performance Making
School of Theatre, Film and Dance
Staff Contact: M Meyer
UOC6 HPW3 S1
Prerequisite/s: DANC1002 or FILM1101 or PFST1103 or THFI1002 or THST1101 or 48 units of credit in Arts and Social Sciences;
Excluded: THST2149

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.

PFST3902
Performance and Performativity
School of Theatre, Film and Dance
Staff Contact: E Scheer
UOC6 HPW3 S2
Prerequisite/s: 24 units of credit from the School of Theatre, Film and Dance at a credit or better average;
Excluded: THFI3902

Examines a range of issues in contemporary theory, exploring their pertinence to film and theatre.

PHIL1007
Knowledge and Reality
School of Philosophy
Staff Contact: S Hetherington
UOC6 HPW3 S2

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.

PHIL1010
Thinking About Reasoning
School of Philosophy
Staff Contact: School Office
UOC6 HPW3 S2
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.

PHIL1011
Minds, Bodies and Persons
School of Philosophy
Staff Contact: P Cam
UOC6 HPW3 S1

What are we, what are we like? What is a person? Are only humans persons? Are we mind, body or both? These are among the most puzzling and compelling questions that humans can ask. An introduction to some of the many ways philosophers have approached these and related questions. Some philosophical perspectives on the subject have a moral focus, some a psychological, some a computational, some a political. We look at the works of ancient philosophers and of philosophers working today.

PHIL1014
Introduction to European Philosophy
School of Philosophy
Staff Contact: School Office
UOC6 HPW3 S1

Introduces students to some of the major currents of contemporary continental philosophy such as phenomenology, nihilism, existentialism, structuralism and poststructuralism. Readings will come from thinkers such as Nietzsche, Kierkegaard, Husserl, Heidegger, Arendt, Sartre, Merleau-Ponty, Levinas, Foucault, Deleuze and Derrida. Topics include: death, truth, experience, meaning, history, knowledge, power and freedom.

PHIL2106
Logic
School of Philosophy
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: MATH3400.

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.

PHIL2116
Scientific Method
School of Philosophy
Staff Contact: M Michael
UOC6 HPW3 S2
Prerequisite/s: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Science has a serious claim to being the major cultural force shaping our world-view. Aims to enable us to understand better our own views about science by tracing their historical development. Examines the conceptions of science to be found in the writings of Aristotle, Descartes, various Positivists, and some more recent philosophers, with a view to understanding how their conceptions of science, and their conceptions of which questions philosophers should ask about science, differ from each other and from our own.

PHIL2118
Philosophy and Biology
School of Philosophy
Staff Contact: M Michael
UOC6 HPW3 S1
Prerequisite/s: 6 level 1 units of credit in Philosophy and 36 units of credit overall or 30 units of credit in HPSC or BIOS1011;
Excluded: HPST3012, HPST3117.

Our understanding of ourselves is powerfully shaped by our conception of our biological nature. Central in this conception is the idea that we have evolved so the theory of evolution plays an important role in our understanding of ourselves. Aims at being an in-depth examination of some of the conceptual and philosophical issues which are raised by evolutionary theory. In particular, we will look at the explanatory structure of modern evolutionary theory and its relationship to the vexed issue of classification.

PHIL2206
Philosophy of Mind
School of Philosophy
Staff Contact: P Cam
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: P Cam
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: S Hetherington
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: P Staines
UOC6 HPW3 S1
Prerequisite/s: 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.

PHIL2226
Twentieth Century Analytic Philosophy
School of Philosophy
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 6 units of credit in level 1 Philosophy and 36 units of credit overall

As well as asking how modern Anglo-American philosophy is different from its predecessors, we also look at ways in which its ideas and concerns are continuous with those of other epochs and traditions. Readings include selections from Frege, Russell, Wittgenstein, Quine, Kripke, and Putnam. Themes include the rejection of Hegelian idealism, atomism and holism, the influence of empiricism, the revival of Platonism through philosophy of mathematics, ideas about existence and ontology, the revival of Aristotelian essentialism, the return to a sort of idealism. No prior familiarity with these writers will be assumed. Moreover we steer clear of papers that will make heavy use of formal logic.

PHIL2229
Themes in Eighteenth Century Philosphy
School of Philosophy
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Studies a range of topics drawn from the writings of the eighteenth century philosophers George Berkeley, David Hume, Jean-Jacques Rousseau and Immanuel Kant. Topics will be selected from the following: idealism, human nature, the self, enlightenment, ideals of reason, the idea of progress.

PHIL2309
The Heritage of Hegel
School of Philosophy
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Hegel is one of the towering presences in contemporary philosophy. Long recognised as an influence on European philosophy from Marx to Lacan, Derrida and Kristeva, the Hegelian philosophy of identity, difference, subjectivity and desire, is essential to anyone who wants to understand current directions in critical theory. Covers a close reading of Phenomonolgy of Spirit together with selections from Hegel's lectures on logic. The second half of the course looks at important readings of Hegel by Derrida, Habermas, Irigaray, etc.

PHIL2316
Philosophy of Religion
School of Philosophy
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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.

PHIL2407
Contemporary European Philosophy
School of Philosophy
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 6 units of credit in level 1 Philosophy and 36 units of credit overall

The earliest philosophy attached myth and poetry; the most recent philosophy wonders if it is possible to live without them. The writers studied criticise the moral and the aesthetic values of their culture; they demand new ways of feeling and thinking, new modes of behaviour and language. Their visions are troubling and sometimes violent, but we cannot simply dismiss them. The purpose is to reach a better understanding of the work of Nietzsche, the Surrealists, Bataille and Deleuze, in order to evaluate their critique of modernity; these writers have been chosen because of their impact on current theoretical debates in the social sciences, literature and art.

PHIL2416
Nietzsche and Philosophy
School of Philosophy
Staff Contact: R Diprose
UOC6 HPW3 S1
Prerequisite/s: 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.

PHIL2418
Ethical Issues
School of Philosophy
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 6 units of credit in level 1 Philosophy and 36 units of credit overall

An examination of a range of current ethical issues involved in topics such as abortion, surrogacy, foetal tissue research, euthanasia, AIDS.

PHIL2420
Environmental Ethics
School of Philosophy
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: P Cam
UOC6 HPW3 S2
Prerequisite/s: 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.

PHIL2505
Kant and Kantian Themes
School of Philosophy
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Addresses some of the major texts in Kant's critical system. Readings will come from works such as the 'Critique of Pure Reason', 'Prolegomena to Any Future Metaphysics', 'Critique of Practical Reason', 'Foundations of the Metaphysics of Morals', 'Critique of Judgment', 'On the Beautiful and the Sublime' and relevant secondary literature. Examines problems such as the bases of empirical knowledge, moral judgment, human reason and error, law and aesthetic judgment. Applies Kant's own method, and seeks the conditions of the possibility of the true, right and beautiful.

PHIL2508
Theories in Moral Philosophy
School of Philosophy
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Examination of three moral theories central in the history and development of moral philosophy. David Hume, Immanuel Kant, and John Stuart Mill present different kinds of moral theories, differing approaches to arriving at a moral theory, and specific theories which are markedly different from each other. Each moral theory is investigated in itself and in comparison with the other two.

PHIL2509
Philosophy of Law
School of Philosophy
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Selected conceptual and normative issues in the philosophy of law, centering around the broad areas of law (e.g, its nature, validity, bindingness and relation to morality), liberty, justice, responsibility (including strict, vicarious and collective liability), and punishment.

PHIL2510
Political Philosophy: Equality, Freedom and Justice
School of Philosophy
Staff Contact: P Patton
UOC6 HPW3 S1
Prerequisite/s: 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.

PHIL2515
Origins of Phenomenology
School of Philosophy
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Examines the nature of phenomenology through readings selected from Husserl and Heidegger to address themes such as: the structure of consciousness, the role of language, sensation and the body in human experience, the phenomenological method of investigation, our subjective relation to time and the temporality of human experience, the nature of intersubjectivity, Being and the world.

PHIL2519
Introduction to Chinese Philosophy
School of Philosophy
Staff Contact: K Lai
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: K Lai
UOC6 HPW3 S2
Prerequisite/s: 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).

PHIL2608
Aesthetics: Experiencing the Spectacle
School of Philosophy
Staff Contact: R Diprose
UOC6 HPW3 S2
Prerequisite/s: 6 level 1 units of credit in Philosophy or MDCM1001 and 36 units of credit overall;
Excluded: PHIL2606.

Explores philosophical accounts of what is involved in a person's aesthetic experience of a spectacle (e.g. a painting, theatrical performance, television or virtual reality). Themes include: Plato and mimesis, Descartes and perspective, Kant on taste and the sublime, and revisions to ideas of representation and spectatorship from thinkers such as Nietzsche, Heidegger and Merleau-Ponty. Emphasis will be on how these philosophers understand the relation between the person and the spectacle with the consideration of the implications of their views for understanding the impact of visually based media in our lives.

PHIL2708
Reading Option
School of Philosophy
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: 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.

PHIL3900
Themes in Seventeenth Century Philosophy
School of Philosophy
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit with at least 6 units of credit in Philosophy at 65% or higher;
Excluded: PHIL2228.

Includes a range of topics drawn from the writing of the seventeenth century philosophers John Locke, Rene Descartes, Benedict de Spinoza and Gottfried Leibniz. Topics will be selected from the following: substance, minds and bodies, freedom, contingency, possibility and necessity, time and space. Includes a one hour advanced level seminar each week.

PHIL3910
Advanced Philosophy Seminar
School of Philosophy
Staff Contact: R Diprose
UOC6 HPW3 S2
Prerequisite/s: 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) F/T
School of Philosophy
Staff Contact: P Staines
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 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) P/T
School of Philosophy
Staff Contact: P Staines
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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
Staff Contact: P Staines
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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 present a thesis as approved by the Heads of the two participating Schools.
Note/s: Students contemplating Honours are urged to seek advice from the School on their program early in their course.

PHIL4550
Combined Philosophy Honours (Research) P/T
School of Philosophy
Staff Contact: P Staines
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 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 present a thesis as approved by the Heads of the two participating Schools.
Note/s: Students contemplating Honours are urged to seek advice from the School on their program early in their course.

PHPH1501
Introduction to Health & Sports Science A
School of Medical Sciences
Staff Contact: P Ryan
UOC6 HPW6 S1

This course provides an overview of health and sports 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.
Note/s: Restricted to students enrolled in program 3850 Bachelor of Science in Health and Sports Science.

PHPH1502
Introduction to Health & Sports Science B
School of Medical Sciences
Staff Contact: P Ryan
UOC6 HPW6 S2

This course introduces students to the area of physical activity, health, and lifestyle. An overview of the impact of physical activity will be provided. Students will learn how to assess different components of physical fitness and varying aspects of lifestyle. Health based screening and intervention techniques will also be outlined with students undertaking a personal lifestyle change project.

PHPH2101
Physiology 1A
School of Medical Sciences
Staff Contact: L Ulman
UOC6 HPW6 S1
Prerequisite/s: BIOS1201 and 12UOC of Level 1 CHEM and 6 UOC Level 1 MATH;
Co-requisite: 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 ares 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/s: Students intending to major in Physiology and/or Pharmacology should note that prerequisites can only be waived at the discretion of the Head of School.

PHPH2121
Principles of Physiology A
School of Medical Sciences
Staff Contact: L Ulman
UOC6 HPW6 S1
Prerequisite/s: must be enrolled in 3950 Optometry degree program

Provides an introduction to fundamental physiological principles for students in BOptom degree program. 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/s: Restricted to students enrolled in BOptom degree program and the Biomedical Engineering double degree programs.

PHPH2201
Physiology 1B
School of Medical Sciences
Staff Contact: L Ulman
UOC6 HPW6 S2
Prerequisite/s: BIOS1201 and 12UOC of Level 1 CHEM and 6 UOC Level 1 MATH;
Co-requisite: BIOC2101 or BIOC2181.

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.
Note/s: Students intending to major in Physiology and/or Pharmacology should note thatI prerequisites can only be waived at the discretion of the Head of School.

PHPH2221
Principles of Physiology B
School of Medical Sciences
Staff Contact: L Ulman
UOC6 HPW6 S2

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 gastronintestinal 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/s: Restricted to students enrolled in BOptom degree course and the Biomedical Engineering double degree programs. PHPH2121 is highly recommended.

PHPH2501
Physiology for Health and Sports Science A
School of Medical Sciences
Staff Contact: L Ulman
UOC6 S1
Prerequisite/s: BIOS1201, 12 units of credit of Level 1 Chemistry

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 3850 Bachelor of Science in Health and Sports Science.

PHPH2502
Physiology for Health and Sports Science B
School of Medical Sciences
Staff Contact: L Ulman
UOC6 HPW6 S2
Prerequisite/s: PHPH2501.

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 3850 Bachelor of Science in Health and Sports Science.

PHPH2503
Exercise Physiology
School of Medical Sciences
Staff Contact: M Matuszek
UOC6 HPW6 S2
Prerequisite/s: 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.

PHPH3121
Membrane and Cellular Physiology
School of Medical Sciences
Staff Contact: A Moorhouse
UOC6 HPW6 S1
Prerequisite/s: 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-medicated 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/s: 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
Staff Contact: J Morley
UOC6 HPW6 S1
Prerequisite/s: PHPH2101 and PHPH2201

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 cerebral cortical function. Segments are also included on the neural control of cardiorespiratory function; transmitters and neuromodulators; neural mechanisms in certain higher functions, e.g. language and memory; nervous system plasticity; computer applications in neuroscience. 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/s: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective.

PHPH3151
Introductory Pharmacology and Toxicology
School of Medical Sciences
Staff Contact: L Wakelin
UOC6 HPW6 S1
Prerequisite/s: PHPH2101, PHPH2201, BIOC2101 or BIOC2181, BIOC2201 or BIOC2291

Includes a study of the fundamentals of drug action, such as dose-response methods, receptor binding, drug absorption, distribution and metabolism. Further material on drug analysis and adverse effects of drugs will be presented. Segments dealing with aspects of chemical toxicology and the requirements of government agencies for the registration and evaluation of toxic chemicals will be covered, The practicals will cover basic pharmacological methods. Advanced Science students will be affiliated with a research group within the School involving attendance at group meetings, seminars and the presentation of a report based on literature within the subject area.
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.

PHPH3211
Cardiorespiratory and Exercise Physiology
School of Medical Sciences
Staff Contact: M Perry
UOC6 HPW6 S2
Prerequisite/s: PHPH2101,PHPH2201

An advanced course which emphasises function and control of the cardiovascular system; gas exchange in the lung, respiratory pathophysiology, preventive medicine and laboratory testing of the cardiorespiratory system in exercise physiology. Performance of the cardiorespiratory system in extremes of pressure and temperature is discussed. Extensive practical components involve mammalian preparations and human subjects.
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.

PHPH3221
Endocrine, Reproductive and Developmental Physiology
School of Medical Sciences
Staff Contact: A Boyce
UOC6 HPW6 S2
Prerequisite/s: PHPH2101,PHPH2201

There are three major components to this subject, which consists of lectures, practical classes, tutorial and case studies. The first component of the course is a study of neuroendocrinology, molecular and systematic endocrinology. The second component of the subject deals with female and male reproductive physiology. The third component of the subject details the physiology of pregnancy, and that of the fetus and the newborn.
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.

PHPH3251
Clinical and Experimental Pharmacology
School of Medical Sciences
Staff Contact: L Wakelin
UOC6 HPW6 S2
Prerequisite/s: PHPH2101,PHPH2201,PHPH3151,BIOC 2101 or BIOC2181, BIOC2201 or BIOC2291

The subject deals with the pharmacology of drug classes, with emphasis on mode of drug action. Effects of drugs on the major organs, including the cardiovascular system, kidney, endocrine systems, and the central nervous system, will be covered. Students will be introduced to recent innovations in drug development and 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/s: 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
Staff Contact: R Knihinicki
UOC4 HPW4 S2
Prerequisite/s: 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. Pharmacodymamics, 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
Staff Contact: J Morley
UOC6 S1
Prerequisite/s: 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
Staff Contact: S Head
UOC3 HPW3 S1
Prerequisite/s: PHPH2501, PHPH2502, BIOC2181 or BIOC2101

This course will focus on the identification of specific joints and muscles responsible for sport and exercise movements. Students will use a dynamic analysis approach to assess skills and movements for the purpose of physical conditioning, injury prevention, and exercise rehabilitation.

PHPH3503
Advanced Exercise Physiology
School of Medical Sciences
Staff Contact: M Matuszek
UOC6 HPW6 S1
Prerequisite/s: ANAT2111, PHPH2501

An advanced course linking previous physiological principles with advanced applications associated with endurance based energy systems and metabolism. This will incorporate endocrine physiology, biochemistry of energy systems during exercise and will look at the responses and adaptations occurring with such activity. This will also cover other aspects such as tapering, over-reaching, overtraining and the associated detrimental physiological and pathological results. A significant practical component will continue to build relevant experience for future employment.

PHPH3504
Physical Activity and Health
School of Medical Sciences
Staff Contact: S Boutcher
UOC3 HPW3 S1
Prerequisite/s: ANAT2111, PHPH2501

This course will introduce students to the literature examining the effects of physical activity on health. In particular, the effects of exercise on cancer, AIDS, heart disease, vascular disease, stroke hypertension, diabetes, obesity, immune function, sleep, stress, cognitive functioning, depression, arthritis, and asthma will be described. Health based screening and intervention techniques will also be outlined with students undertaking a supervised lifestyle change project.

PHPH3505
Motor Control & Dysfunction
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S2

This course will describe the neurophysiological basis of dysfunctional and normal human motion control. The neurophysiology and anatomy of the motor control system will be described as well as analysis techniques of movement patterns.

PHPH3506
Principles of Exercise Prescription
School of Medical Sciences
Staff Contact: P Ryan
UOC3 HPW3 S2
Prerequisite/s: ANAT2111, PHPH2501

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 F/T
School of Medical Sciences
Staff Contact: J Morley
UOC24 S1 S2

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 P/T
School of Medical Sciences
Staff Contact: J Morley
UOC12 S1 S2

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 F/T
School of Medical Sciences
Staff Contact: J Morley
UOC24 S1 S2

The Honours Yyar 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 P/T
School of Medical Sciences
Staff Contact: J Morley
UOC12 S1 S2

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.

PHPH4501
Introductory Research Methods
School of Medical Sciences
Staff Contact: S Boutcher
UOC3 HPW3 S1

This course deals with the statistical and epidemiological bases for understanding the scientific process for undertaking research. The student receives training in statistical software such as SPSS and learns to use the software for tests on the various levels of measurement including correlation, regression, t-tests, and analysis of variance. The student develops a research proposal during the course.

PHPH4502
Principles of Pharmacology
School of Medical Sciences
Staff Contact: School Office
UOC3 S1
Prerequisite/s: PHPH2501, PHPH2502, BIOC2181 or BIOC2101

This course includes a study of the fundamentals of drug action, such as dose response methods, receptor binding, drug absorption, distribution and metabolism. Further material on drug analysis and adverse effects of drugs will be presented. Segments dealing with aspects of chemical toxicology and the requirements of government agencies for the registration and evaluation of toxic chemicals will be covered. This is a lecture only course.

PHPH4503
Practicum A
School of Medical Sciences
Staff Contact: D Spice
UOC6 S1

Students are required to complete 50 hours of work experience with an approved organisation under the supervision of the placement program officer. Course availability: it is intended that students will complete this placement over semester 2. Alternative arrangements may see this completed during holiday periods if this is desired by both the student and is acceptable to the employer. 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 suitable industry experience. The supervisor will ensure adequate records of activities and skills developed by the student. Students will be assessed by the submission of a substantial report of the internship, together with the submission of the completed lab book and a seminar presentation.

PHPH4504
Practicum B
School of Medical Sciences
Staff Contact: D Spice
UOC6 S2

See description for Practicum A. The student may take an internship in a different or related professional area to that of Practicum A. The same requirements apply in terms of a completed log book, substantial report and seminar presentation.

PHPH4505
Research Project
School of Medical Sciences
Staff Contact: S Boutcher
UOC6 S2
Prerequisite/s: PHPH4501.

A research proposal will have been developed in the course Introductory Research Methods (PHPH4501). In this course the student will implement the approved project in terms of reviewing the literature, applying the appropriate methods, accumulating results and processing these through the relevant statistics, discussing the results and drawing conclusions. A report is to be written in the form of a scientific paper.

PHPH4506
Drugs in Sport (Effects and Interactions)
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S2
Prerequisite/s: PHPH4502 or PHPH3157.

This is a course in systematic pharmacology dealing with the effects of drugs on systems with particular emphasis on the drugs that enhance performance and underlying mechanisms responsible for their effects. As well students will study the impact of drug treatment on performance and the effects of exercise on drug actions and side effects. This course will be given as lecture only.

PHPH4507
Movement Rehabilitation
School of Medical Sciences
Staff Contact: School Office
UOC6 S1 S2

This course describes the use of exercise as a clinical rehabilitative tool for humans with neurological and muscular pathologies. The subject delivers information about evaluation of injury sites and the design and implementation of exercise-based rehabilitative techniques to improve functional capability.

PHPH4511
Sports Management
School of Medical Sciences
Staff Contact: S Boutcher
UOC3 S1 S2

The principles and practice of sports management will be dealt with, emphasising planning, staffing, financial management and information systems management. A 'systems' view of sporting organisations will be developed. There will be examination and discussion of the Australian sporting industry and its changing structure and its relation to the media and multimedia international organisations. Practical work will require selecting appropriate topics in these areas for analysis and reports.

PHPH4512
Circadian Rhythms: Sleep Physiology and Pathophysiology
School of Medical Sciences
Staff Contact: School Office
UOC3 S2
Prerequisite/s: PHPH2503

The course emphasises the importance of circadian rhythms in regard to athletes and their performance. The neurophysiology and location of rhythm generators will be reviewed and their effects on the neuro-

hormonal axis discussed. The ultradian rhythms, such as the alert-drowsy cycle, will be discussed in relation to performance. Sleep physiology and its stages will be discussed in relation to hormonal changes such as on diurnal changes in plasma cortisol and growth hormone. There will be discussion of jet-lag in relation to the phase changes due to rapid changes in longitude as occurs in airline travel. The effects of disordered sleep will be considered in relation to its effects on performance and related effects on arousal and attention and on hormones. Practical work will include observations in a sleep laboratory.

PHPH4513
Physical Activity in Special Populations
School of Medical Sciences
Staff Contact: P Ryan
UOC3 S1
Prerequisite/s: ANAT2111, PHPH2501

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 role of physical activity in the health of children, women, aging adults, pain, arthritis, and asthma patients will be described.

PHPM2018
Medical Physiology 1
School of Physiology and Pharmacology
Staff Contact: K Gibson
UOC8 HPW8 S1 S2
Prerequisite/s: PHPM1004

Objectives: To gain knowledge and understanding of the function of the cellular elements of the body and the function of certain major body organ systems in humans: to gain experience in the use of medical instrumentation and in the measurement of variables in mammalian biological systems; to gain experience in problem-solving approaches in the study of the physiology of the normal person; to integrate knowledge of anatomy, biochemistry and physiology to provide an understanding of human structure and function. Systematic lectures, tutorials, practicals and demonstrations deal with cells and excitable tissues, circulation, respiration, kidney and body fluids, gastro-intestinal tract and temperature regulation. Attention is paid to the principles of physics and statistics necessary to understand the functioning of cells and organ systems. Clinical material illustrates the relevance of the course to the study of medicine. Assessment: Examinations are held mid-year and at the end of the year and include both lecture and practical content.

PHPM3014
Medical Physiology 2
School of Physiology and Pharmacology
Staff Contact: R Vickery
UOC4 HPW4 S1 S2
Prerequisite/s: PHPH2018

Objectives: To extend knowledge of normal physiology to areas not covered in Medical Physiology I, particularly blood, the nervous and endocrine systems and reproduction; problem solving approaches are emphasised and students are encouraged to integrate their knowledge of anatomy, biochemistry and physiology to provide an understanding of normal human structure and function. Those principles of biophysics necessary for an understanding of the subject are discussed. In addition, the subject places emphasis on applied physiology, including the physiology of exercise. Some clinical physiology is included where basic physiological principles are applied to the understanding of selected clinical disorders. Teaching involves systematic lectures, tutorials, practical classes and demonstrations.Assessment: Examinations are held both mid-year and at the end of the year and cover both lecture and practical content.

PHPM3055
Medical Pharmacology
School of Physiology and Pharmacology
Staff Contact: V Kapoor
UOC5 HPW6 S1 S2

Objectives: To understand the mechanism of drug action with special reference to drugs of clinical importance; to be aware of the principles of drug interaction. Medical pharmacology is the science of drugs or chemicals used to prevent, diagnose and heal disease, as well as the role of chemicals in the environment that cause disease. The medical pharmacology subject is concerned with basic principles of drug action, including the pharmacodynamics, pharmacokinetics and toxicology of drugs of clinical importance. Assessment: Examinations are held mid-year and at the end of the year and include both lecture and practical content.

PHTN1010
Introduction to Photonics
School of Electrical Eng and Telecommunications
Staff Contact: I Skinner
UOC3 HPW3 S1

The lecture program for this course has three themes. The first lectures provide an introduction to the practice of photonics 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 and photonics 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, photonics, computing, data networks, the Internet, electronics and communications systems.

PHYS1000
Physics Thinking
School of Physics
Staff Contact: R Newbury
UOC3 HPW3 S2

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.

PHYS1103
Physics of the Human Musculoskeletal System
School of Physics
Staff Contact: R Newbury
UOC3 HPW3 S1

In this course we assume the student begins with little or no previous exposure to physics and only basic high school mathematics. We introduce the central ideas of mechanics and fluid mechanics, electricity and magnetism, atomic and nuclear physics. Throughout, and particularly at the conclusion of each unit, we will illustrate how physics principles are central to a proper understanding of the musculoskeletal system by looking at some applications of physics knowledge. We also show how some of the technologies associated with measuring and examining the human body have been possible through physics - in essence, we want to show how physics is in fact extremely useful, not the difficult, dry subject that some might believe it to be!
***Assumed Knowledge*:** A basic understanding of Physics, equivalent to year 11 high school level.

PHYS1111
Fundamentals of Physics
School of Physics
Staff Contact: R Newbury
UOC6 HPW6 S1 S2

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/s: Introductory level course for students of all disciplines. Recommended courses: MATH1011 or MATH1131 or MATH1031.

PHYS1121
Physics 1A
School of Physics
Staff Contact: R Newbury
UOC6 HPW6 S1 S2
Corequisite/s: MATH1131 or MATH1141

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
Staff Contact: R Newbury
UOC6 HPW6 S1 S2
Corequisite/s: MATH1131 or MATH1141

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
Staff Contact: R Newbury
UOC6 HPW6 S1
Corequisite/s: 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.

PHYS1169
Physics 1 (Chem,Mech,Min Eng)
School of Physics
Staff Contact: R Newbury
UOC6 HPW6 S1

Mechanics of intermolecular systems. Atomic structure of solids; forces and defects. Plasticity of solids. Fracture of solids. Thermal properties of solids, liquids and gases. Geometrical optics, optical instruments, interference and diffraction, polarisation. Electrostatics, direct-current circuits. Elementary circuit theory. Magnetic forces and fields, electromagnetic induction. Alternating currents .

PHYS1189
Physics 1 (Geomatic Engineering)
School of Physics
Staff Contact: R Newbury
UOC6 HPW6 S1

Vectors, linear mechanics. Newton's laws 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. Geometrical optics and instruments. Fluid mechanics; Bernoulli's equation, viscosity; Stoke's Law, Nuclear physics, radioactivity, half-life, nuclear forces, binding energies, fission and fusion.

PHYS1199
Physics 1 (Optometry)
School of Physics
Staff Contact: R Newbury
UOC6 HPW6 S1

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/s: Restricted to program 3950.

PHYS1211
Energy and Environmental Physics
School of Physics
Staff Contact: R Newbury
UOC6 HPW6 S2

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
Staff Contact: R Newbury
UOC6 HPW6 S2 X1
Prerequisite/s: PHYS1121;
Corequisite/s: 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
Staff Contact: R Newbury
UOC6 HPW6 S2 X1
Prerequisite/s: PHYS1131;
Corequisite/s: 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
Staff Contact: R Newbury
UOC6 HPW6 S2
Prerequisite/s: PHYS1131;
Corequisite/s: 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 approxiamately 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
Staff Contact: R Newbury
UOC3 HPW6 S2

Energy, its uses and environmental impacts, thermodynamics, heat engines, heat transfer, solar radiation and its uses, properties of fluids, alternative energy sources.

PHYS1250
Physics 1 (Building)
School of Physics
Staff Contact: R Newbury
UOC3 HPW3 S1 S2

Energy transfer: concepts of temperature and heat; calorimetry; gas laws; phase changes and humidity; heat transmission; refrigeration. Electrostatics and electromagnetism; electric and magnetic fields; DC circuits. Properties of matter: atomic bond types and their relation to elasticity, plasticity and fracture; pressure in stationary and moving fluids.

PHYS1259
Physics 1 (Industrial Design)
School of Physics
Staff Contact: R Newbury
UOC4 HPW4 S2

Energy transfer: concepts of temperature and heat; calorimetry; gas laws; phase changes and humidity; heat transmission; refrigeration. Electrostatics and electromagnetism; electric and magnetic fields; DC circuits; electromagnetic induction. Sound: wave properties; absorption of sound. Properties of matter: atomic bond types and their relation to elasticity, plasticity and fracture; pressure in stationary and moving fluids.

PHYS1279
Physics 1 (Civil Engineering)
School of Physics
Staff Contact: R Newbury
UOC4 HPW4 S2

Mechanics; elastic waves; electromagnetism; DC and AC circuits; introduction to electric measurement systems; instrumentation; digital electronic information processing systems; mechanical properties of matter; atomic structure; elasticity of solids; surface tension and viscosity of fluids; non-destructive testing; wave phenomena and acoustic techniques.

PHYS1601
Computer Applications in Experimental Science 1
School of Physics
Staff Contact: R Newbury
UOC6 HPW6 S1 S2

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
Staff Contact: S Hagon
UOC3 HPW2 S1
Prerequisite/s: PHYS1002 or PHYS1221 or PHYS1231 or PHYS1241 and MATH1231 or MATH1241;
Corequisite/s: MATH2011 or MATH2110 or MATH2100;
Excluded: PHYS2001.

Simple, damped and forced harmonic oscillations, central force problems, systems of particles, Lagrange's equations, coupled oscillations, waves.

PHYS2020
Computational Physics
School of Physics
Staff Contact: S Hagon
UOC3 HPW2 S1
Prerequisite/s: 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 intergration, gravitational, cellular automata, classical mechanics, and data analysis. Software used will include C and Maple.

PHYS2030
Laboratory A
School of Physics
Staff Contact: S Hagon
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: S Hagon
UOC3 HPW2 S1
Prerequisite/s: 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
Staff Contact: S Hagon
UOC3 HPW2 S2
Prerequisite/s: PHYS1002 or PHYS1221 or PHYS1231 or PHYS1241, MATH1231 or MATH1241;
Corequisite/s: 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
Staff Contact: S Hagon
UOC3 HPW2 S2
Prerequisite/s: 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
Staff Contact: S Hagon
UOC3 HPW2 S2
Prerequisite/s: 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
Staff Contact: S Hagon
UOC3 HPW2 S2
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/s: This course is not available to Advanced Science students.

PHYS2410
Biophysics 1
School of Physics
Staff Contact: S Hagon
UOC3 HPW2 S2
Prerequisite/s: 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
Staff Contact: S Hagon
UOC6 HPW5 S2
Prerequisite/s: 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
Staff Contact: S Hagon
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: S Hagon
UOC6 HPW4 S1
Prerequisite/s: 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
Staff Contact: S Hagon
UOC3 HPW2 S1
Prerequisite/s: 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.

PHYS2939
Physics 2 (Electrical Engineering)
School of Physics
Staff Contact: S Hagon
UOC3 HPW3 S1
Prerequisite/s: PHYS1231or PHYS1241 or PHYS1969 or PHYS1002.

Electrostatics in vacuum and in dielectric materials. Electric current. Magnetostatics in vacuum and magnetic media, magnetic materials and magnetic circuits. Time-varying fields. Capacitance and inductance calculations. General field concepts. superconductivity. Maxwell's equations. Electromagnetic waves.

PHYS2969
Physics of Measurement (Geomatic Engineering)
School of Physics
Staff Contact: S Hagon
UOC3 HPW3 S1
Prerequisite/s: PHYS1998 or PHYS1189

Digital electronics, CCD arrays and computerised image enhancement. analogue-to-digital conversion. Transducers including direct digital output. Wave motion. Geometrical optics. Physical optics including interference, diffraction and polarisation. Optical instruments: Telescopes, image brightness and resolution, photography.

PHYS3010
Quantum Mechanics (Advanced)
School of Physics
Staff Contact: S Hagon
UOC3 HPW2 S1
Prerequisite/s: PHYS2021 or PHYS2040;
Corequisite/s: 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/s: Not available without a mark of 65 or greater in PHYS2021 or PHYS2040.

PHYS3020
Statistical Physics
School of Physics
Staff Contact: S Hagon
UOC3 HPW2 S1
Prerequisite/s: 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
Staff Contact: S Hagon
UOC3 HPW2 S1
Prerequisite/s: (PHYS2011 or PHYS2050 or PHYS2934) and MATH2011 or math 2111 and MATH2120 or MATH2130 and MATH2520 or MATH2620;
Excluded: PHYS3230.

Electromagnetic fields; Maxwell's equations, Poynting theorem, potential formulation. Planel waves, reflection and transmission. Emission of radiation from accelerating charges, scattering and propagation of radiation in material media. Covariant formulation of electromagnetism.
Note/s: Not available without a mark of 65 or greater in PHYS2011 or PHYS2050.

PHYS3040
Experimental Physics A1
School of Physics
Staff Contact: B Perczuk
UOC3 HPW4 S1

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/s: Some experiments assume knowledge of PHYS2030, PHYS2040 or PHYS2050.

PHYS3050
Nuclear Physics
School of Physics
Staff Contact: S Hagon
UOC3 HPW2 S2
Prerequisite/s: 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
Staff Contact: S Hagon
UOC3 HPW2 S2
Prerequisite/s: PHYS1002 or PHYS1221 or PHYS1231 or PHYS1241;
Corequisite/s: 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/s: This course may also be studied via distance education.

PHYS3070
Experimental Physics A2
School of Physics
Staff Contact: B Perczuk
UOC3 HPW4 S2

As for PHYS3040 Experimental Physics A1.
Note/s: Some experiments assume knowledge of PHYS2030, PHYS2040 or PHYS2050.

PHYS3080
Solid State Physics
School of Physics
Staff Contact: S Hagon
UOC3 HPW2 S1
Prerequisite/s: PHYS2021 or PHYS2040;
Corequisite/s: 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.

PHYS3110
Experimental Physics B1
School of Physics
Staff Contact: B Perczuk
UOC3 HPW4 S1

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
Staff Contact: B Perczuk
UOC3 HPW4 S2

As for PHYS3110 Experimental Physics B1.

PHYS3160
Astrophysics
School of Physics
Staff Contact: S Hagon
UOC3 HPW2 S2
Prerequisite/s: 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
Staff Contact: S Hagon
UOC3 HPW2 S1
Prerequisite/s: PHYS2021 or PHYS2040;
Corequisite/s: 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
Staff Contact: S Hagon
UOC3 HPW2 S1
Prerequisite/s: (PHYS2011 or PHYS2050 PHYS2939) and MATH2011 or MATH2111 and MATH2120 or MATH2130;
Excluded: PHYS3030.

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.

PHYS3310
Physics of Solid State Devices
School of Physics
Staff Contact: S Hagon
UOC3 HPW2 S2
Prerequisite/s: 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.
Note/s: This course may also be studied via distance education.

PHYS3410
Biophysics 2
School of Physics
Staff Contact: S Hagon
UOC3 HPW2 S2
Prerequisite/s: 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
Staff Contact: S Hagon
UOC3 HPW2 S1
Prerequisite/s: (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
Staff Contact: S Hagon
UOC3 HPW2 S2
Prerequisite/s: 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.

PHYS3610
Computational Physics
School of Physics
Staff Contact: S Hagon
UOC3 HPW2 S2
Prerequisite/s: (PHYS2001 or PHYS2020) and MATH2120 or MATH2130

Use of computers in solving physical problems, including matrix eigenvalue problems and quantum energy levels, boundary value problems (heat conduction, fluid flow and electrostatics) and Monte Carlo techniques.

PHYS3630
Electronics
School of Physics
Staff Contact: S Hagon
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: S Hagon
UOC3 HPW2 S1

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/s: This course may also be studied via distance education.

PHYS3720
Optoelectronics
School of Physics
Staff Contact: S Hagon
UOC3 HPW2 S1

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/s: This course may also be studied via distance education.

PHYS3770
Laser and Spectroscopy Laboratory
School of Physics
Staff Contact: B Perczuk
UOC3 HPW4 S1 S2

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
Staff Contact: B Perczuk
UOC3 HPW4 S1 S2

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 communictions, wavelength division multiplexing, Er droped fibre amplifiers, optical domain reflectometery, etc.

PHYS4103
Physics 4 Honours F/T
School of Physics
Staff Contact: C Hamer
Enrolment requires School approval
UOC24 S1 S2

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/s: 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.

PHYS4411
Medical Physics
School of Physics
Staff Contact: J Wolfe
UOC3 HPW2 S1 S2
Prerequisite/s: PHYS2021 or PHYS2040

Radiotherapy: radiation sources, interactions of radiation with the body, radiation detection and measurement. Dosimetry and radiotherapy planning. Radioisotopes, brachytherapy. Nuclear Medicine: Radioisotope production. Radiopharmaceuticals. Basic instrumentation. Gamma camera. SPECT and PET. Medical Imaging: x-rays and C.T. Magnetic Resonance Imaging (MRI). Ultrasound. Safety and quality control in Medical Physics.
Note/s: Enrolment restricted to program 3973 Medical Physics.

PHYS4413
Medical Physics Projects
School of Physics
Staff Contact: S Hagon J Wolfe
UOC9 HPW9 S1 S2

These projects for final year Medical Physics students will be in areas such as Radiotherapy, Nuclear Medicine, Medical Imaging or Biophysics. Generally carried out in a hospital environment under the supervision of a practising medical physicist but may be carried out in the university or elsewhere, if suitable facilities available. Students required to submit a written thesis and present a seminar describing their project work.
Note/s: Enrolment restricted to program 3973 Medical Physics.

PLAN0081
Work Experience
Planning and Urban Development
Staff Contact: P Williams
UOC24 S1 S2

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
Staff Contact: P Williams
UOC24 S1

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
Staff Contact: School Office
UOC3 HPW3 S1

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
Staff Contact: School Office
UOC6 HPW6 S1 S2

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 class participation, reading set texts, group projects on field excursions and a final examination.

PLAN1052
Quantitative Methods
Planning and Urban Development
Staff Contact: School Office
UOC6 HPW6 S1 S2

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
Staff Contact: R Freestone
UOC6 HPW6 S1

An introduction to urban design principles and basic design skills targeted specifically at 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, modeling writing, 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
Staff Contact: R Freestone
UOC6 HPW6 S1 S2

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 examination of 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 individual assignments structured as consultant reports and seminar participation.

PLAN1241
Planning Theory and Practice
Planning and Urban Development
Staff Contact: S Harris
UOC6 HPW6 S1

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 organisations 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, and directed exercises, and field investigations.

PLAN2032
Urban Design
Planning and Urban Development
Staff Contact: R Freestone
UOC6 HPW6 S1

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. Taking off 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
Staff Contact: School Office
UOC6 HPW6 S1

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
Staff Contact: R Freestone
UOC6 HPW6 S1

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
Staff Contact: R Freestone
UOC6 HPW6 S1 S2

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
Staff Contact: P Williams
UOC6 HPW6 S1 S2

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
Staff Contact: School Office
UOC6 HPW6 S1 S2

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 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
Staff Contact: S Harris
UOC6 HPW6 S1

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 would include environmental, town centre, open space, transportation, employment zone, redevelopment, heritage or general locality studies which might 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
Staff Contact: R Freestone
UOC6 HPW6 S1 S2

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
Staff Contact: P Williams
UOC6 HPW6 S1

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 by essay and examination.

PLAN3051
Development Assessment
Planning and Urban Development
Staff Contact: P Williams
UOC6 HPW6 S1

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
Staff Contact: School Office
UOC6 HPW6 S1 S2

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, team building, community consultations and mediation. 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
Staff Contact: R Freestone
UOC3 HPW3 S1

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
Staff Contact: R Freestone
UOC6 HPW6 S1

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 organisation 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
Staff Contact: R Freestone
UOC12 HPW2 S1 S2
Prerequisite/s: 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 a 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
Staff Contact: S Harris
UOC6 HPW6 S1 S2

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 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.

PLAN4221
Regional Policy
Planning and Urban Development
Staff Contact: R Freestone
UOC3 HPW6 S1

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 organisation 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.

POLS1002
Power and Democracy in Australia
School of Politics and International Relations
Staff Contact: M Rolfe
UOC6 HPW3 S1

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 Institutions
School of Politics and International Relations
Staff Contact: S Maddison
UOC6 HPW3 S2

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
Staff Contact: C Condren
UOC6 HPW3 S1

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,T, Utopia.

POLS1008
Politics of Post-Communist Systems
School of Politics and International Relations
Staff Contact: S Fortescue
UOC6 HPW3 S2

Examines political concepts and phenomena in Post-Communist systems, with the emphasis on Russia. Background is given on the Communist period, before moving to post-1989.

POLS1017
International Relations in the 20th Century
School of Politics and International Relations
Staff Contact: M McDonald
UOC6 HPW3 S1
Excluded: INST1001.

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.

POLS1018
Politics, Power, Principle: An Introduction to Modern Political Theory
School of Politics and International Relations
Staff Contact: G Levey
UOC6 HPW3 S2

Introduces the ideas of some of the main political thinkers of the twentieth century; examines some of their main theories and concepts with particular emphasis on their views of power, of society and of the state; examines some of the main principles of justice, equity and human rights that have become current this century.

POLS1020
International Relations: Continuity and Change
School of Politics and International Relations
Staff Contact: S Scott
UOC6 HPW3 S2
Excluded: INST1002, 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.

POLS2008
Public Policy Making
School of Politics and International Relations
Staff Contact: E Thompson
UOC6 HPW3 S2
Prerequisite/s: 18 units of credit in POLS at 70% or 70% in SLSP2000;
Excluded: AUST2024

The problems of administering government and the problems of decision-making in the modern State. Models of organisations are discussed, as are problems of participation and implementation. The role of the State and the impact of economic rationalism and managerialism are examined. Students may choose to participate in a parliamentary internship as a component of this course.

POLS2015
Political Language
School of Politics and International Relations
Staff Contact: C Condren
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: POLS3900

Tactics and strategies of political argument; rhetoric and our understanding of the political; word change, metaphor and the formation of the concepts we use in and to understand, politics.

POLS2020
Sex, Human Rights and Justice
School of Politics and International Relations
Staff Contact: H Pringle
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: G Kitching
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit in Arts and Social Science courses;
Excluded: COMD2000, 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
Staff Contact: J Pemberton
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

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.

POLS2032
Globalisation, Power and Development in Australia
School of Politics and International Relations
Staff Contact: M Rolfe
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

Australia is one of the most urbanised countries in the world. Deals with Australian politics in the context of urban, city and industrial development and of the power of the international environment of which Australia is a part. Such broad topics as American influence, British ties, the role of the state, gender, immigration and the language of modern Australian politics are examined for their influence on Australian cities.

POLS2033
Jews in Modern Society
School of Politics and International Relations
Staff Contact: G Levey
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit in Arts and Social Science courses;
Excluded: JWST2000.

Introduces students to the social scientific study of the Jews and their communities in the modern period. Focus is on the different paths of Jewish emancipation in Western societies, the impact of modernisation on Jewish life, and the significance of the Holocaust and the establishment of the State of Israel for contemporary Jewish identity. Themes include: occupational, educational, and social class transformations; religious, ethnic, and communal forms of Jewish identification; Jews and others; political allegiances; Israel-Diaspora relations; and assimilation and intermarriage.

POLS2034
Jews, States and Citizenship
School of Politics and International Relations
Staff Contact: G Levey
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit in Arts and Social Science courses;
Excluded: JWST2001.

Examines tensions in the relationship of Jews to the governing principles of liberal states through analysis of case materials and controversies that have occurred in France, Britain, Australia, Canada, USA, and Israel over the political recognition of religious practices and group identity. Topics include: the terms of liberal citizenship; church state separation; affirmative action; free speech; state recognition and support of Jewish practices; multiculturalism as a new public policy and challenge to Jews; Israel as a liberal and a Jewish state.

POLS2036
Political Development in Northeast Asia
School of Politics and International Relations
Staff Contact: J You
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: S Scott
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

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/s: No prior knowledge of law is assumed.

POLS2040
Politics and Business
School of Politics and International Relations
Staff Contact: S Fortescue
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: V Farrer
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit in Arts and Social Science courses;
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.

POLS2044
Institutions and Policy: Re-evaluating Australian Politics
School of Politics and International Relations
Staff Contact: S Maddison
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit in Arts and Social Sciences;
Excluded: AUST2007

With the Centenary of Federation behind us, a re-evaluation of Australia's position in the world seems to be occurring. Some have argued Australia is undergoing an increasing integration of our political system with 'global' norms, and that this differs from Australia's institutional heritage and ideals. Allows students to compare the historical foundations and formation of some key political institutions with new norms, expectations and challenges. Developments within Australia will be examined in the context of struggles over power, and over time.

POLS2045
Resource Politics: Politics in Resource-Rich Societies
School of Politics and International Relations
Staff Contact: S Fortescue
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

Concentrates on the politics of resource-dominated societies in Australia, Russia and sub-saharan African countries. Examines how and why these societies frequently have poor economic and social performance.

POLS2046
Political Rhetoric
School of Politics and International Relations
Staff Contact: J Pemberton
UOC6 HPW3 S2
Prerequisite/s: 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.

POLS2047
Human Rights and Wrongs in Australia
School of Politics and International Relations
Staff Contact: K Gelber
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: POLS1019

Examines the human rights debate in Australia by first examining the idea of human rights and the international human rights system. Considers mechanisms within Australia to promote and protect human rights, and examines case studies including IVF, refugees, indigenous land rights, hate crimes and free speech.

POLS2048
International Security
School of Politics and International Relations
Staff Contact: M McDonald
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: 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.

POLS2049
Asia in the International Political Economy
School of Politics and International Relations
Staff Contact: E Thurbon
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: POLS3911

A theoretical and empirical analysis of the international political economy and its interactions with the Asian region. First section analyses the capitalist transformation of Asia, its role as the world's 'wealth bowl' and the political economic crises it faces. The second examines the movements of regional and global capital, especially from the United States and Japan, in the forms of investment, trade and finance as well as the resulting migrations of people and ecological problems. The final section assesses how far regional and global forms of governance can solve the main problems facing the region in the twenty first century.

POLS3024
Australian Foreign Policy
School of Politics and International Relations
Staff Contact: M McDonald
UOC6 HPW3 S2
Prerequisite/s: 18 units of credit in POLS at credit 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.

POLS3027
Liberal Democratic Thought
School of Politics and International Relations
Staff Contact: H Pringle
UOC6 HPW3 S1
Prerequisite/s: 18 units of credit in POLS at credit level.

Examines problems in liberal democratic thought from Hobbes through Locke, Rousseau, Kant, Mill and Bentham, to Rawls. Focuses on social contract and the utilitarian calculus to set out the limits of political obligation and the range of legitimate state actions. Includes critical evaluations of these concepts in liberal democratic thought.

POLS3028
Perspectives on US Politics: The American President
School of Politics and International Relations
Staff Contact: E Thompson
UOC6 HPW3 S2
Prerequisite/s: 18 units of credit in POLS at 70% average.

A study of modern US Presidents and theories of presidential power and what makes for successful and unsuccessful presidencies.

POLS3032
The Party System in Australia
School of Politics and International Relations
Staff Contact: K Gelber
UOC6 HPW3 S1
Prerequisite/s: 18 units of credit in POLS at credit level.

Aspects of Australian political parties at national and state level, including their origins, ideologies, organisations, socio-economic bases, electoral fortunes and performance in office. Explores what it means to describe Australian party politics as a system and examines recent challenges to that system, including the decline of party identification, the rise of minor parties and independent parliamentarians and the proliferation of new social movements and issue groups. Some comparisons will be made with the party systems of other countries.

POLS3040
Early Political Texts
School of Politics and International Relations
Staff Contact: C Condren
UOC6 HPW3 S2
Prerequisite/s: 18 units of credit in POLS at credit 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. It 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.

POLS3050
Theories of Nationalism
School of Politics and International Relations
Staff Contact: E Nimni
UOC6 HPW3 S2
Prerequisite/s: 18 units of credit in POLS at credit level.

Explores how normative political theory interprets nationalism, nationhood and ethnicity. Examines in sequence three clusters of theories that inform most contemporary political debates on nationalism: Marxism, liberalism and post modernity. The topics studied in all three cases concern nationhood, ethnicity and citizenship, collective rights for minorities and self determination and the nation state.

POLS3054
Theorising International Political Economy
School of Politics and International Relations
Staff Contact: E Thurbon
UOC6 HPW3 S1
Excluded: INST3001

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.

POLS3055
Prime Ministers & Leadership
School of Politics and International Relations
Staff Contact: M Rolfe
UOC6 HPW3 S2
Prerequisite/s: 18 units of credit in POLS at 65% average;
Excluded: POLS2038.

A great deal of what is called politics in Australia is identified with political parties and, ultimately, with prime ministers. Popular and media views identify the prosperity of Australia, various events and the achievements of a Federal government with success or failure of the Prime Minister. Hence, there are a great many people who discuss the so-called 'presidentialisation' of Australian politics. But do prime ministers have as much power as is popularly conceived? This course is based on the old political theme of agency versus structure. How much can one individual achieve as prime minister when he/she is dependent on a political party and a cabinet which include powerful allies? How much has the process of socialisation in a party shaped the aspirant? What style of leadership must a prime minister present to the electorate?

POLS3901
States, Nations and Ethnic Identities
School of Politics and International Relations
Staff Contact: E Nimni
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit in Arts and Social Science courses, including 6UOC in POLS at credit level;
Excluded: POLS2030.

An introduction to contemporary theories of ethnicity and nationalism. Covers the contemporary resurgence of ethnicity, the emergence of the idea of the nation, nationalism and modernity, nationhood and popular sovereignty, the emergence of the nation state, the relation between ethnicity and nationalism and some contrasting interpretations on the contemporary revival of nationalism. It culminates with a brief examination of three case studies: South Africa, Israel and Palestine, and the European Union.

POLS3910
The Art of Political Science
School of Politics and International Relations
Staff Contact: G Levey
UOC6 HPW3 S1
Prerequisite/s: 18 units of credit in POLS at 65% average;
Excluded: POLS3056.

Is political science like the natural sciences in terms of its aims and methods? Or is it more like journalism or perhaps interpreting a text? Examines debates in political science over its subject matter and mission, and over what political knowledge is and how it is acquired. The focus is on 'landmark' studies in political science and influential works in the philosophy of science. Topics include the nature of political phenomena and political explanation; different approaches to political research; and how contending theories and knowledge claims may be evaluated.

POLS4000
Politics and International Relations Honours (Research) F/T
School of Politics and International Relations
Staff Contact: H Pringle
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 54 units of credit in POLS at an average of 65%, including at least 12 units of credit at 65% in one POLS39## and one POLS391# course and permission from head of school.

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.

POLS4500
Combined Politics and International Relations Honours (Research) F/T
School of Politics and International Relations
Staff Contact: H Pringle
Enrolment requires School approval
UOC12 S1 S2

POLY3011
Polymer Science - Theory
School of Chemical Eng and Industrial Chemistry
Staff Contact: R Burford
UOC3 HPW3 S1
Prerequisite/s: 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 Eng and Industrial Chemistry
Staff Contact: R Burford
UOC3 HPW3 S2
Prerequisite/s: CHEM2021, INDC2040, POLY3011

A series of practical laboratory exercises designed to illustrate the kinetics of polymerisation and the mechanical behaviour and properties of polymers.

PROR1114
Introduction to Laboratory and Professional Aspects of Prosthetics & Orthotics
School of Medical Sciences
Staff Contact: School Office
UOC6 HPW6 S1

Students will be introduced to various clinical aspects of prosthetics and orthotics such as the function of the rehabilitation team and history taking. Students will be introduced to the various hand tools and machinery commonly used in fabricating prostheses and orthoses. Safe laboratory practice and appropriate laboratory management skills are also covered. Students will also gain skill and knowledge in manufacturing techniques related to different materials commonly used within prosthetics and orthotics.

PROR1116
Overview of Prosthetics and Orthotics
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S1

Students will be introduced to common terminology, historical developments in prosthetics and orthotics and the roles and responsibilities of the prosthetist and orthotist. Introduction to components and basic manufacturing procedures used within prosthetics and orthotics as well as an overview in general terms of common materials and techniques used in the profession.

PROR1121
Biology for Prosthetics and Orthotics
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S1

Students will be introduced to topics relating to: cells; membranes and organelles; animal biology including nutrition, circulation and gas exchange; homeostasis; osmoregulation and thermoregulation; control and integration by endocrine systems; animal development; control and integration of the nervous systems and animal movement as well as evolution; introductory microbiology.

PROR1205
Anatomy for Prosthetics and Orthotics
School of Medical Sciences
Staff Contact: K Ashwell
UOC3 HPW3 S2

This course will provide an overview of the gross and microscopic structure of those body systems which are important in prosthetics and orthotics. Topics covered in detail include the musculoskeletal system (bones, joints and muscles), the somatic nervous system (brain, spinal cord, peripheral nerves), the autonomic nervous system, endocrine, cardiovascular and respiratory systems and the skin. Some brief consideration will also be given to the gastrointestinal and genitourinary systems and human embryology with particular relevance to limb development. In revision classes, students will be encouraged to consider the normal anatomy routinely encountered by prosthetists and orthotists within the context of clinical situations.

PROR1217
Lower Limb Orthotics 1
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S2

In this course students receive an introduction to the principles of orthotic application, as well as the procedures of orthotic assessment, prescription, casting and measuring of orthoses for the lower limb and foot orthoses. The course includes applied orthotic theory, anatomy, pathology and biomechanics relevant to foot and lower limb orthotic management.

PROR1218
Applied Lower Limb Orthotics 1
School of Medical Sciences
Staff Contact: School Office
UOC6 HPW6 S2

Students gain practice in the fabrication of orthoses for the lower limb orthotic device including AFO's and foot orthoses. Students are required to demonstrate effective communication skills with clients and colleagues. They will further apply safe laboratory skills while being introduced to the manufacturing techniques commonly used in various levels of orthotic management.

PROR1220
Physiology for Prosthetics and Orthotics
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S2

The course will introduce the fundamentals associated with human physiology from cellular function through to the operation and interaction of some key body systems. It will contain some theory behind excitable tissues, in particular the functioning of synaptic and neuromuscular transmission and properties of muscles and the principles behind the control and function of the nervous system (both voluntary and involuntary). The course also deals with the control and functioning of the cardiovascular system and the contributions of the renal, respiratory and endocrine systems in maintaining homeostasis in the human.

PROR2101
Pathology for Prosthetics and Orthotics
School of Medical Sciences
Staff Contact: G Velan
UOC3 HPW3 S1

Pathology is the scientific study of disease. The objective of the online course PROR2101 is to give students a broad overview of pathological processes. Topics will include disease processes that cause changes in the structure and function of cells, tissues and organs: inflammation and repair; atherosclerosis; thrombosis, embolism and infarction; neoplasia. Specific examples of each of these processes will be used to integrate and extend students' understanding of the scientific basis of disease.

PROR2102
Functional Anatomy for Prosthetics and Orthotics
School of Medical Sciences
Staff Contact: D Tracey
UOC3 HPW3 S1

This course builds upon basic structural knowledge provided in gross anatomy to develop an understanding of the functional significance of these structures. The underlying theme is to explore the relationship between structure and function with particular reference to the muscular and skeletal systems and neural integration in the movement setting. Analysis of walking and running will be an important component of the course.

PROR2103
Biomechanics for Prosthetics and Orthotics
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S1

The course provides an introduction to biomechanics with an emphasis on topics in prosthetics and orthotics. Students will study the basic principles of biomechanics and apply these to the analysis of normal and abnormal human movement. The mechanics of the musculoskeletal system will be studied in detail in human gait. The basic biomechanical topics in prosthetics and orthotics will be introduced, covering lower limb and upper limb prosthetics and orthotics, posture and seating and the interface mechanics.

PROR2111
Transtibial and Partial Foot Prosthetics
School of Medical Sciences
Staff Contact: School Office
UOC6 HPW6 S1

Covers knowledge of prosthetic principles, assessment, prescription considerations and design possibilities for transtibial prostheses. Includes applied anatomy, pathology and biomechanics appropriate to the level of prosthetic management. Students will be able to demonstrate at the completion of this course, an understanding of the casting, modifying, fabrication and biomechanic considerations for the correct fitting and cosmetic applications for the prostheses. Levels of amputation covered in this course will include partial foot, ankle disarticulation and transtibial prostheses

PROR2112
Applied Transtibial & Partial Foot Prosthetics
School of Medical Sciences
Staff Contact: School Office
UOC6 HPW6 S1

Covers skills and knowledge in practical aspects of assessment, prescription, design, casting, fabrication, fitting and alignment for transtibial prostheses. The student is expected to communicate effectively with amputee clients and colleagues. Includes applied transtibial and partial foot prostheses and areas of applied anatomy, pathology and biomechanics appropriate to the level of prosthetic management.Students are required to demonstrate an understanding of the applied theory in the application for the manufacture of partial foot, ankle disarticulation and transtibial prosthetic fabrication.

PROR2115
Medical Conditions: Functional Aspects for Prosthetics and Orthotics
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S1

Students will be introduced to the various medical conditions they will find in their patients. Aspects of diseases and aging will be taught. Diseases covered include asthma, diabetes, heart disease and neurological diseases which occur in prosthetic and orthotic patients. Peripheral vascular disease will be explained, as well as infectious diseases, which cause amputation. At the end of this courset you will have an understanding of the diseases your patients have.

PROR2201
Clinical Aspects of Gait Disorders
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S2

Students will have an understanding of common gait disorders that affect patients requiring the services of a rehabilitation team. The course will cover biomechanic, pathology and psychology considerations as well as the neuroscience aspects that can affect human gait/locomotion. Assessment, prescription and a clear understanding of medical implications will be covered in this course as well as terminology and effective communication skills. Introduction to the theory and practice of prosthetic and orthotic patient evaluation. Principles of normal and pathological body postures and function are addressed and particular attention is directed to the assessment of musculoskeletal and neuromuscular disorders affecting the limbs and spine. Practical sessions provide experience in assessment techniques.

PROR2210
Lower Limb Orthotics II
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S2

This course covers advanced level issues in the assessment, prescription, fabrication for foot and lower limb orthoses. Students will be introduced to common complications surrounding the fabrication and fitting of orthotic devices.

PROR2211
Applied Lower Limb Orthotics II
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S2

This course covers practical aspects of lower limb orthotics at an advanced level, including how to deal with common complications with assessments and manufacture.

PROR2212
Trans-Femoral and Hip Disarticulation Prosthetics
School of Medical Sciences
Staff Contact: School Office
UOC6 HPW6 S2

Covers knowledge of prosthetic principles, assessment, prescription considerations and design possibilities for transfemoral and hip disarticulation prostheses. Includes applied anatomy, pathology and biomechanics appropriate to the level of prosthetic management.

PROR2213
Applied Trans-Femoral and Hip Disarticulation Prosthetics
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S2

Covers clinical skills and practical knowledge in assessment, prescription, design, casting, fabrication, fitting and alignment for transfemoral and hip disarticulation prostheses. Students are expected to communicate effectively with amputee clients and colleagues. Students will be introduced to techniques used in the fabrication of these prosthetic devices, applying principles learned from PROR 2212

PROR3111
Orthopedics for Prosthetics and Orthotics
School of Medical Sciences
Staff Contact: School Office
UOC6 HPW6 S1

This course will discuss areas involved in orthopedic surgery including amputations and orthopedic considerations for orthotic devices. Other considerations will follow a medical and rehabilitation's prospective. Biomechanical and pathology areas will be discussed with case studies presented for students to review. Students explore the relationships between musculoskeletal deficiency and prosthetic or orthotic application, with emphasis on prescription rationale. Students are encouraged to develop an understanding of the physical, social and psychological factors that effect prosthetic and orthotic applications. Content is developed with patient focussed treatment as a priority.

PROR3112
Upper Limb Prosthetics
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S1

Provides students with knowledge in the assessment, prescription, casting, fabricating, fitting and aligning of upper limb prostheses. Includes applied anatomy and biomechanics of the upper limb relevant to upper limb prosthetic function.

PROR3113
Applied Upper Limb Prosthetics
School of Medical Sciences
Staff Contact: School Office
UOC6 HPW6 S1

Covers clinical skills and knowledge in practical assessment, prescription, design, casting, fabrication, fitting and alignment for the upper limb prostheses. Student are expected to communicate effectively with amputee clients and colleagues. Includes applied upper limb prosthetic management and application of anatomy, pathology and biomechanics.

PROR3211
Paediatrics for Prosthetics and Orthotics
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S2

Students increase depth of knowledge of prosthetic and orthotic theory for paediatrics, including principles, the treatment process, assessment, prescription considerations and biomechanical basis of paediatric management. Orthotic and prosthetic treatment of a variety of hip, knee, knee-ankle-foot and upper limb pathologies is presented. The subject includes applied hip, knee, knee-ankle-foot and upper limb orthotic and prosthetic management, as well as anatomy, pathology and biomechanics

PROR3212
Applied Paediatrics for Prosthetics and Orthotics
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S2

Covers clinical skills and knowledge in assessment, prescription, design, casting, fabrication, fitting and alignment for paediatric prosthetic and orthotic devices. Student are expected to communicate effectively with amputee clients and colleagues. Includes applied paediatric prosthetic and orthotic management and areas of anatomy, pathology and biomechanics appropriate to the level of paediatric management.

PROR3213
Spinal Orthotics
School of Medical Sciences
Staff Contact: School Office
UOC6 HPW6 S2

Covers knowledge and skill in management of the spine with orthoses. Includes applied anatomy, biomechanics and pathology relevant to the area and details the principles of spinal orthoses, seating and wheelchairs. An emphasis is placed on pathological conditions and their relationship to the assessment and fitting of spinal orthoses.

PROR3214
Clinical Topics for Prosthetics and Orthotics
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S2

Students are assigned to hospitals and prosthetic and orthotic centres for block clinical placements in which they are familiarised with clinical practice in patients with orthotics and prosthetics. The placement provides experiential contact with the clinical environment and introduces students to observational and recording practices. Students may be involved in practical prosthetic and orthotic tasks during these placements. Students work under supervision and are required to demonstrate initiative and ability in clinical activity, patient treatment and laboratory work. There is the opportunity for students to observe the functioning of the centre and management in relation to the prosthetist and orthotist. Students are expected to participate as a team member and provide patient evaluations and relevant prosthetic and orthotic solutions including fitting and objective critiques of their treatment procedures

PROR3216
Principles of Ethical, Professional and Management Standards for P&O
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S2

Students gain knowledge in ethical and professional standards and in organisational and workplace issues to enable them to perform effectively as prosthetists and orthostists in the workplace. It introduces topics such as workplace values, motivation, communication, decision making, conflict resolution, power relationships, leadership, innovation and program development implementation and evaluation. Issues of funding and administrative practices relevant to the Australian context will be presented.

PROR3217
Limb Amputation; Functional Aspects for Prosthetics and Orthotics (Elective)
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S2

Students will be covering topics including diabetes, peripheral vascular disease, cerebral vascular diseases: strokes, other cardiovascular diseases, poliomyelitis, post-folio syndrome, congenital deformatities, infections and other tissue pathology, biomechanics of gait: gait deficiencies.

PROR4111
Practicum 1 Lower Limb Prosthetics
School of Medical Sciences
Staff Contact: School Office
UOC6 HPW6 S1

Students are assigned to hospitals and prosthetic and orthotic centres for block clinical placements in which they are familiarised with clinical practice in prosthetics for the lower limb. The placement provides experiential contact with the clinical environment and introduces students to observational and recording practices. Students may be involved in practical prosthetic and orthotic tasks during these placements.Students work under supervision and are required to demonstrate initiative and ability in clinical activity, patient treatment and laboratory work. There is the opportunity for students to observe the functioning of the centre and management in relation to the prosthetist and orthotist.Students are expected to participate as a team member and provide patient evaluations and relevant prosthetic and orthotic solutions including fitting and objective critiques of their treatment procedures

PROR4112
Practicum 2 Upper Limb Prosthetics
School of Medical Sciences
Staff Contact: School Office
UOC6 HPW6 S1

Students are assigned to hospitals and prosthetic and orthotic centres for block clinical placements in which they are familiarised with clinical practice in prosthetics for the upper limb. The placement provides experiential contact with the clinical environment and introduces students to observational and recording practices. Students may be involved in practical prosthetic and orthotic tasks during these placements.Students work under supervision and are required to demonstrate initiative and ability in clinical activity, patient treatment and laboratory work. There is the opportunity for students to observe the functioning of the centre and management in relation to the prosthetist and orthotist.

PROR4113
Practicum 3 Lower Limb Orthotics
School of Medical Sciences
Staff Contact: School Office
UOC6 HPW6 S1

Students are assigned to hospitals and prosthetic and orthotic centres for block clinical placements in which they are familiarised with clinical practice in orthotics for the lower limb. The placement provides experiential contact with the clinical environment and introduces students to observational and recording practices. Students may be involved in practical orthotic tasks during these placements.Students work under supervision and are required to demonstrate initiative and ability in clinical activity, patient treatment and laboratory work. There is the opportunity for students to observe the functioning of the centre and management in relation to the prosthetist and orthotist.Students are expected to participate as a team member and provide patient evaluations and relevant prosthetic and orthotic solutions including fitting and objective critiques of their treatment procedures

PROR4114
Practicum 4 Upper Limb/Spinal Orthotics
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S1

Students are assigned to hospitals and prosthetic and orthotic centres for block clinical placements in which they are familiarised with clinical practice in orthotics for the spine and upper limb. The placement provides experiential contact with the clinical invironment and introduces students to observational and recording practices. Students may be involved in practical orthotic tasks during these placements.Students work under supervision and are required to demonstrate initiative and ability in clinical activity, patient treatment and laboratory work. There is the opportunity for students to observe the functioning of the centre and management in relation to the prosthetist and orthotist.Students are expected to participate as a team member and provide patient evaluations and relevant prosthetic and orthotic solutions including fitting and objective critiques of their treatment procedures.

PROR4115
Practicum (Elective)
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S2

Involves a project completed by students working independently or in small groups. The topic is chosen by students in consultation with the supervisor and must have some relevance to the profession. The study may comprise the development of a prosthetic or orthotic device or technique, a small research project, or a critical review of literature in an area of interest.

PROR4116
Research Methods (Elective)
School of Medical Sciences
Staff Contact: School Office
UOC3 HPW3 S2

Introduces the basic principles for conducting research in the health sciences and demonstrates how these principles are utilized for advancing health practices. Topics include the scientific method and clinical practice, qualitative and quantitative approaches to design, sampling, data collection and analysis, theories and the formulation of hypothesis and research questions. Particular emphasis is placed on how research is conducted with people who may be ill and disabled, and how social and ethical considerations shape health related research. At the conclusion of the subject, students will be able to critically evaluate fundamental aspects of professionally relevant publications. Detailed course materials are available enabling students to take a flexible self-directed approach to learning.

PROR4117
Advanced Prosthetic and Orthotics (Elective)
School of Medical Sciences
Staff Contact: School Office
UOC6 HPW6 S2

Involves a project completed by students working independently or in small groups. The topic is chosen by students in consultation with the supervisor and must have some relevance to the profession. The study may comprise the development of a prosthetic or orthotic device or technique, a small research project, or a critical review of literature in an area of interest.

PSCY2201
Human Behaviour (Science)
School of Psychiatry
Staff Contact: U Vollmer-Conna
UOC6 HPW3 S1 S2

Aims to provide students with key concepts in the areas of research methods, psychology, sociology, biomedical ethics, and human sexuality; and to explore the relevance and application of these concepts to the practice of medicine. Specific topics include: scientific method; risk behaviours; stress/anxiety; mood and mood disorders; models of illness; the sexual response across the lifespan; ethical themes including research ethics, euthanasia, reproduction ethics, the doctor and the state.Encourages an understanding of human behaviour as the result of complex interactions between multiple factors, and an appreciation and respect of patients and colleagues as individuals. Emphasis is placed on practising an integrative style of problem solving, critical thinking, and on developing skills in clear professional communication. Tutorial exercises encourage teamwork and foster the development of supportive and cooperative working relationships among students. Interviewing skills are practised in the context of taking a sexual history.
Note/s: Restricted to combined degree program 3821.

PSYC1001
Psychology 1A
School of Psychology
Staff Contact: J Cranney
UOC6 HPW5 S1
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
Staff Contact: J Cranney
UOC6 HPW5 S2
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
Staff Contact: G Huon
UOC6 HPW4 S2

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 will focus on the professional and social responsibilities of psychologists.
Note/s: Restricted to program 3432, Bachelor of Psychology.

PSYC1126
Psychology for Prosthetics and Orthotics
School of Psychology
Staff Contact: P Cleary
UOC3 HPW3 S2

This course provides an overview to theoretical and practical applications of psychology to orthotics and prosthetics. Specific attention will be focused on theory and practice of counselling, pain management, depression,anxiety, post-traumatic stress disorder, grief, and adjustment counselling. Web-based teaching will be supplemented by a one-day practical workshop delivered during the residential component of the post traumatic one day course.
Note/s: Restricted to program 3860, Bachelor of Science in Prosthetics and Orthotics.

PSYC2001
Research Methods 2
School of Psychology
Staff Contact: G McNally
UOC6 HPW4 S1
Prerequisite/s: PSYC1001, PSYC1011
Excluded: GENB4004, GENB4005, GENB4007, GENB4008, GENS4004, GENS4005, GENS4007, GENS4008

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/s: PSYC1001 may be taken as a corequisite.

PSYC2061
Social and Developmental Psychology
School of Psychology
Staff Contact: J Forgas
UOC6 HPW4 S1
Prerequisite/s: 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
Staff Contact: M Taft
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: R Westbrook
UOC6 HPW4 S1
Prerequisite/s: 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/s: PSYC1001 may be taken as a corequisite.

PSYC2101
Assessment and Personality
School of Psychology
Staff Contact: S McDonald
UOC6 HPW4 S2
Prerequisite/s: 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.

PSYC2126
Sports Psychology
School of Psychology
Staff Contact: M Rohan
UOC6 HPW4 S2
Prerequisite/s: PSYC1001, PSYC1011

This course focuses on intrapsychic and interpersonal processes relevant to the training and practice of sport. Theories in areas such as self-perception, self-evaluation, attentional control, attribution, social comparison, group cohesiveness, leadership, and conflict management will be described and applied to the sporting context. Physiological consequences of psychological processes, and their implications for preparation and performance will be discussed. Practical classes will include consideration of issues and methods involved in assessment of relevant personality and individual differences.
Note/s: Restricted to program 3850, Bachelor of Science - Health and Sports Science.

PSYC3001
Research Methods 3A
School of Psychology
Staff Contact: M Gleitzman
UOC6 HPW4 S1
Prerequisite/s: 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
Staff Contact: M Gleitzman
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: G McNally
UOC6 HPW4 S2
Prerequisite/s: PSYC2001, PSYC2081

The neural control of behaviour with special emphasis on cerebral localisation of function in humans. Clinical conditions will be considered to the extent they illuminate mechanisms and theory of brain function, and the professional issues raised by different theories will be canvassed.

PSYC3121
Social Psychology
School of Psychology
Staff Contact: J Forgas
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: C Von Hippel
UOC6 HPW4 S1
Prerequisite/s: PSYC2001, PSYC2061

The application of general psychological theories and principles to contemporary management problems. It will aquaint 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
Staff Contact: P Lovibond
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: C Mitchell
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: B Spehar
UOC6 HPW4 S1
Prerequisite/s: 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
Staff Contact: R Richardson
UOC6 HPW4 S1
Prerequisite/s: 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
Staff Contact: G Huon
UOC6 HPW4 S1
Prerequisite/s: PSYC2061, 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
Staff Contact: R Kemp
UOC6 HPW4 S1
Prerequisite/s: PSYC2001, PSYC2061

An examination of various aspects of the judicial process from a psychological perspective in terms of their impact upon the trial, participants and society. The focus will be upon contributions of social psychology, although other areas of experimental psychology will be drawn from as well. Topics will include eyewitness memory, judge's instructions, lie-detection, trial tactics, reactions to insanity defenses and jury decision making.

PSYC3311
The Psychology of Language
School of Psychology
Staff Contact: M Taft
UOC6 HPW4 S2
Prerequisite/s: 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 developent will also be considered.

PSYC3331
Health Psychology
School of Psychology
Staff Contact: G Huon
UOC6 HPW4 S1
Prerequisite/s: 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
Staff Contact: K Salmon
UOC6 HPW4 S2
Prerequisite/s: 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
Staff Contact: M Rohan
UOC3 HPW2 S1
Corequisite/s: 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/s: Restricted to program 3950 Bachelor of Optometry.

PSYC3526
Workplace Psychology
School of Psychology
Staff Contact: J Bright
UOC3 HPW2 S2
Excluded: GENB4005, GENS9005

An examination of the aims, methods and ethics of industrial and organisational psychology. Topics will include personnel selection, training, job analysis and design, and the relation between job satisfaction and job performance.
Note/s: Restricted to students enrolled in Bachelor of Science (Safety Science major).

PSYC4053
Psychology 4A
School of Psychology
Staff Contact: R Richardson
Enrolment requires School approval
UOC24 S1 S2

A supervised research thesis and coursework to be determined in consultation with the Head of School.

PSYC4063
Psychology 4B
School of Psychology
Staff Contact: R Richardson
UOC24 S1 S2
Prerequisite/s: PSYC4053

A continuation of PSYC4053.

PSYM2101
Human Behaviour
School of Psychiatry
Staff Contact: U Vollmer-Conna
UOC3 HPW3 S1 S2
Prerequisite/s: MFAC1001

Aims to provide students with key concepts in the areas of research methods, psychology, sociology, biomedical ethics, and human sexuality; and to explore the relevance and application of these concepts to the practice of medicine. Specific topics include: scientific method; risk behaviours; stress/anxiety; mood and mood disorders; models of illness; the sexual response across the lifespan; ethical themes including research ethics, euthanasia, reproduction ethics, the doctor and the state.Encourages an understanding of human behaviour as the result of complex interactions between multiple factors, and an appreciation and respect of patients and colleagues as individuals. Emphasis is placed on practising an integrative style of problem solving, critical thinking, and on developing skills in clear professional communication. Tutorial exercises encourage teamwork and foster the development of supportive and cooperative working relationships among students. Interviewing skills are practised in the context of taking a sexual history.

PSYM5001
Psychiatry
School of Psychiatry
Staff Contact: P Mitchell
UOC12 S1 S2
Prerequisite/s: 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
Staff Contact: H Salisch
UOC3 HPW3 S1

UNIT 1: Worldwide distribution of oil and gas reserves. Data sampling and interpretation. Measurement scaling. Core, log and test data. UNIT 2: Rock/fluid systems. Coring and core analysis. Well logging and log interpretation. Well testing and test analysis. UNIT 3: Drilling of oil and gas wells. Drilling fluids. Well completions. 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
Staff Contact: H Salisch
UOC6 HPW3 S2

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
Staff Contact: H Salisch
UOC6 HPW6 S2

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.

PTRL1101
Reservoir Rock Properties and Fluid Flow
School of Petroleum Engineering
Staff Contact: H Salisch
UOC3 HPW3

Porosity, permeability, saturation. Steady-state flow of compressible and incompressible fluids. Basic reservoir engineering concepts. Static pressure distribution. Capillary pressure and relative permeability. Static distribution of fluids and capillary-gravity equilibrium.

PTRL2010
Business Communications & Practices for Engineers
School of Petroleum Engineering
Staff Contact: W Allinson
UOC6 HPW6 S1

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
Staff Contact: H Salisch
UOC3 HPW3 S2
Prerequisite/s: PTRL1016

Hydrostatic pressure and geothermal gradients. Porosity-permeability relationships and rock microstructure. Diffusivity equation. Steady-state, pseudo-steady-state and transient flow. Radial flow and well models. Skin, partial penetration and well productivity index. Horizontal wells. Gas flow and Klinkenberg effect.

PTRL2015
Well Drilling Equipment & Operations
School of Petroleum Engineering
Staff Contact: S Rahman
UOC3 HPW3 S1

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
Staff Contact: H Salisch
UOC3 HPW3 S2
Prerequisite/s: PTRL1010, PTRL1016

The study of petroleum reservoirs. Fundamentals of petrophysics. 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 resisitivities. Shallow and deep resistivity measuring devices. Practical work with well log and core analysis and well pressure data.

PTRL3008
Reservoir Engineering A
School of Petroleum Engineering
Staff Contact: V Pinczewski
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: V Pinczewski
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: H Salisch
UOC3 HPW3 S2
Prerequisite/s: PTRL2016, PTRL3009
Corequisite/s: PTRL3023

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 geostatitsics. 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
Staff Contact: H Salisch
UOC3 HPW3 S1
Prerequisite/s: 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
Staff Contact: H Salisch
UOC6 HPW3 S1
Prerequisite/s: CEIC2110

The design project covers all aspects of the design of processing facilities for a potentially viable oil/gas field from conceptual design and environmental impact statement preparation through to a detailed design of processing facilities. Major emphasis is placed on the preparation of piping and instrumentation diagrams. Other topics include control schemes, a HAZOP analysis, equipment layout, main power and material requirements, and project schedule and economics.

PTRL3023
Formation Evaluation
School of Petroleum Engineering
Staff Contact: H Salisch
UOC6 HPW6 S2
Prerequisite/s: PTRL2014, PTRL2012, PTRL3008

Unit A-Well Log Analysis: Porosity measurements from well logs. Sonic, Formation Density and Neutron logs. Lithology plots. Saturation, irreducible saturation and permeability studies from well logs. Shaly sand analysis. Complex- reservoir analysis. Dipmeter logs. Wireline Formation Testing. Integration of, core, log ,well test and seismic data evaluation. Cementing quality monitoring. Cased hole well logs. Practical work with logs from an Australian oil/gas field. 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 pseudopressure 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
Staff Contact: S Rahman
UOC6 HPW6 S2
Prerequisite/s: PTRL2015

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 objective 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
Staff Contact: W Allinson
UOC6 HPW6 S1

Unit A-Petroleum Project Evaluation: 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). Unit B: 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). 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).

PTRL4001
Integrated Oil/Gas Field Evaluation
School of Petroleum Engineering
Staff Contact: W Allinson
UOC9 HPW6 S2
Prerequisite/s: All Stage 3 Petroleum Engineering Courses.

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 an d 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
Staff Contact: V Pinczewski
UOC3 HPW3 S2
Prerequisite/s: 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
Staff Contact: H Salisch
UOC3 HPW3 S1
Prerequisite/s: CEIC2110, CEIC2120, CEIC2130

Rock and fluid properties. Gas-in-place by volumetric and material balance methods. Ultimate recovery and future performance predictions. Dry gas, wet gas and retrograde condensate reservoirs. Hydorcarbon phase behaviour. Fluid sampling and laboratory tests. Abnormally high-pressured reservoir analysis. Waterdrive reservoir recovery and rate sensitivity. Water coning, critical rates and time calculations. Gas flow through porous media. Delivery tests. Pressue transient test analysis. Applicability of the real gas potential and oil flow equations in addition to classical gas well methods. Gas storage. Pressure maintenance. Recovery optimisation. Maximum efficient rate. Tight gas reservoirs. Naturally fractured reservoirs. Horizontal wells.

PTRL4017
Well Technology
School of Petroleum Engineering
Staff Contact: S Rahman
UOC6 HPW6 S1
Prerequisite/s: 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 bottom hole 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.

RUSS1111
Introductory Russian 1
Department of German and Russian Studies
Staff Contact: L Stern
UOC6 HPW6 S1
Excluded: GENT0434

Intended for complete beginners, this course provides a basic introductory knowledge of spoken and written Russian. Assessment: weekly assignments, tests.
Note/s: Excluded native speakers of Russian and students qualified to enter RUSS1113 or RUSS1114.

RUSS1112
Introductory Russian 2
Department of German and Russian Studies
Staff Contact: L Stern
UOC6 HPW6 S2
Prerequisite/s: RUSS1111

A continuation of RUSS1111. Assessment: weekly assignments and tests.
Note/s: Excluded native speakers and students qualified to enter RUSS1113 or RUSS1114.

RUSS2102
The Great Terror
Department of German and Russian Studies
Staff Contact: M Ulman
UOC6 HPW3 S2
Prerequisite/s: 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/s: No knowledge of the Russian language required.

RUSS2111
Intermediate Russian 1
Department of German and Russian Studies
Staff Contact: L Stern
UOC6 HPW4 S1
Prerequisite/s: 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
Department of German and Russian Studies
Staff Contact: L Stern
UOC6 HPW4 S2
Prerequisite/s: RUSS2111.

A continuation of RUSS2111. Assessment: weekly assignments, tests.

RUSS3101
Russian Option 1
Department of German and Russian Studies
Staff Contact: M Ulman
UOC3 HPW1.5 S1 S2
Prerequisite/s: One of the following: RUSS2112 or RUSS1114 or RUSS1115 or RUSS2000 or RUSS2001 or RUSS1001 or RUSS1101.

Selected authors of Russian literature.
Note/s: Refer to Department for available options.

RUSS3102
Russian Option 2
Department of German and Russian Studies
Staff Contact: M Ulman
UOC3 HPW1.5 S1 S2
Prerequisite/s: One of the following: RUSS2112 or RUSS1114 or RUSS1115 or RUSS2000 or RUSS2001 or RUSS1001 or RUSS1101.

Selected authors of Russian literature.
Note/s: Refer to Department for available options.

RUSS3103
Russian Option 3
Department of German and Russian Studies
Staff Contact: M Ulman
UOC3 HPW1.5 S1 S2
Prerequisite/s: One of the following: RUSS2112 or RUSS1114 or RUSS1115 or RUSS2000 or RUSS2001 or RUSS1001 or RUSS1101.

Selected authors of Russian literature.
Note/s: Refer to Department for available options.

RUSS3104
Russian Option 4
Department of German and Russian Studies
Staff Contact: M Ulman
UOC3 HPW1.5 S1 S2
Prerequisite/s: One of the following: RUSS2112 or RUSS1114 or RUSS1115 or RUSS2000 or RUSS2001 or RUSS1001 or RUSS1101.

Selected authors of Russian Literature.
Note/s: Refer to Department for available options.

RUSS3111
Advanced Russian 1
Department of German and Russian Studies
Staff Contact: L Stern
UOC6 HPW4 S1
Prerequisite/s: 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
Department of German and Russian Studies
Staff Contact: L Stern
UOC6 HPW4 S2
Prerequisite/s: RUSS3111.

A continuation of RUSS3111. Assessment: weekly assignments, tests.

RUSS4000
Russian Honours (Research) F/T
Department of German and Russian Studies
Staff Contact: L Stern
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 54 units of credit in RUSS courses at 65%.

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) P/T
Department of German and Russian Studies
Staff Contact: L Stern
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 54 units of credit in RUSS courses at 65%.

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) F/T
Department of German and Russian Studies
Staff Contact: L Stern
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 48 units of credit in RUSS courses at 65%.

Advanced language (2 hours) or equivalent or 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) P/T
Department of German and Russian Studies
Staff Contact: L Stern
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 48 units of credit in RUSS courses at 65%.

Advanced language (2 hours) or equivalent or one option and a 15,000-20,000 word thesis on a topic to be approved by the Heads of the participating Schools/Departments.

SAED1401
Human Growth and Development
School of Art Education
Staff Contact: School Office
UOC4 HPW3 S1 S2

This course fosters the prospective teacher's understanding of secondary school students through awareness of developmental theories, processes, determinants, variations and patterns. Fieldwork provides students with opportunities to exercise observation skills, reflect and relate current theoretical constructions to classroom practices. Studies of the biological, personality, social, cognitive and moral development of adolescents include theorists such as Erikson, Piaget, Kohlberg and Bandura.

SAED1402
Teacher Development 1
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S1 S2

This course, the first in a series of three teacher development courses, introduces students to the classroom and teaching practice, and the importance of preparation, planning and evaluation. Content includes: perceptions of teaching; classroom communication; developing instructional skills; an introduction to classroom management and professional ethics; eight days fieldwork orienting students to the teaching profession and daily routines of schools. The experience is focussed on students becoming familiar with teaching, school procedures and protocols and developing their confidence as preservice teachers through a short primary school placement.

SAED1403
Foundations of Art Education
School of Art Education
Staff Contact: School Office
UOC4 HPW2 S1

This course introduces the field of art and design education using a series of key theorists, workshops and an interview with an art and 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 preservice teaching is explored through introduction to scholarly practices of writing, information literarcy and database skills.

SAED1404
Visual Arts Workshop
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S1 S2

This course investigates some of the frameworks and methods of identifying and representing art making content for tutorial purposes appropriate to art and design education. Artistic performances and the practices of artists and designers are studied as one primary resource for the art student and teacher, along with sites that can be utilised, such as exhibitions, catalogues, print and electronic media, for generating content. Current curriculum requirements for representing visual arts and design content processes are considered.

SAED2401
Educational Psychology
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: SAED 1401

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.

SAED2402
Teacher Development 2
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: SAED1402

Teacher Development 2 is focussed on questioning, firstly as instructional and explanatory teaching skills, and then further developed utilising four distinct conceptualisations of knowledge and models of teaching as expressed by types of questioning. The emphasis in this course is on improving teaching performance by more effectively developing classroom communication, language and questioning strategies.

SAED2405
Special Education
School of Art Education
Staff Contact: School Office
UOC4 HPW2 S1 S2
Prerequisite/s: SAED 1401

Special Education extends and develops the preservice teachers experiences, attitudes and understandings of students with special and/or high support needs in the secondary school. 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 students 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
Staff Contact: School Office
UOC6 HPW3 S1 S2

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.

SAED2475
Multicultural Contexts
School of Art Education
Staff Contact: School Office
UOC4 HPW2 S2 X1

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.

SAED2479
Dialogues and Communities
School of Art Education
Staff Contact: School Office
UOC4 HPW2

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
Staff Contact: School Office
UOC4 HPW2

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
Staff Contact: School Office
UOC4 HPW2 S1

This course utilitises 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 2
School of Art Education
Staff Contact: School Office
UOC3 HPW3 S1 S2

Ten days professional experience in a metropolitan, regional or country secondary school or other approved setting provides students with the opportunity to extend their understanding of the function and organisation of schools and teaching practice to secondary contexts. Working with a cooperating teacher in a negotiated program of classroom, department and whole school activities and responsibilities, students with increased confidence, plan, prepare and implement classes for years 7-10 visual arts and design.

SAED3402
Teacher Development 3
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: SAED2402

Students develop skills and apply methods of clinical supervision to understand and improve their teaching knowledge and practice with a particular focus on classroom management. Classroom management aspires to developing strategies for consistency and preventing problems rather than defaulting to reaction and erratic or inconsistent responses to student and group behaviour. Classroom management, properly handled, minimises disciplinary action and contributes to a positive learning environment. Finally, Kounin's research showing how teacher behaviour can be investigated and described is examined and applied.

SAED3403
Issues in Contemporary Design Education
School of Art Education
Staff Contact: School Office
UOC6 HPW3

Issues in Contemporary Design Education comprises an analysis and intepretation 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
Theories and Practices of Art History in Education
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S1 S2

This course aims to present students with a range of theories of art history and develop student ability to explore and apply art historical methodologies to the educational conditions of setting, student and curriculum. Students will consider the educational significance of concepts of the historical event, the interpretation of art works in cultural and historical contexts, and the formation of spatiotemporal frames of reference among art works.

SAED3407
Curriculum Studies in Art Education
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S1 S2

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 3
School of Art Education
Staff Contact: School Office
UOC3 S1 S2

Professional Experience 3 involves further in-school professional experience. Students work in another secondary school that provides new and different educational cultures and practices. A wider understanding of the profession as entailing administration, collegial and community consultation, along with visual arts and design expertise and the completion of projects is required.

SAED4051
Practices of Research in Art, Design and Education
School of Art Education
Staff Contact: School Office
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.

SAED4053
Curriculum in Art, Design and Education
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S2

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 archeology 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
Staff Contact: School Office
UOC8 HPW10 S1 S2

This course enables students to prepare and complete an Art Education research project in a chosen area of specialisation. Content includes a review of major research paradigms including: historical, descriptive, experimental and philosophical methodologies. Students will complete a research project submitting a report which identifies an issue or problem of art educational significance and demonstrates understanding and appropriate application of selected methodologies to the investigation of the chosen problem, and is presented in the form of a publishable paper of 5500-7500 words in length.

SAED4403
Theory of Aesthetics in Art Education
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: SAED 3404

This course aims to provide students with opportunities to examine aesthetics and art theory as these relate to the teaching of art, to increase their critical awareness, to become more aware of their own philosophy of art education and the implications of this for their teaching. Through a combination of lectures and seminars the subject will include the ideas and aims of aesthetic education.

SAED4406
Philosophical Issues in Education
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S1 S2

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.

SAED4474
Dilemmas of Praxis: The State, the School and the Educator
School of Art Education
Staff Contact: School Office
UOC4 HPW2 S2
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, Gidden's Structuration; Haberma's communicative action; and Foucault's notion of discourse and difference.

SAED4491
Professional Experience Internship
School of Art Education
Staff Contact: School Office
UOC24 HPW3 S1 S2

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.

SAHT1101
Mapping the Modern
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW4 S1

Examines the production of art, art theory and art's meanings within changing social, political and cultural contexts. Commencing with the nineteenth-century and concluding with the outbreak of World War II, Mapping the Modern looks at different modes of visual representation ranging from Realism, Symbolism and Expressionism to early twentieth-century avant-gardes such as Futurism, Dada and Surrealism. These are considered against the backdrop of industrialisation, technological transformations, colonisation and international conflicts.

SAHT1102
Mapping the Postmodern
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW4 S2

Commencing with the art of totalitarian regimes, and tracing the transformations in art practice and theory from the 1940s to the present, Mapping the Postmodern examines major forms of cultural production in relation to changing social, political and economic patterns. 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, international exhibitions and the new technologies.

SAHT1211
Theories of the Image
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S1

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
Staff Contact: School Office
UOC6 HPW3 S2

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 Wolfflin, Panofsky, Gombrich, Baxandall, Fry, Antal, Clark, and Pollock.

SAHT1214
Methods of Research and Writing on Art
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S2

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.

SAHT1221
Contexts for Art
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S1

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
Staff Contact: School Office
UOC6 HPW3 S2

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 - Early Modern Period to Postmodernism
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2 S1

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 stand-point. 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.

SAHT1627
Aboriginal Art
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2

This course will provide an historical overview of the variety of Aboriginal Art Forms that were practiced prior to European invasion; traditionally-based art forms that are still practised in the more remote parts of Australia and the innovative art forms that have developed in contemporary Aboriginal Australia. It will examine the ethnocentricity of European thinking that can inhibit appreciation of Aboriginal art and will address the problem of appropriation of Aboriginal imagery.

SAHT2103
Aesthetics for Contemporary Practice
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW2 S2

This course will critically examine aspects of art history and theory which can be seen as relevant to contemporary visual arts. Art History and Theory 3 will enable students to gain a critical understanding of the historical discourses and art practices which structure the understanding of the practice of art.

SAHT2211
Grand Narratives of Western Art
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S2

To tell progressive stories of art, grand narratives have been formed in Western histories of art which have entailed ordering a selection of historical material into Eurocentric and ethnocentric evolutions. This course is constructed to cut across wide historical fields and their periodisations to critically examine how these grand narratives have been formed in western art and its histories. It sets out to focus upon the nature of historical material constituted as evidence for such grand narratives as classicism from Ancient Greece to Nazi Germany, mimesis in terms of illusionism involving the Renaissance control of space and direction of the gaze. It will also explore the geopolitical nature of representing the environment through such genres as landscape and cityscape, formations of gender, sexuality and the body through images of the nude, and notions of race as insinuated through such stylistic classifications as orientalism and primitivism, and their connections with Western connotations of exoticism as eroticism.

SAHT2212
Art and Cultural Difference
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S2

The conceptualisation of difference, diversity and multiplicity, both within and across cultural boundaries, has occupied a central position in the historical trajectory of Art, paricularly 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
Staff Contact: School Office
UOC4 HPW2

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
Staff Contact: School Office
UOC6 HPW3 S1

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.

SAHT2221
Writing for Art and Design
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S1

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 journalese, 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.

SAHT2301
Design History, Theory and Aesthetics 2 - Design and Consumption
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2 S1
Prerequisite/s: 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
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2 S1

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
Staff Contact: School Office
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 Neoclassism 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 British Painting in Focus
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2 S1

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 manifested in reviews and cartoons. Questions to do with gender, class, sexuality, labour and leisure are examined in relation to Courbet, Manet, Morisot, Degas, Holman Hunt and Ford Madox Brown, among others, as well as lesser known figures such as Augustus Egg and Francois Salle.

SAHT2612
'Art and its Others': tendencies in international contemporary art
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2 S1

This course addresses the way in which contemporary art has and continues to engage and/or appropiate disciplines which are ordinarily treated as distinct from fine art. These 'others' include fashion, design, architecture, advertising, environment, etc.. The course critically examines the inter-linkages and interdependencies between the fine arts and these others, allowing a broader and more inclusive account of contemporary art practices.

SAHT2633
Peripheral Visions: Perspectives of Colonial and Post-Colonial Art
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2 S2

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
Introduction to Modern Aesthetics
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2

This course will introduce students to aesthetics as a separate branch of Philosophy, from Baumgarten to Worringer. The most fundamental ideas of such key thinkers in art as Burke, Kant, Hegel, Schopenhauer, Nietzsche will be discussed in class and examined in both historical context and the contemporary.

SAHT2642
Theories of Subjectivity and the Body
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2 S2

This course will explore the ways in which our culture produces us as social subjects and as sexual identities. It will investigate the social construction of norms, taboos and perversions, covering such issues as sadism, masochism, incest and pornography. Particular attention will be paid to the role of visual culture in both the maintenance and subversion of norms. We will draw upon the work of a variety of theorists (Michel Foucault, Jacques Lacan, Sigmund Freud, Giles Deleuze, Kaja Silverman, the Marquis de Sade, Judith Butler, Eve Kosofsky Sedgwick and contemporary Queer theorists), in addition to discussing various artist and film makers.

SAHT2643
Pornography, Art and Politics
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2

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.

SAHT2647
The Artist and the Writer
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2

The aim of the first unit of this two-session course is to enable students to understand and appreciate some of the writings on art by poets, novelists or essayists which have been particularly influential in the shaping of artistic tastes and values. Reading the works of 18th and 19th century literary figures such as Diderot, Hazlitt, Goethe, Baudelaire, Ruskin, Wilde et al. students will be expected to develop an understanding of the interdependence of art and literature, as well as its implication for both artists and writers. To illustrate the point, the literary production of visual artists such as Delacroix or Courbet will also come under close scrutiny.
Note: Not available to BArtTh students.

SAHT2648
Writing on Art
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2

Following on from COFA2254, the second unit of this two-session subject will be concerned with the works of seminal 20th century writers who, from a nonphilosophical (systematic) perspective, have contributed to the definition of contemporary art and its understanding. With the works of poets (Rilke, Wallace Stephens or Paul Celan), novelists (Hermann Bloch, Kafka, Proust, Breton), essayists (Valery, Benjamin, Steiner), or artists (Cezanne, Braque or Klee), students will be given a wide range of writings on art to explore.
Note: Not available to BArtTh students.

SAHT2649
Creative Writing for Artists
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2

Many visual artists develop and maintain a writing practice that informs, supplements and enriches their art, and/or that complements work presented in exhibitions and artists books. In this course, students read the writing of artists and develop their own writing directions and skills. Particular attention is paid to the forms of creative writing that many artists appear to find valuable, including short stories, poetry and autobiography.

SAHT2653
Dance - Party Culture
School of Art History and Theory
Staff Contact: P McNeil
UOC4 HPW2 S2

This course examines the relationship between design and dance-party culture with reference to fashion, graphics, music, film and architecture. Topics examined include geographies of youth culture, the carnivalesque, clubbing and consumption, new masculinities, sexuality, cyber-feminism, spatiality and sensation, techno music and computer-generated graphics, psychadelic design and drug culture. Theoretical frameworks are drawn from sub-culture theory, critical theory, cultural studies and sociology. Writers include Adorno, Bahktin, Bachelard, de Certeau, Deleuze and Guattari, and Levi-Strauss.

SAHT2661
Experimental Film and Video since the 1960s
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2 S1

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 on this situation.

SAHT2663
A History of Avant-Garde Cinema
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2

This screenings course will survey early avant-garde cinemas. This will include German Expressionism, Russian Constructivism, Dada, Surrealist, and Cubist Cinema.

SAHT2668
Photography: Historical Perspectives
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2

This course will examine photography historically taking into account the diversity and ubiquity of the medium and the problems that this raises for linear chronological accounts. Areas to be covered in the medium's one hundred and fifty year history include changing technologies, genres, uses, aesthetic debates and the intersection of photography with larger historical forces. Specific topics include documentary and social reform, war photography, advertising, photojournalism and the rise of the illustrated press, the emergence of fine art photography, recurrent aesthetic themes and oppositional practices.

SAHT2672
History of Jewellery
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2

This course has been designed to introduce students to the history of jewellery with particular reference to its evolution in the Western World. The course will encompass the period from the Bronze Age to contemporary times.

SAHT2674
A History of Drawing
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2 S1

This course is designed to provide students with an understanding of a wide historical range of drawings, and to examine the relationship of drawing to other art forms as well as its development as an art form with its own integrity. Drawings from the Neolithic and Greek periods, from Carolingian and Medieval times through to the Renaissance, Baroque and Modern times will be examined, within the cultural contexts.

SAHT2676
Art, Technology and New Media
School of Art History and Theory
Staff Contact: A Munster
UOC4 HPW2 S2

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
Staff Contact: School Office
UOC4 HPW2 S2

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 experiements with time in online spaces.

SAHT2678
Vision, Sensation and Desire
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2 S2

Vision here is closely associated with the sense of touch and is formed by a complex interaction between inside and outside the body. This course will focus upon two key accounts of vision, and their implications for the analysis and production of visual culture. The first, the approach of theorists like Merleau-Ponty, links vision to the formation of the sensing body. The second, the psychoanalytic account of vision, links vision to identification, desire and fantasy. What is highlighted in this account is misperception and the strange imbrication of vision and desire. The course will consider how these accounts differ, what they reveal about the nature of vision, and their limitations. In particular, the question of affective engagement with images is not well addressed by either account. The possible links between vision, affect, feeling and sensation will be explored. This course will examine instances where vision is linked to affect, for example: visual pleasure, the fascination of the spectacle, the uncanny, disgust and the abject, and visual overload. The work of Deleuze on sensation and affect will also be considered.

SAHT3105
Art since 1990
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW2 S1

Explores the many interrelationships between artistic practices, whether drawing, painting, printmedia, photomedia, sculpture, or time-based art, and critical and theoretical issues that arise out of these practices and have been used to frame and comprehend them. Many modern and postmodern artists chose to carry a toolbox of history and of philosophical assumptions into the studio with them. The overall aim is to enable students to gain a critical understanding of both the historical and contemporary discourses which have framed our understanding of the role and meaning of art.

SAHT3211
Art After Postmodernism
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S1

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
Staff Contact: School Office
UOC6 HPW3 S2

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 aestheticization 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
Staff Contact: School Office
UOC6 HPW3 S2

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.

SAHT3221
Contexts, Professions and Practices
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S1

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.

SAHT3222
Industry Placement
School of Art History and Theory
Staff Contact: School Office
UOC6

Designed to give students hands-on experience in a particular area of professional practice. In consultation with the subject co-ordinator, students are placed into an institutional framework for a specified period of time. This could be a commercial gallery, museum, artist run initiative, artist's studio or arts funding body. The student shall carry out one project while at the institution, and prepare a report at the end of the session on the placement.

SAHT3301
Design History, Theory and Aesthetics 3 - Theoretical Frameworks for Design
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2 S1
Prerequisite/s: 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
Staff Contact: School Office
UOC4 HPW2 S1

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
Staff Contact: School Office
UOC4 HPW2 S1

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.

SAHT3634
Peripheral Visions 2:Perspectives of Colonial and 'Peripheral' Art Practiced in Asia, India, SE Asia
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2

This course will investigate the effects of the spread of Euro-American 'modernism' through the Asian, Indian and South East Asian region during the Twentieth 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 and local visual practices. 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 non-European context.

SAHT3669
Critical Theories of Photography
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2 S2

This course will examine the major ways in which the photographic image and the social practices of photography have been theorised. Semiotic and post-structural approaches to reading photographs will be given particular attention. Other areas to be covered include aesthetic theories of photography, theories about the nature of photography, context and meaning, photography and truth, documentary realism and critiques of realism.

SAHT3690
Special Project
School of Art History and Theory
Staff Contact: School Office
UOC4

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
School of Art History and Theory
Staff Contact: School Office
Enrolment requires School approval
UOC18 S1 S2

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 Coordinator in February about their topics and arrange supervision with a member of staff no later than mid-March, when work on the thesis should commence.

SAHT4301
Design History, Theory and Aesthetics 4
School of Art History and Theory
Staff Contact: School Office
UOC4 HPW2 S1 S2
Prerequisite/s: SAHT3301 or COFA5337

This course addresses issues faced by the student designer moving into the professional design environment. These include: market trends, design ethics, semiotics, product semantics, design economics and socio-environmental politics. These investigations will build on skills, knowledge and understanding gained by students from their previous studio and theoretical courses.

SART1301
Introductory Studies: Drawing, Painting, Printmaking
School of Art
Staff Contact: School Office
UOC8 HPW6 S1

This course will introduce students to the basic relationships between drawing, painting and printmaking. Through a series of projects, emphasis is upon 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.

SART1302
Introductory Studies: Photomedia, Sculpture, Time-Based Art
School of Art
Staff Contact: School Office
UOC8 HPW6 S1

This studio based course introduces the student to the broad experience of working with photomedia focusing on image, object; sculpture focusing on installation, object, performance; time-based art focusing on sound, video, performance. Emphasis is upon 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.

SART1311
Drawing/Painting 1
School of Art
Staff Contact: School Office
UOC8 HPW6 S2
Prerequisite/s: SART1301, SART1402

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 techniques. The importance of analytical observation will be emphasised. Students will be expected to attain a basic competence in drawing and painting by the end of the session.

SART1313
Printmaking 1
School of Art
Staff Contact: School Office
UOC8 HPW6 S2
Prerequisite/s: SART1301, SART1402

This course will introduce students to basic concepts and skills in printmaking, developing a firm skills 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 and techniques in both two and three dimensions. 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. The importance of analytical observation will be emphasied. 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 prints will be covered.

SART1314
Sculpture, Performance and Installation 1
School of Art
Staff Contact: School Office
UOC8 HPW6 S2
Prerequisite/s: SART1302, SART1402

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 marriage of concept to process, intention to outcomes. Critical awareness and interpretive skills are developed along with an understanding of basic sculptural languages such as metaphor, narrative, metonymy, spatiality, materiality, form, mass, scale. The interdisciplinary nature of contemporary sculptural practice is explored through a diversity of experiences such as producing works using time, light, installation, body works, clay, 3D digital visualisation, sound, collaboration and performance, as well as exploratory applications of traditional forms and methodologies.

SART1319
Drawing
School of Art
Staff Contact: School Office
UOC4 HPW3 S2

This course will provide a foundation of drawing skills and introduce students to a basic drawing vocabulary. A range of approaches will be taken and diverse media will be explored. Through the investigation of drawing process, students will be encouraged to develop an expression appropriate to, and integrated with, their major area of art practice.

SART1333
Drawing: Object, Life and Landscape
School of Art
Staff Contact: School Office
UOC4 HPW3 S1 S2

This course will introduce students to the techniques for visually representing objects, figures and landscapes as well as using abstract concepts. The use of sketching will be encouraged to "visually think" and communication, using a variety of methods, techniques, tools and materials, and strategies. Students will examine the human form, landscape and objects in terms of structure, proportion, movement, surface qualities and associated ideas.

SART1361
Etching Elective 1
School of Art
Staff Contact: School Office
UOC4 HPW3 S2

These courses aim to introduce the student to a wide range of experiences in the process of intaglio printing, including etching, drypoint and engraving. Students will be encouraged to cultivate an awareness of the creative possibilities of intaglio printing and to relate their concepts to the characteristics of the medium through a combination of theoretical and practical studies.

SART1401
Foundation Studies 1 (B Art Ed)
School of Art
Staff Contact: School Office
UOC8 HPW6 S1

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 art work. Through sustained inquiry students will have the opportunity to be critical, inventive and experimental in their approach. An emphasis is placed on the students own developing practice.

SART1402
Foundation Studies 2 (B Art Ed)
School of Art
Staff Contact: School Office
UOC8 HPW6 S2

This course builds on skills and understandings established in Foundation Studies 1 through engaging students in a series of structured projects to encourage individual exploration and expression. These studies will expand the range of critical and practical skills through which the student may develop their own personal visual language and ideas.

SART1501
Painting Elective 1
School of Art
Staff Contact: School Office
UOC4 HPW3 S1 S2

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 Elective 1
School of Art
Staff Contact: School Office
UOC4 HPW3 S1 S2

The aim of these courses is to 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 Elective 1
School of Art
Staff Contact: School Office
UOC4 HPW3 S2

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 the aesthetic qualities of the original print. The course will engage elements including 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 Elective 1
School of Art
Staff Contact: School Office
UOC4 HPW3 S1

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 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.

SART1601
Sculpture Elective 1
School of Art
Staff Contact: School Office
UOC4 HPW3 S1 S2

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 development of original works.

SART1606
Drawing for Media
School of Art
Staff Contact: School Office
UOC4 HPW3 S1

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 Elective 1
School of Art
Staff Contact: School Office
UOC4 HPW3 S1 S2

This course provides the opportunity to explore the various forms and disciplines three-dimentional activity can take in contemporary art practice. This course is designed to allow maximum 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, experiencial learning and conceptual development. This discussion is centered around a rigorous studio theory program, conducted on the studio floor and in tutorials.

SART2320
Drawing/Painting 2
School of Art
Staff Contact: School Office
UOC8 HPW8 S1
Prerequisite/s: SART1311 or SART1402

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 2
School of Art
Staff Contact: School Office
UOC8 HPW8 S1
Prerequisite/s: SART1313 or SART1402

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 on printmaking disciplines. 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. Workshop procedures will be covered.

SART2323
Sculpture, Performance and Installation 2
School of Art
Staff Contact: School Office
UOC8 HPW8 S1
Prerequisite/s: 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, body works, or traditional mediums such as bronze casting. The emphasis at this stage is on an open-ended, exploratory investigation of sculptural language, the stimulation of the imagination, 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 3
School of Art
Staff Contact: School Office
UOC8 HPW8 S2
Prerequisite/s: SART2320

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 3
School of Art
Staff Contact: School Office
UOC8 HPW8 S2
Prerequisite/s: SART2322

Students will continue to investigate and imaginatively interpret the significant concepts and conventions of the disciplines within 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 printworks will be covered.

SART2333
Sculpture, Performance and Installation 3
School of Art
Staff Contact: School Office
UOC8 HPW8 S2
Prerequisite/s: 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 divergent or interdisciplinary works such as spatial, temporal, ephemeral or performative installations, or develop particular sculptural forms related to object making, works related to the body, or traditional mediums such as bronze casting. The emphasis at this stage is 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.

SART2361
Etching Elective 2
School of Art
Staff Contact: School Office
UOC4 HPW3 S2

This course aims to introduce the student to a wide range of experiences in the process of intaglio printing, including etching, drypoint and engraving. Students will be encouraged to cultivate an awareness of the creative possibilities of intaglio printing and to relate their concepts to the characteristics of the medium through a combination of theoretical and practical studies.

SART2501
Painting Elective 2
School of Art
Staff Contact: School Office
UOC4 HPW3 S1 S2

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.

SART2502
Drawing Elective 2
School of Art
Staff Contact: School Office
UOC4 HPW3 S1 S2

The aim of this course is to 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.

SART2581
Screen Printing Elective 2
School of Art
Staff Contact: School Office
UOC4 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 the aesthetic qualities of the original print. The course will engage elements including 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.

SART2591
Printmaking Elective 2
School of Art
Staff Contact: School Office
UOC4 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 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.

SART2601
Sculpture Elective 2
School of Art
Staff Contact: School Office
UOC4 HPW3

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 development of original works.

SART2621
Installation Elective 2
School of Art
Staff Contact: School Office
UOC4 HPW3

This course provides the opportunity to explore the various forms and disciplines three-dimentional activity can take in contemporary art practice. This course is designed to allow maximum flexibility for both multimedia experimentation and specialisation in the exploration of the construction, installations and spaces as an expressive vehicle. These courses are studio based with an emphasis on the critical analysis of research, experiencial learning and conceptual development. This discussion is centered around a rigorous studio theory program, conducted on the studio floor and in tutorials.

SART2819
Photo Techniques for Printmaking Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S2

A study of the application of photo mechanical, photo-related and computer-generated techniques in printmaking.

SART2821
Metal Joining Techniques Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S2

This is a workshop based course to extend students' skills in metal fabrication. It contains information and practice concerning skills of joining various metals efficiently, safely and with aesthetic consideration. Mechanical, soldered and welded jointing will be carried out by students as well as cutting and shaping techniques.

SART2823
Sculpture: Casting Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3

This is a workshop class for those students seeking skills in casting and mould making. Through lectures, demonstrations and projects, students will learn how to make moulds of increasing complexity, and to cast various material. The theory of casting processes will be discussed as it applies to individual work required by the student.

SART2826
3D Fabrication Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S2

This is a workshop-based course for students wishing to improve their ability to manipulate materials for making sculpture installation, and bodyworks. It contains information and practice in elementary fabrication and assembly techniques. Through lectures, demonstrations and projects, students will acquire understanding and skills concerning the purpose and use of a range of hand and power tools, and methods of measuring and gauging.

SART2828
Artists' Books Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S1 S2

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 artist's 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 artist's book.

SART2829
Anatomy for Artists Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S1

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 will develop an understanding of the human figure. 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 Drawing Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S2

This course is designed to consolidate and extend previous drawing experience. Students will be engaged in 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 Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S2

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. This course will provide an introduction to anatomy. Emphasis will be placed on direct observations and their interpretation in graphic media.

SART2833
Drawing Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S1

This course is designed to enable students to explore a range of visual images and ideas. The course will deal with practical and theoretical issues of drawing. Through interpretation and translation of two and three dimensions the student will examine space, form and structure. Students will also be encouraged to develop a personal graphic language.

SART2834
Experimentation in Mixed Media Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S1

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 Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S1

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 Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S1 S2

This course will investigate colour across numerous disciplines. Students will be introduced to colour in relation to areas such as pigment, light and computing.

SART2841
Electronics Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S1 S2

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 Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S2

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.

SART2846
Figurative Sculpture Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S2

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.

SART2849
Alternative Printmaking Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S2

This course 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 Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S1

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.

SART2853
Printmaking Colour Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S2

This course aims to demystify the complexities of colour theory and techniques as they relate to printmaking. Beginning with a basic introduction to Colour Theory and a comparison of analogue and digital colour models students are introduced to advanced colour printing procedures with emphasis upon etching and screenprinting. Through lectures, demonstrations and projects students will gain understanding and skills in the practical application of specialist procedures not generally covered in elective printmaking courses. This course will be of most benefit to students who have some previous experience in etching.

SART2856
Digital Printmaking Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S1

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 proceedures as compared directly with traditional print practice, and the extension of traditional print media through the incorporation of these practices into existing technologies.

SART2857
Paper Technology Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S1

This course will attempt a comprehensive investigation of the characteristics and functions of paper in its broadest sense, with emphasis on the wide variety of papers used by printmaking artists. Students will gain an insight into the history, making and usage of paper, particularly as it applies to contemporary art practice. Through lectures, demonstrations and projects, students will gain an understanding of such things as the conservation of paper, hand paper making, cast paper, and other three dimensional uses of paper in artworks, and appropriate choice of paper for various media.

SART3340
Drawing/Painting 4
School of Art
Staff Contact: School Office
UOC8 HPW8
Prerequisite/s: SART2330

In this course students will concentrate upon their major creative interests. Students will begin the initiation and execution of a body of studio work which demonstrates the relationship between their own work and current art practices and concepts. Students will be encouraged to analyse the relationship between perceived aims and results achieved in their studio practice.

SART3342
Printmaking 4
School of Art
Staff Contact: School Office
UOC8 HPW8 S1
Prerequisite/s: SART2332

This course will continue to build upon concepts and skills developed in previous sessions. Students will investigate the creative possibilities of media appropriate to the expression of individual ideas. 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. A proposal outlining intended studies is required.

SART3343
Sculpture, Performance and Installation 4
School of Art
Staff Contact: School Office
UOC8 HPW8
Prerequisite/s: 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 and studio research methodologies, 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, works related to the body, or traditional mediums such as bronze casting.

SART3350
Drawing/Painting 5
School of Art
Staff Contact: School Office
UOC8 HPW8
Prerequisite/s: 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 5
School of Art
Staff Contact: School Office
UOC8 HPW8
Prerequisite/s: SART3342

This course will consolidate concepts and skills developed in previous sessions. Students will continue to investigate the creative possibilities of media appropriate to the expression of individual ideas. 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.

SART3353
Sculpture, Performance and Installation 5
School of Art
Staff Contact: School Office
UOC8 HPW8
Prerequisite/s: 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, the refinement of skills and studio research methodologies, 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, 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.

SART3361
Etching Elective 3
School of Art
Staff Contact: School Office
UOC4 HPW3 S2

These courses aim to introduce the student to a wide range of experiences in the process of intaglio printing, including etching, drypoint and engraving. Students will be encouraged to cultivate an awareness of the creative possibilities of intaglio printing and to relate their concepts to the characteristics of the medium through a combination of theoretical and practical studies.

SART3501
Painting Elective 3
School of Art
Staff Contact: School Office
UOC4 HPW3

The aim of these courses 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.

SART3502
Drawing Elective 3
School of Art
Staff Contact: School Office
UOC4 HPW3 S1 S2

The aim of this course is to 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.

SART3581
Screen Printing Elective 3
School of Art
Staff Contact: School Office
UOC4 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 the aesthetic qualities of the original print. The course will engage elements including 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.

SART3591
Printmaking Elective 3
School of Art
Staff Contact: School Office
UOC4 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 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.

SART3601
Sculpture Elective 3
School of Art
Staff Contact: School Office
UOC4 HPW3

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 development of original works.

SART3621
Installation Elective 3
School of Art
Staff Contact: School Office
UOC4 HPW3

This course provides the opportunity to explore the various forms and disciplines three-dimentional activity can take in contemporary art practice. This course is designed to allow maximum flexibility for both multimedia experimentation and specialisation in the exploration of the construction, installation and space as an expressive vehicle. This course is studio based with an emphasis on the critical analysis of research, experiencial learning and conceptual development. This discussion is centered around a rigorous studio theory program, conducted on the studio floor and in tutorials.

SART3800
Professional Practice
School of Art
Staff Contact: School Office
UOC4 HPW3 S1 S2

This course will prepare students completing the BFA for professional practice as artists in Australia.

SART3860
Digital Media for Painters Workshop
School of Art
Staff Contact: School Office
UOC4 HPW3 S1

Digital Media for Painters workshop.

SART3862
Advanced Metal Casting Workshop
School of Art
Staff Contact: School Office
UOC6 HPW3 S1

This 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. 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
Electronic Installaton Elective
School of Art
Staff Contact: School Office
UOC6 HPW3 S2

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 student's 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, immersive installation, IT spaces, and the interface of visual arts with technology and science.

SART3864
Advanced Electronics Workshop
School of Art
Staff Contact: School Office
UOC6 HPW3 S1

This course is an advanced workshop that extends student's 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 reseach methods in technical areas are fuelled by the student's advanced, self initiated project work. Reportage of research is required as 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 liase with both industrial and research organisations to achieve goals and meet deadlines.

SART4030
Honours Paper
School of Art
Staff Contact: School Office
Enrolment requires School approval
UOC6 S1 S2

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
Staff Contact: School Office
Enrolment requires School approval
UOC18 S1 S2

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.

SCOM1011
Science, Technology and Society
Faculty of Science
Staff Contact: S Healy
UOC6 HPW3 S1
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.

SCOM2014
Science Communication
Faculty of Science
Staff Contact: W Rifkin
UOC6 HPW3 S2
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 stratergies 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.
Note/s: SCOM2014 serves in the BSc(Communication) program in place of SCOM1021.

SCOM2021
Professional Science Communication
Faculty of Science
Staff Contact: W Rifkin
UOC6 HPW3 S1
Prerequisite/s: SCOM1021

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 will be 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/s: This course is also available to students either having school approval or who have completed LIFE1001 or LIFE2001 or INOV3100. This course is only offered in alternate years commencing 2004.

SCOM2505
Science Communication Project A
Faculty of Science
Staff Contact: W Rifkin
UOC3 HPW2 S1 S2 X1
Prerequisite/s: SCOM1021

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' will determine 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.
Note/s: This course is also available to students either having school approval or who have completed LIFE1001 or LIFE2001 or INOV3100.

SCOM2700
Topics in Science Communication- Language and History
Faculty of Science
Staff Contact: School Office
UOC3 HPW2 S1

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 like - the evolution of scientific instrumentation or the recording of oral histories of Australian science. A number of these 3-unit courses are being offered by the SCOM program.

SCOM2750
Topics in Science Communication - Social and Organisational Processes
Faculty of Science
Staff Contact: School Office
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-unit courses are being offered by the SCOM program.

SCOM2800
Topics in Science Communication - Processes in Science Media and Education
Faculty of Science
Staff Contact: School Office
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-unit courses are being offered by the SCOM program.

SCOM3011
Communicating Science: Theory and Practice
Faculty of Science
Staff Contact: School Office
UOC6 HPW3
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 online 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/s: This course is only offered in alternate years commencing 2005.

SCOM3021
Science Communication Internship
Faculty of Science
Staff Contact: W Rifkin
UOC6 HPW3 S1 S2 X1
Prerequisite/s: 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
Staff Contact: W Rifkin
UOC3 HPW3 S1 S2 X1
Prerequisite/s: SCOM1021

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' will determine 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.
Note/s: This course is also available to students either having school approval or who have completed LIFE1001 or LIFE2001 or INOV3100.

SDES1101
Design Studio 1A - Elements and Principles of Design
School of Design Studies
Staff Contact: School Office
UOC6 HPW4 S1

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 1B - Analysing Design Principles
School of Design Studies
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: 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.

SDES1103
Design and Human Functioning - the Body at Work
School of Design Studies
Staff Contact: School Office
UOC4 HPW2 S1

The aim of this course is to introduce and develop understandings about the functioning human being at both the physical and cognitive levels. The relationship between human physiology and psychology is examined in the context of the designed environment and its implications for questions of ergonomics. The course will refer to the physiology and neurology of sensation, the psychology of perception, ergonomics and anthropometrics as knowledge domains pertinent to designing the optimum interface between humans and their environment.

SDES1104
Interactive Systems - Design and Responsible Management of the Enviroment
School of Design Studies
Staff Contact: School Office
UOC4 HPW2 S2

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.

SDES1105
Presentation Techniques
School of Design Studies
Staff Contact: School Office
UOC3 HPW2 S1

This course aims to emphasise the development of a keen and critical awareness in students of the principles of verbal and visual presentation techniques within the Design context. The questions of intent; content and application are focussed towards the intended development of the individual's visual language and presentation technique.

SDES1107
Modelmaking: Communicating in Three Dimensions
School of Design Studies
Staff Contact: School Office
UOC3 HPW2 S1

This course introduces students to basic materials, equipment and techniques involved in modelmaking. The knowledge and understanding derived from these initial investigations is applied to a range of exercises and projects. The projects include fabricating and forming materials to appropriately and clearly articulate design intent. The relevance of three-dimensional models within the design process is emphasised by understanding the place of models as tools of; Exploration, Communication, Visualisation and Presentation. This course aims to equip students with necessary knowledge and skills to apply to concepts within the design studio setting.

SDES1108
Typography and Composition
School of Design Studies
Staff Contact: School Office
UOC3 HPW2 S2

This course introduces the history and fundamentals of typography, principles of layout and composition, and a range of graphic applications in contemporary contexts. Students will be encouraged to develop perceptual awareness, analytical and technical skills in their understanding and approach to typography and composition in graphics/ media design.

SDES1109
Measured Drawing
School of Design Studies
Staff Contact: School Office
UOC3 HPW2 S2

This course will introduce students to the communication of ideas through measured drawing. Students will be introduced to topics by means of exercises in plane geometry, descriptive geometry and orthographic projections. Exercises will also include those to develop the ability to visualise and record forms and spaces in measured drawings.

SDES1110
Design and Computers 1B
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2

This course extends students knowledge in four basic areas of design and computers. These areas are: image acquisition and manipulation, shape manipulation, introduction to CADconcepts and introduction to multimeda authoring. This course will explore rapidly developing tool sets, identify and familiarise students with basic user interface metaphors utilised by most sofware packages while placing software applications commonly seen in industry and studio work flows, into context.

SDES1144
Textiles Workshop
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

This course introduces the student to a wide range of techniques and processes involving textiles. Students will be encouraged to cultivate an awareness of the creative possibilities of textiles through technical sampling, research and application. Contemporary and historical textile artists as well as other artists who incorporate textiles-related processes will be discussed. Students will be introduced to and work with various textiles processes including: fabric manipulation, print, tapestry and weave.

SDES1154
Jewellery Workshop
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

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
Ceramics Workshop
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

This course is designed to enable students to undertake a program of practical study in the nature of ceramic material, and to explore traditional and contemporary techniques employed in their use. Through lectures, demonstrations and practical application, students will study techniques which may include hand building, adobe techniques, mould making, slip casting, glazing, throwing and firing. Appropriate health and safety procedures will be demonstrated, discussed and considered in the production of students' work.

SDES1303
Introductory Studies:Ceramics , Jewellery, Textiles
School of Design Studies
Staff Contact: School Office
UOC8 HPW6 S1

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 1
School of Design Studies
Staff Contact: School Office
UOC8 HPW6 S2
Prerequisite/s: SDES1303, SART1402

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 1
School of Design Studies
Staff Contact: School Office
UOC8 HPW6 S2
Prerequisite/s: SDES1303, SART1402

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 1
School of Design Studies
Staff Contact: School Office
UOC8 HPW6 S2
Prerequisite/s: SDES1303, SART1402

This course introduces the student to the basic concepts, techniques and processes of contemporary textiles practice while developing a firm skills base from which they will expand in their continuing studies in the discipline. Contemporary, traditional, cultural and historical textiles are examined, developing knowledge and a critical awareness of these textile processes and how they can be can be integrated within the contemporary context. The course provides preliminary technical training in woven and interlaced structures and surface techniques of stitch, print and dyes.

SDES1601
Colour, Composition and Typography
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1

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
Design Studio 2A - Applied/Object
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1
Prerequisite/s: SDES1102

In this course, design practice is undertaken which requires students to integrate technical knowledge and artisan skills with material, form and contextual issues in the applied object design discipline. Projects will address the conceptual, material and sculptural understandings of 3D object design. Elements of the design process - critical analysis, research, problem solving and design development - will be undertaken to facilitate the resolution of form and fabrication design issues.

SDES2102
Design Studio 2A - Environments/Spatial
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1
Prerequisite/s: 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
Design Studio 2A - Graphics/Media
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1
Prerequisite/s: SDES1102

In this course design practice is undertaken which requires students to integrate theoretical knowledge and technical skills with contextual issues in the graphics/media design discipline. Projects will address the principles of visual representation, media and processes, typography, composition, colour and contextual issues in graphics/media applications. Elements of the design process - critical analysis, research, problem solving and design development - will be undertaken to facilitate the resolution of visual communication design issues.

SDES2104
Design Studio 2A - Ceramics
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1
Prerequisite/s: SDES1102

This course requires students to integrate technical knowledge and artisan skills with material form and contextual issues in the ceramic design discipline. Projects address the conceptual, material and sculptural understandings of 3D object design in clay and associated materials. In particular, this course highlights 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
Design Studio 2A - Jewellery
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1
Prerequisite/s: SDES1102

In this course, design practice is undertaken which requires students to integrate technical knowledge and artisan skills with material form and contextual issues in the jewellery design discipline. Projects will address the conceptual and material understandings of 3D jewellery and object design. Elements of the design process- critical analysis, research, problem solving and design development- will be undertaken to facilitate the resolution of form and fabrication design issues. This course will develop students' understanding of jewellery design through investigations of materials and jewellery processes. 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
Design Studio 2A - Textiles
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1
Prerequisite/s: SDES1102

In this course, design practice is undertaken which requires students to integrate knowledge, conceptual understanding and technical skills with materials, form and contextual issues in the textile design discipline. Projects will address the conceptual, material and sculptural understanding of constructed textile processes. Elements of the design process - critical analysis, research, problem solving and design development - will be undertaken to facilitate the resolution of form and fabrication design issues. Through projects the subject will introduce and develop the students' understanding of the textile processes of interlacing, weave and fabric manipulation.

SDES2107
Design and Computers 2A
School of Design Studies
Staff Contact: School Office
UOC4 HPW4 S1
Prerequisite/s: SDES1110.

This course is an investigation into computers, hardware, software and design in the graphics/media industry. The software programs will include photographic enhancement, image manipulation, typography. The course will also cover the processes and techniques used in computer generated design.

SDES2108
Design Studio 2B - Applied/Object
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2
Prerequisite/s: SDES2101

In this course, the students' existing design practice is investigated, requiring students to extend their capacity to integrate technical knowledge and artisan skills with material, form and contextual issues in the applied design discipline. Projects will address the conceptual, material and sculptural understandings of 3D object design. Elements of the design process - critical analysis, research, problem solving and design development - will be undertaken to facilitate a more complex resolution of form and fabrication design issues.

SDES2109
Design Studio 2B - Environments/Spatial
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2
Prerequisite/s: 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
Design Studio 2B - Graphics/Media
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2
Prerequisite/s: SDES2103

In this course, design practice is investigated which requires students to extend their capacity to integrate theoretical knowledge and technical skills with contextual issues in the graphics/media design discipline. Projects will address the principles of visual representation, media and processes, typography, composition, colour, 2D and 3D graphics, and contextual issues in graphics/media applications. Elements of the design process - critical analysis, research, problem solving and design development - will be undertaken to facilitate a more complex resolution of visual communication design issues.

SDES2111
Design Studio 2B - Ceramics
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2
Prerequisite/s: SDES2104

This course provides the opportunity for students to investigate existing design practice and to extend their capacity to integrate technical knowledge and skills with material, formal and contextual issues in the ceramic discipline. Projects address the conceptual, material and sculptural understandings of three dimensional object design in clay. In particular, these projects require that students engage with ideas, materials and techniques relevant to achieving fired ceramic surfaces appropriate to their developing individual practice. 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 practice.

SDES2112
Design Studio 2B - Jewellery
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2
Prerequisite/s: SDES2105

In this course, the students' existing design practice is investigated, requiring students to extend their capacity to integrate technical knowledge and artisan skills with material, form and contextual issues in the jewellery design discipline. Projects will address the conceptual, material and sculptural understandings of 3D jewellery design. Elements of the design process - critical analysis, research, problem solving and design - will be undertaken to facilitate a more complex resolution of form and fabrication design issues. This course will focus students 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.

SDES2113
Design Studio 2B - Textiles
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2
Prerequisite/s: SDES2106

In this course, design practice is undertaken which requires students to integrate knowledge, conceptual understanding and technical skills with material, form and contextual issues in the textile design discipline. Projects will address the conceptual and material understanding of textile processes relating to surface design techniques. Elements of the design process - critical analysis, research, problem solving and design development - will be undertaken to facilitate the resolution of form and fabrication design issues. Through projects, this course will introduce and develop the students' understanding of the textile processes of print, dyed and stitched textiles.

SDES2114
Design and Social Theory
School of Design Studies
Staff Contact: School Office
UOC4 HPW2 S1

This course introduces students to concepts within social theory and their application within the area of design. Current issues in design will be discussed and analysed to examine the behaviour of social groups and target populations. By investigating issues such as green design, gender and social responsibility in design, students can develop an understanding of the social impact of design. This investigation will require active involvement by the students in observation, analysis and speculation concerning the social factors present in all aspects of the design process.

SDES2115
Design and Computers 2B
School of Design Studies
Staff Contact: School Office
UOC4 HPW4 S2
Prerequisite/s: SDES2107

This course will integrate the graphics component the introduction to 2D drawing on the computer by the use of CAD (Computer Aided Drawing) software program for the generating of technical and mechanical design drawings. With this basis of computer generated drawing, the students can create and manipulate designs and drawings. The areas that this course will cover includes placing, manipulating and modifying elements, drafting features, references filing, dimensioning, annotating, plotting and 2D drawing techniques.

SDES2116
Design Practice
School of Design Studies
Staff Contact: School Office
UOC4 HPW2 S1

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, 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
Ceramics Technology Workshop
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

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. Theoretical information is contextualised with reference to ceramic history and to contemporary developments/usage. The subject 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 Workshop
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

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. In addition, the subject 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.

SDES2143
Low Impact and Alternative Ceramic Processes Workshop
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1

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. Throughout, students work with accessible materials to produce clay media, equipment and firings that are inexpensive, energy efficient and easily replicated in the domestic studio.

SDES2149
Metal Forming Workshop
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

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 materials and with processes such as casting, advanced fabrication and hydraulic forming, students will be asked to realise three-dimensional works..

SDES2150
Jewellery Workshop:Processes for Multiple Production
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2

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
Jewellery Workshop:Surface Techniques
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1

This is a practical class open to students requiring skills centred in the jewellery studio This course will focus on a thorough examination of surface as applied to jewellery allowing for experimentation in any one of a variety of specialist surface techniques such as granulation, etching, keum-bo or married metal

SDES2152
Jewellery Workshop in Colour
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1

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.

SDES2163
Jewellery Elective 1:Contemporary Wearables
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

This course will enable students to gain insight into and understanding of jewellery practice. Within a framework encompassing traditional and 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 Elective 2:3D Jewellery and Small Scale Objects
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

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 but not wearable and which may be expressed as vessels or implements expanding their understanding of this traditional component of jewellery practice.

SDES2167
Textiles for Fashion
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

This course covers the design and making of textiles for costumes and fashion garments. Particular emphasis will be placed on the textiles used for fashion, the selection of textiles, the way textiles are used, and the manipulation of textiles for fashion garments. The course provides an introduction to textiles, explored in the context of fashion. Students will design and make fabrics from which to create garments. The fashion industry will be introduced and explored in relation to the work of selected designers.

SDES2168
Commercial Textile Design and Industry
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

This course follows the design process for the commercial production of textiles, from design brief and concept development to sampling and final manufacture. It will explore and examine the weave, stitch and print processes at studio and industry level including professional presentation, colourways and client requirements. The course will involve students in visits to textile firms in industry and the commercial sector, where the concept of briefs, design development and client relationships will be explored. Students will use this knowledge to produce textile related project work with industrial applications to set briefs, relating to fashion or furnishing fabrics.

SDES2171
Design Management Elective
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

By considering the form that a design culture takes, 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 the main focus while social responsibility and ethical practice will add an additional focus.

SDES2174
Fashion and Costume Design 1
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

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
Staff Contact: School Office
UOC4 HPW3 S1 S2

This course will introduce students to design and performance in various contexts. Design in theatre will be the major focus of this subject and students will systematically examine design needs and the crafts of the theatre and participate in practical workshops intended to provide technical and construction experiences. A design craft brief will be set for students to complete.

SDES2178
Independent Study
School of Design Studies
Staff Contact: School Office
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 Theatre
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

Fundamentals of stage design including technical drawing, plans, renderings and model construction. Scene design, painting and perspective, special effects using colour and synthetic materials. Costume design, patterns and pattern making, cutting and construction. Historical and social research in theatre design.

SDES2184
Textiles: Woven Forms
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1

This course provides an introduction to textile processes and techniques associated with constructed textiles as a means of expressing ideas. Practical work in basketry, tapestry and loom weaving is complimented by critical, historical and theoretical information which assists students in understanding elements of contemporary textile work, and which enables them to place their work in context.

SDES2185
Textiles: Fabric Manipulation
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2

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 in mark making on fabric, and hand and machine embroidery is complimented by critical, historical and theoretical information which assists students in understanding elements of contemporary textile work, and which enables them to place their work in context.

SDES2187
Ceramics: The Contemporary Vessel Elective
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

This course provides an opportunity for students to use basic materials, technology, processes and skills associated with the construction and firing of studio based work in clay. Practical work is contextualised within historical and theoretical considerations/debates that frame contemporary ceramic practice. In particular, studio projects give prominence to disparate contemporary interpretations of the vessel and associated notions of containment.

SDES2188
Ceramics: Mutiples, Meanings and Methods Elective
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

This course highlights a range of fundamental approaches and skills that underpin multiple strands of contemporary ceramic practice. Practical work is contextualised within historical and theoretical considerations/debates that frame contemporary ceramic practice. In particular, studio projects give prominence to ideas and processes associated with the construction and firing of ceramic multiples and work in series.

SDES2195
The Arts and Aboriginal People and Torres Strait Islanders
School of Design Studies
Staff Contact: School Office
UOC4 HPW3

This course will concentrate on one form of visual art, such as textiles, from the range of media utilised by the Aboriginal and Torres Strait Islander people. It will examine the course from a traditional and contemporary viewpoint with emphasis placed on its relationship to other art forms. The interconnectedness of the art forms with the culture will be studied. Visits to museum and gallery collections will be included. A studio component will be incorporated to complement the art and problem solving activities based on stylistic qualities of various art forms.

SDES2325
Ceramics 2
School of Design Studies
Staff Contact: School Office
UOC8 HPW8 S1
Prerequisite/s: SDES1316 or SART1402

This course builds on the general introduction to ceramic processes and materials developed in Ceramics 1. It highlights both mechanical and non-mechanical approaches to the construction of three-dimensional objects in clay and associated considerations of form, purpose, permanence, scale, site etc. 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 2
School of Design Studies
Staff Contact: School Office
UOC8 HPW8
Prerequisite/s: 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 fabrication will be explored using both ferrous and non-ferrous materials to translate two-dimensional drawn designs into three-dimensional jewellery objects both wearable and non-wearable.

SDES2327
Textiles 2
School of Design Studies
Staff Contact: School Office
UOC8 HPW8 S1
Prerequisite/s: SDES1318 or SART1402

This course introduces the conceptual understanding and technical skills of textiles practise relating to textile structures. Students become familiar with the textile processes of weave, basketry and fabric manipulation. The emphasis at this stage is an open ended, exploratory investigation of textiles language and processes through experimentation and research. The process is supported by the acquisition of skills in constructed textiles including the presentation of projects, field work, studio theory and documentation of completed works. Students produce individual work which integrates technical and conceptual approaches.

SDES2335
Ceramics 3
School of Design Studies
Staff Contact: School Office
UOC8 HPW8 S2
Prerequisite/s: 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 3
School of Design Studies
Staff Contact: School Office
UOC8 HPW8 S2
Prerequisite/s: SDES2326

This course will focus students on a thorough examination of qualities of suface 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 3
School of Design Studies
Staff Contact: School Office
UOC8 HPW8 S2
Prerequisite/s: SDES2327

This course introduces the conceptual understanding and technical skills of textiles practise relating to textile surfaces. Students become familiar with the textile processes of printed and dyed textiles and embroidery. The emphasis at this stage is an open ended, exploratory investigation of textiles language and processes through experimentation and research. The process is supported by the acquisition of skills in constructed textiles including the presentation of projects, field work, studio theory and documentation of completed works. Students produce individual work which integrates technical and conceptual approaches.

SDES3101
Design Studio 3A - Applied/Object
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1
Prerequisite/s: SDES2108

In this course design solutions are developed from briefs that are academically based or emulate problems typical of applied 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.

SDES3102
Design Studio 3A - Environments/Spatial
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1
Prerequisite/s: 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
Design Studio 3A - Graphics/Media
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1
Prerequisite/s: SDES2110

In this course design solutions are developed from briefs that are academically based or emulate problems typical of graphics/media 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 graphics/media design conventions.

SDES3104
Design Studio 3A - Ceramics
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1
Prerequisite/s: SDES2111

This course provides the opportunity to develop design solutions from briefs that are academically based or emulate the approaches and problems typical of ceramic design in the professional context. 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.

SDES3105
Design Studio 3A - Jewellery
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1
Prerequisite/s: SDES2112

In this subject 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
Design Studio 3A - Textiles
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1
Prerequisite/s: SDES2113

This course provides the opportunity to develop design solutions from briefs that are academically based or emulate the approaches and problems typical of textile design in the professional context. The design proposals must address complex contextual issues and the interactions of the brief. Students will be encouraged to develop a clear design process and apply their skills to appropriate documentation and presentation of textiles.

SDES3107
Design and Computers 3
School of Design Studies
Staff Contact: School Office
UOC4 HPW4 S1
Prerequisite/s: SDES2115

The course is an advanced investigation into computers and design in graphics and high resolution output for print and its applications in the graphics/media industry. The program will include graphics software for 3D modelling, image manipulation and typography. The subject will also involve the integration of graphics with the advanced investigation into 2D and 3D drawing and modelling for object, graphics and environment purposes. This area takes the students from the basics of creating simple three dimensional models through to the more complex problems that arise from three dimensional modelling. Students will learn how to create three dimensional models and then produce two dimensional drawings from these models.

SDES3108
Design Studio 3B - Applied/Object
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2
Prerequisite/s: SDES3101

The aim of the course is to build on the skills and knowledge from Design Studio 3A - Applied and to increase the complexity of the studio practice within the applied discipline. Self-direction will be 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.

SDES3109
Design Studio 3B - Environments/Spatial
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2
Prerequisite/s: SDES3102

The aim of the course is to build on the skills and knowledge from Design Studio 3A - Environments and to increase the complexity of the studio practice within the environments discipline. Self-direction will be 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
Design Studio 3B - Graphics/Media
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2
Prerequisite/s: SDES3103

The aim of the course is to build on the skills and knowledge from Design Studio 3A - Graphics/Media and to increase the complexity of the studio practice within the graphics/media discipline. Self-direction will be 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.

SDES3111
Design Studio 3B - Ceramics
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2
Prerequisite/s: SDES3104

The aim of this subject is to build on skills and knowledge from Design Studio Ceramics - 3A and to increase the complexity of studio practice within the ceramic discipline. Self-direction will be encouraged so that students develop and apply their skills within the development and articulation of the brief. Project documentation and presentation methods are expected to reflect a substantial sophistication of design ideas and communication techniques.

SDES3112
Design Studio 3B - Jewellery
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2
Prerequisite/s: SDES3105

The aim of the subject is to build on the skills and knowledge from Design Studio 3A - Jewellery and to increase 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 development and articulation of a brief. Project documentation and presentation methods are expected to reflect a substantial sophistication of design ideas and communication.

SDES3113
Design Studio 3B - Textiles
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2
Prerequisite/s: SDES3106

The aim of this course is to extend the students design experience through complex projects in the textile design discipline. The aim of this course is to build on the skills and knowledge from Design Studio 3A - Textiles and to increase the complexity of the studio practice within the textiles discipline. Self-direction will be 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 textile design ideas and techniques.

SDES3162
Ceramics Elective: Non-Functional,3 Dimensional Ceramics
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

This course provides the opportunity for students to explore technical and creative skills in developing and executing studio based work in clay. The practical component of the program broadens students' engagement 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
Jewellery Elective 3: the Replicated Object-Jewellery Multiples
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

Students will develop an understanding of jewellery practice and explore the concepts of making multiples to produce wearable and non-wearable objects which have the body as their format. 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
Staff Contact: School Office
UOC4 HPW3 S1 S2

This course will introduce students to the contemporary and commercial applications of jewellery design for fashion. The class will encourage students to integrate ideas, processes and materials in the design and fabrication of jewellery and accessories with a fashion focus. Specific technologies will be selected for research within the subject. In the pursuit of this research liaisons with industries associated with the related technologies will be established.

SDES3169
Textiles: New Technologies
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2

This course introduces the new textile technologies and processes developed by artists and industry for textiles in the worlds of art, design, engineering and science. The course covers the development of textile fabrics, materials and structures for fashion, art, design, science, engineering and industrial purposes. It will introduce a range of technologies and processes including thermoplastics, smart textiles, ultra sound and transfer print processes, digital and computerised techniques for textiles.

SDES3171
Digital Design - Video and Interactive
School of Design Studies
Staff Contact: School Office
UOC4 HPW2 S2

The course expands the students' knowledge in digital video and interactive applications in the development and display of digital image design, information technology and information design processes. Students will also develop skills in pre-production and post-production media processes as well as the administrative and non-digital elements required for interactive media design, authoring and construction. 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 interactive applications from briefs and concepts developed in class. The course will increase their knowledge of the design processes required for developing high-end video output.

SDES3172
Digital Design - Interactive Media
School of Design Studies
Staff Contact: School Office
UOC4 HPW2 S2

The course is an advanced investigation into computing in and design in graphics and their application in the graphics/media industry. The course also considers the areas of information technology, information design and the design processes involved in the creation of interactive media. The subject expands the students use of CAD modelling, image manipulation, typography, digital audio, digital video and reactive software for computer interaction. Students will be given 'hands on' experience in computer software for the graphics/film/title design industry. The student will also become experienced with a combination of advanced digital media applications for designing and producing interactive computer interfaces and information systems.

SDES3174
Web Design and Screen Interface
School of Design Studies
Staff Contact: School Office
UOC6 HPW3 S2

This course provides students with the knowledge and skills to design web and screen based interface, to a design brief. This course focuses on the creation and design of web and screen based interface in relation to and satisfying the parameters set for a specified brief and target audience. Students will explore and apply hypertext markup language, research content, create and apply navigational strategies and structures, generate and produce fully functioning web pages to a brief to a sophisticated level of design. The content includes: Critical analysis of selected web page applications and sites; Criteria governing web page design; Critical analysis of target audience for a specified brief; Research and structuring of web page design; Research and application of HTML to web page design; Research and analysis of navigational strategies to web page design; Research, analysis and use of appropriate technologies.

SDES3175
Fashion and Costume Design 2
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S2

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 Design Pre-Press
School of Design Studies
Staff Contact: School Office
UOC6 HPW3 S2

In this course students will learn to use appropriate industry principles methods and terminology to select, plan and implement the most appropriate digital pre-press, direct to press processes and digital print production processes for print graphics applications. Students will focus on the preparation and creation of appropriate digital artwork and print specifications for a variety of briefs from single colour to multi-colour print designs, and from single page to multi-page documents. 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.

SDES3183
Jewellery 3
School of Design Studies
Staff Contact: School Office
UOC4 HPW3

Students will develop their understanding of jewellery practice and explore the concepts of making multiples to produce wearable and non wearable objects which have the body as their format. 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.

SDES3186
Textiles: Surface Design
School of Design Studies
Staff Contact: School Office
UOC4 HPW3 S1 S2

This course provides an introduction to textile processes and techniques associated with dyed and printed textiles as a means of expressing ideas. Practical work in dyeing, printing and repeat designing is complimented by critical, historical and theoretical information which assists students in understanding elements of contemporary textile work, and which enables them to place their work in context.

SDES3345
Ceramics 4
School of Design Studies
Staff Contact: School Office
UOC8 HPW8 S1
Prerequisite/s: 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 4
School of Design Studies
Staff Contact: School Office
UOC8 HPW8 S1
Prerequisite/s: SDES2336

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 4
School of Design Studies
Staff Contact: School Office
UOC8 HPW8 S1
Prerequisite/s: SDES2337

This studio based course centres upon the students' self initiated work program which is devised in consultation with their lecturers. 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 context central to their work. Special content extends the students' technical and conceptual skills in relation to print, weave, embroidery and dyed textiles. Lectures, tutorials, demonstrations of advanced textile processes, the acquisition of advanced skills and studio research methodologies, the presentation of seminars by each student about the content and context of their practice are employed to achieve a thorough knowledge and critical awareness of contemporary textile practice and an ability to articulate the concerns of visual arts making.

SDES3355
Ceramics 5
School of Design Studies
Staff Contact: School Office
UOC8 HPW8 S2
Prerequisite/s: SDES3345

This course requires that 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 5
School of Design Studies
Staff Contact: School Office
UOC8 HPW8 S2
Prerequisite/s: 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 area of research relevant to their jewellery practice. The presented body of work will evidence the refinement of both students conceptual and technical capabilities.

SDES3357
Textiles 5
School of Design Studies
Staff Contact: School Office
UOC8 HPW8 S2
Prerequisite/s: SDES3347

This studio based course allows students to produce a substantial project which demonstrates an understanding and refinement of the concepts and contexts central to their work. Students refine their technical and conceptual skills in textiles and are expected to develop an area of research relevant to their individual art practice. This self initiated and directed project is devised in consultation with relevant lecturers. The course aims to produce an integrated approach to studio practice through lectures, tutorial discussion, field work, the refinement of skills, studio research methodologies and the presentation of seminars by each student about the content and context of their practice are employed to achieve the synthesis of conceptual concerns and studio practice.

SDES4101
Design Studio Project 4
School of Design Studies
Staff Contact: School Office
UOC8 S1 S2

This student initiated project will be based in a "real" context. This project will be developed in conjunction with selected professionals or with a client who presents an actual design problem. The project must reflect the philosophy of the course by demonstrating an integrated approach to design. Design solutions are developed from student briefs which emulate typical problems encountered in commercial practice. The design proposals must address complex contextual issues and fully understand the constraints set by a brief. Students will be encouraged to develop a recognisable design process and apply their skills to clear documentation and presentation of an integrated design outcome.

SDES4102
Professional Experience Program
School of Design Studies
Staff Contact: School Office
UOC8 S1 S2

The aim of this program is to provide students with the opportunity to experience real-life professional design situations, over an extended period. During this program 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.

SDES4103
Design and Computers 4
School of Design Studies
Staff Contact: School Office
UOC4 HPW4 S1 S2
Prerequisite/s: SDES3107

The course in computer studies is self-directed and works in conjunction with the students Design Studio Project work that is to be presented. The course will expand the range of software and hardware previously studied with emphasis on the advanced use of equipment in relation to specific projects nominated by the students.

SDES4104
Honours Project
School of Design Studies
Staff Contact: School Office
UOC6 S1 S2
Excluded: SAED2475, COFA4033

The aim of this project is to provide the exceptional student with the opportunity to research and document an approved, self-nominated, design related topic. The topic may be derived from any one (or any combination) of the following design related areas; design history/theory, manufacturing processes and techniques, new materials and potential use, design management theories and practice strategies, Design Education, and studio projects.

SDES4501
Project A (Honours)
School of Design Studies
Staff Contact: School Office
UOC18 HPW3

Honours program: investigation of theoretical and practical issues that focus upon the student s major area of specialisation. Each student will be required to identify a topic, area of interest & design problem that can be researched, documented and reported in a major illustrated paper of 5000 words. An alternative presentation of an equivalent standard may be individually negotiated.

SDES4502
Project B (Honours)
School of Design Studies
Staff Contact: School Office
UOC24 HPW6 S1

Students accepted into the fourth year of the program (Honours) will be required to complete a research and development project in their specialist craft art area leading to a major presentation/exhibition. The project will need to be fully documented (words/visuals) and the documentation presented as an additional record. This record should identify a research area, methods for investigating the particular creative process and findings. The project will include regular meetings/ discussions with a supervisor. At regular periods over the academic year members of the School will be invited to participate in some of these discussions to provide feedback. The project must be approved by the Head of School or the Head of School nominee.

SENG1010
Software Engineering Workshop 1A
School of Computer Science and Engineering
Staff Contact: P Ho
UOC3 HPW2.5 S2

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; a discussion of the project to be undertaken in SENG1020. The groups formed during this course will not persist for the entire series of courses. Groups will be reformed arbitrarily at various stages.

SENG1020
Software Engineering Workshop 1B
School of Computer Science and Engineering
Staff Contact: P Ho
UOC3 HPW2.5 S2
Corequisite/s: SENG1010, INF1611

This is the second course in the series and during this phase each group will complete a domain analysis and a requirements analysis for the project determined in SENG1010. 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.

SENG2010
Software Engineering Workshop 2A
School of Computer Science and Engineering
Staff Contact: A Nymeyer
UOC3 HPW2.5 S1
Prerequisite/s: SENG1020;
Corequisite/s: INFS2603, COMP2110

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.

SENG2020
Software Engineering Workshop 2B
School of Computer Science and Engineering
Staff Contact: K Robinson
UOC3 HPW2.5 S2
Prerequisite/s: 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.

SENG3010
Software Engineering Workshop 3A
School of Computer Science and Engineering
Staff Contact: J Plaice
UOC3 HPW2.5 S1
Prerequisite/s: 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.

SENG3020
Software Engineering Workshop 3B
School of Computer Science and Engineering
Staff Contact: J Plaice
UOC3 HPW2.5 S2
Prerequisite/s: 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.

SENG4903
Industrial Training
School of Computer Science and Engineering
Staff Contact: School Office
UOC0 S1
Excluded: COMP4903, COMP4905.

Students enrolled in program 3648 must complete a minimum of 60 days' industrial training. At least some of this should be obtained in Australia. Students are required to submit to the School evidence from their employers confirming completion of the prescribed training and a report, typically 2000 words long, summarising the work done and training received. Students will formally enrol in the course in Year 4, although they are strongly encouraged to complete as much industrial experience as possible in the breaks between the early years of the course.

SENG4910
Thesis Part A (Software Engineering)
School of Computer Science and Engineering
Staff Contact: W Matheson
UOC6 HPW7 S1 S2
Prerequisite/s: Enrolment in program 3648 or 3651 or 3652;
Excluded: BINF4910,BIOM5920,COMP4910.

This course represents the thesis proposal component. The proposal is assessed by a seminar given at the end of semester.

SENG4911
Thesis Part B (Software Engineering)
School of Computer Science and Engineering
Staff Contact: W Matheson
UOC12 HPW14 S1 S2
Prerequisite/s: SENG4910;
Excluded: BINF4911,BIOM5921,COMP4911.

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.

SENG4921
Professional Issues and Ethics
School of Computer Science and Engineering
Staff Contact: K Robinson
UOC6 HPW4 S1
Excluded: COMP4920.

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.

SESC1001
Safety, Health and Environment
School of Safety Science
Staff Contact: C Winder
UOC6 HPW4 S2

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.
Note/s: Also offered in off campus mode in X1, S1, X2, S2.

SESC1580
Risk Management 1
School of Safety Science
Staff Contact: J Cross
UOC3 HPW4 S2
Excluded: SESC6610 and students undertaking a major or minor in the BSc (3970) in Safety Sciences.

This course provides an introduction to risk managemen 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
Staff Contact: C Winder
UOC6 HPW4 S2

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 those hazards be examining safety, health and environmental case studies.

SESC2451
Biomechanics for Sports Scientists
School of Safety Science
Staff Contact: A McIntosh
UOC6 HPW5 S1

Student will study the basic principles of biomechanics and apply these to the analysis of sports. Basic mechanics (statics, kinematics and dynamics) will be studied in two and three dimensions. Human movement measurement methods will be introduced. The mechanics of the musculoskeletal system will be studied in detail in human gait walking, running and jumping. This will integrate the student's understanding of mechanics with functional anatomy through the study of normal gait dynamics, muscle function, work and power. Aerodynamics and hydrodynamics will be introduced and explained through the analysis of throwing and swimming.

SESC2580
Risk Management 2
School of Safety Science
Staff Contact: A Green
UOC3 HPW2 S2

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
Staff Contact: C Winder
UOC3 HPW2 S2

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
Staff Contact: School Office
UOC3 HPW2 S2

This course covers concepts of law; the judicial and court systems; common law and equity; the common law of employment, occupational health and safety.

SESC3030
Occupational Health and Safety Law 2
School of Safety Science
Staff Contact: School Office
UOC3 HPW3 S2

This course extends concepts of law introduced in SESC3020, and covers other workplace legislation and procedures, such as workers compensation and rehabilitation legislation; cases and actions under common law.

SESC3040
Occupational Health and Safety Law 2
School of Safety Science
Staff Contact: School Office
UOC3 HPW2

This course extends concepts of law introduced in SESC3020, and covers other workplace legislation and procedures, such as workers compensation and rehabilitation legislation; cases and actions under common law.

SESC3091
Safety, Health and Environmental Practice
School of Safety Science
Staff Contact: B Markovic
UOC6 HPW3 S2

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
Staff Contact: J Cross
UOC6 HPW4 S1

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
Staff Contact: B Markovic
UOC3 HPW2 S1 S2

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 by a combination of group activities, case studies, projects and seminars. This course will cover four major topic areas, which are: professional ethics, environmental related issues, safety and liability and controls of future technology.

SESC3451
Human Movement Measurement Methods
School of Safety Science
Staff Contact: A McIntosh
UOC6 HPW6 S1
Prerequisite/s: SESC2451.

Students will study the theory and practice of human movement measurement. The course will be taught through lectures and laboratory sessions. Students will learn 2D and 3D optical measurement techniques and how to apply these to the study of human movement. Electromyography and general instrumentation will be studied with data processing and analysis methods. Methods for the study of human gait, electromyography and sporting skills will be covered in laboratort sessions.

SESC3541
Assessment of the Workplace Environment
School of Safety Science
Staff Contact: K Kothiyal
UOC6 HPW4 X1

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 will be carried out on sites in and around UNSW.
Note/s: 3 day laboratory/workplace assessments with prior pre-reading/ tutorials. Assessment tasks completed subsequently.

SESC3601
Saftey, Health and Environmental Managment Systems
School of Safety Science
Staff Contact: C Winder
UOC6 HPW4 S2
Excluded: SESC6610.

Principles of occupational health and safety. The control of workplace risks. The legal system, duty of care and OHS , workers compensation and rehabilitation law, Environmental Protection law, OHS and environmental management system standards. Safety and environmental auditing.

SESC3620
Occupational Disease and Injuries
School of Safety Science
Staff Contact: C Winder
UOC3 HPW3 S1

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/s: Also offered in off campus mode in S2.

SESC4010
Project Research Methods
School of Safety Science
Staff Contact: D Gardner
UOC3 HPW2 S2

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.

SESC4140
Radiation Protection
School of Safety Science
Staff Contact: R Rosen
UOC3 HPW2 S1

Principles and practices of radiation protection for both ionising and non-ionising radiation. Radiation physics, detection and measurement; background radiation; biological effects of radiation; dose limits; technical controls for radioactive sources and radiating apparatus. Codes of safe practice; radiological monitoring and personal dosimetry; storage, transport and disposal of sources; environmental impact; administrative controls; emergency procedures; control of non-ionising radiation.

SESC4211
Risk Management
School of Safety Science
Staff Contact: J Cross
UOC6 HPW3 S1 S2

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. The student selects 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.

SESC4310
Industrial Safety Management
School of Safety Science
Staff Contact: D Gardner
UOC3 HPW3 S2
Excluded: SESC1001 and SESC3601

This course covers basic issues for managing safety, health and the environment in organisations. Topics include management and management theory, the behaviour of workers, the behaviour of managers, safety culture, systems for managing safety, health and the environment.

SESC4410
Ergonomics 2
School of Safety Science
Staff Contact: K Kothiyal
UOC3 HPW3 S1

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*:** SESC2090, SESC2100, SESC2500

SESC4820
Chemical Safety and Toxicology
School of Safety Science
Staff Contact: C Winder
UOC3 HPW3 S1

This course provides an outline of the toxicological, occupational hygiene and environmental aspects of chemical hazards and exposures. Metals, solvents, atmospheric contaminants, pesticides, carcinogens, hazardous wastes and dioxins are used as case studies.
***Assumed Knowledge*:** SESC2100
Note/s: Short course mode in S1 (compulsory 2 day workshop plus assessable tasks completed subsequently). Also offered in off campus mode in S1 and S2.

SESC4850
Management of Dangerous Materials
School of Safety Science
Staff Contact: C Winder
UOC3 HPW3 S1

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/s: Short course mode in S1 (compulsory 2 day workshop plus assessable tasks completed subsequently). Also offered in off campus mode in S1 and S2.

SESC4924
Research Project
School of Safety Science
Staff Contact: School Office
UOC24 S1 S2

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 will undertake a research project with supervision which is written up as a research project report.

SESC6610
Work and Safety
School of Safety Science
Staff Contact: C Khalil
UOC3 HPW2 S1 S2
Excluded: SESC2091, SESC3101, SESC3601

This is an introductory course that covers the fundamental safety science principles. It is aimed at giving future managers the skills needed to identify and deal with safety issues in the workplace. The course concentrates on identification of workplace hazards, their associated risks to health and how they can be controlled.
Note/s: Also offered by web delivery in X1, S1, X2, S2..

SLSP1000
Social Science and Policy
School of Social Science and Policy
Staff Contact: S Keen
UOC6 HPW3 S1

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
Staff Contact: R Pe-Pua
UOC6 HPW4 S2

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
Staff Contact: M Johnson
UOC6 HPW3 S2

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
Economy and Society
School of Social Science and Policy
Staff Contact: G Argyrous
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

An interdisciplinary overview of the relationship between social and economic theory and policy development. Considers how theory informs and legitimates policy choices and how policies are dependent on historical, social and economic contexts. Major social and economic theorists are considered and current policy case studies are used to evaluate policy implementation in the public and private sectors in Australia.

SLSP2001
Applied Social Research 1
School of Social Science and Policy
Staff Contact: G Argyrous
UOC6 HPW4 S1
Prerequisite/s: SLSP1001

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
Staff Contact: C Jensen-Lee
UOC6 HPW3 S2
Prerequisite/s: 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.

SLSP2201
Knowledge and Policy
School of Social Science and Policy
Staff Contact: S Keen
UOC6 HPW3 S2
Prerequisite/s: SLSP1000 or SLSP1002.

An examination of ways in which organised knowledge influences decision-making. Various concepts of policy-making as well as the variety of roles, strategies and analytical approaches policy analysts assume in relation to decision-makers. The use and abuse of social science in the public, private and non-profit sectors. Students are directly exposed to professional policy research through visits to research centres, and participation of policy analysts from outside the university in the classroom discussions.

SLSP2701
The Theory and Practice of Development
School of Social Science and Policy
Staff Contact: M Johnson
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit in Arts and Social Science courses;
Excluded: POLS2023, COMD2000.

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
Staff Contact: D Oxley
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: A Morris
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: R Hall
UOC6 HPW4 S1
Prerequisite/s: SLSP2001

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
Staff Contact: C Jensen-Lee
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: R Hall
UOC6 HPW3 S2
Prerequisite/s: 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) F/T
School of Social Science and Policy
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 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) P/T
School of Social Science and Policy
Staff Contact: School Office
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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) F/T
School of Social Science and Policy
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 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) P/T
School of Social Science and Policy
Staff Contact: School Office
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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) F/T
School of Social Science and Policy
Staff Contact: School Office
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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) P/T
School of Social Science and Policy
Staff Contact: School Office
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 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
Staff Contact: P Jones
UOC6 HPW3 S2
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.

SOCA1003
Modern Sociology: Key Ideas
School of Sociology
Staff Contact: C Kessler
UOC6 HPW3 S1

An introduction to modern sociology via the examination of some of the discipline's key ideas, the formative debates over them, and their contemporary meanings and applications. Ideas to be considered that will be included are society, work, class, power, charisma, ideology, culture and belief.

SOCA1004
Relationships: Sociology and Everyday Life
School of Sociology
Staff Contact: A Game
UOC6 HPW3 S1
Excluded: SOCC1231, SOCI1230

Works through long-standing 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
Staff Contact: D Olsberg
UOC6 HPW3 S2
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 communciations 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
Staff Contact: M Humphrey
UOC6 HPW3 S1
Excluded: 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.

SOCA2102
Culture: Modernity & Its Discontents
School of Sociology
Staff Contact: C Kessler
UOC6 HPW3 S2
Prerequisite/s: 6 units of credit in Level 1 Sociology and 36 units of credit overall;
Excluded: SOCI2701.

The question of culture and the experience of modernity as they appear in the works of a number of social theorists including Marx, Simmel, Freud, Elias, Tocqueville, Veblen and Riesman.

SOCA2103
Globalisation and Fragmentation
School of Sociology
Staff Contact: M Humphrey
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: SOCC2302, SOCI3596.

Central to the concept of globalisation is the idea of the expansion and development of global capital and the ascendancy of transnational over national forms of economy, society, politics and culture. Globalisation is transforming the character of social boundaries and attachments. Individuals, families, and communities are no longer enclosed in the same way by geography or social worlds. People have become more internationally mobile and so have corporations and whole industries. Global cultures have emerged based on mass communication, media and consumer goods. Draws on the work of Appadurai, Friedman, Tilly, Taylor and Hall to explore concepts such as: identity, borders, migration, global communication, global culture, place and displacement, development, organisation, disorganisation (chaos), sociality and futures.

SOCA2104
Technology, Work, Culture
School of Sociology
Staff Contact: J Pixley
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: D Olsberg
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: G McCall
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: G McCall
UOC6 HPW3 S2
Prerequisite/s: 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
Pacific Island Research Fieldwork
School of Sociology
Staff Contact: G McCall
Enrolment requires School approval
UOC6 S2
Prerequisite/s: 36 units of credit;
Excluded: GENT1204, GENT1205, SOCI3710.

Provides training in and use of ethnographic fieldwork methods in the context of a Pacific Island 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 shape village life.
Note/s: Taught in November-December 2004. Students must contact Grant McCall g.mccall@unsw.edu.au prior to the commencement of Session 2.

SOCA2205
Society and Desire
School of Sociology
Staff Contact: V Kirby
UOC6 HPW3 S2
Prerequisite/s: 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.

SOCA3103
Professions: Disciplines, Knowledge and Power
School of Sociology
Staff Contact: A Daniel
Enrolment requires School approval
UOC6 HPW3 X2
Prerequisite/s: 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/s: 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>

SOCA3106
Tourism and Cultural Anthropology
School of Sociology
Staff Contact: G McCall
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

Tourism provides a unique vantage point for exploring the most transformative process in the world today: globalisation. As a mode of travel, of interaction, and of visualisation and experience, tourism is not only reaching formerly 'isolated' parts of the globe but is reshaping social life and identity at home as well. Explores the social, cultural and ecological outcomes of these processes through various case studies. Topics include studying travel and tourism; varieties of tourists and tourist experiences; commoditisation and authenticity; tourism and representations of culture, history and identity; local responses to tourism; sex and tourism, and ecotourism.

SOCA3200
Jerusalem: One City, Three Faiths
School of Sociology
Staff Contact: C Kessler
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: JWST2108

An investigation of the historical, religious and symbolic significance of Jerusalem in the Jewish, Christian and Muslim religious traditions and to the members of the human faith communities based upon them.

SOCA3202
Religions: Judaism, Christianity, Islam
School of Sociology
Staff Contact: C Kessler
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: SOCI3711, JWST2105.

An investigation of the cultural, social and historical as well as doctrinal relations between the three Abrahamic monotheistic religions and the distinct communities of faith arising from them, as well as of contemporary scripturalist or fundamentalist reassertions of those faiths in movements or ideologies of resistance to modernity.

SOCA3203
Oceanic Societies: Pacific Island Living
School of Sociology
Staff Contact: G McCall
UOC6 HPW3 S1
Prerequisite/s: 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.

SOCA3204
Modernity & Development in the Pacific Islands
School of Sociology
Staff Contact: G McCall
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: SOCI3706.

Australian organisations, NGOs (Non-Government Organisations), religious groups, secular charities and AusAID, the government development assistance organisation, all have played important roles in the Pacific Islands. Representatives of these and other groups will provide practical accounts of their experiences "doing development" in the Pacific, along with readings and reflection on what their experience means in terms of the impact of modernity on the region. The particular Australian role in Pacific affairs and its meanings is featured.

SOCA3206
Current Debates in Social Anthropology
School of Sociology
Staff Contact: G McCall
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit

Presents a series of key debates in today's anthropological literature. Among the issues to be considered are: gender and sexuality; colonial and post colonial encounters; the nature of reason; social and political movements; globalisation of culture; applied anthropology and ethics; internet communities; politics of research; representations in museums and other anthropological institutions.

SOCA3208
Colonisation and Indigenous Identity Formation
School of Sociology
Staff Contact: S Green
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: 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
Staff Contact: S Green
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: 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
Staff Contact: S Green
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

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.

SOCA3301
Critical Reason: Modern Sociological Theories
School of Sociology
Staff Contact: M Markus
UOC6 HPW3 S1
Prerequisite/s: 6 units of credit in Level 1 Sociology and 36 units of credit overall;
Excluded: SOCI3502.

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
Staff Contact: F Lovejoy
UOC6 HPW3 X1
Prerequisite/s: 36 units of credit;
Excluded: AUST2011, GENT1209, SOCI3614

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
Staff Contact: F Lovejoy
UOC6 HPW3 X1
Prerequisite/s: 36 units of credit;
Excluded: GENT1207, WOMS2007

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
Staff Contact: F Lovejoy
UOC6 HPW3 X2
Prerequisite/s: 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
Staff Contact: V Kirby
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: M Pusey
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: D Olsberg
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: M Markus
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: M Markus
UOC6 HPW3 S2
Prerequisite/s: 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.

SOCA3704
Social Movements and Society: Current Debates
School of Sociology
Staff Contact: J Pixley
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: SOCI3607.

Examines sociological debates about social movements in Australia and elsewhere. The relation of social movements to social change is explored partly through critical analyses of data on a social movement of students choice. Movements chosen may range from Feminism, the Gay and Lesbian movements, Environmental, Land Rights or Labour movements to fundamentalists, or more organised lobby-groups or associations. Involves a research project and consideration of definitional and theoretical issues.

SOCA3706
Media and the Public Sphere
School of Sociology
Staff Contact: P Jones
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: SOCA3901.

Introduces sociological debates concerning the news media and public policy-making, including especially communications policy. The central organising theme is the democratic ideal of a public sphere of open discussion. Places Australian debates about the media in an international context of long-standing sociological concerns about journalistic practices (including news values and ethics).

SOCA3801
Healing
School of Sociology
Staff Contact: A Game
UOC6 HPW3 S2
Prerequisite/s: 12 units of credit in Level 1 Sociology and 36 units of credit overall;
Excluded: SOCC2304.

What is healing? One view might be that to heal is to bring about the absence of illness to eradicate disease through external intervention. Another view might be that healing occurs from within. We will consider another holistic approach. Healing is a matter of making whole, but what is whole? This question will be addressed with reference to ways of being in everyday life.

SOCA3804
Living and Dying
School of Sociology
Staff Contact: A Metcalfe
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: SOCC2203, SOCC3203.

Is death the ultimate, immutable other, the incomprehensible and unspeakable limit of existence? Or is death not also integral to life, a condition for life, experienced as impermanence, absence and lack or a creative impulse? Investigates the complex and ambiguous relations of life and death by examining different responses to death: how death is managed or exorcised, sought, denied or transcended. Includes

discussions of love, ecstasy, grief, sex, laughter, generationality, seasonality, religion and science. Based on a close reading of Michel Serres' book, Angels: A Modern Myth, but this is supplemented by readings from Berger, Steindl-Rast, Rilke, Moore, Hillman and others.

SOCA3810
The Space of Terror
School of Sociology
Staff Contact: M Humphrey
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: SOCA3915, SOCA3805, SOCC2303, SOCC3303, POLS3059

Violence is historically an integral part of social and political processes even though it is often constructed as deviant and from the dark side. Explores contemporary political violence and its relationship to social space, self and community. Focuses on contemporary civil wars and ethnic and religious violence. Explores themes such as massacre, ethnic cleansing, and martyrdom as ways in which individual death is given collective meaning in the context of the crisis of the nation-state. Its methodology involves a micropolitics of violence and the semiotics of pain. Explores concepts such as the abject, torture, war, terrorism, trauma, testimony, witnessing, reconciliation and post-violence worlds. Draws on the work of Scarry, Kristeva, Nordstrom, Massumi, Foucault, Zulaika and Taussig.

SOCA3912
Risk and Trust in Modern Societies
School of Sociology
Staff Contact: M Markus
UOC6 HPW3 S2
Prerequisite/s: 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) F/T
School of Sociology
Staff Contact: V Kirby
Enrolment requires School approval
UOC24 HPW5 S1 S2
Prerequisite/s: 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/s: 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) P/T
School of Sociology
Staff Contact: V Kirby
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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/s: 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) F/T
School of Sociology
Staff Contact: V Kirby
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 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/s: 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) P/T
School of Sociology
Staff Contact: V Kirby
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 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/s: 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
Staff Contact: J Breckenridge
UOC6 HPW3 S1

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
Staff Contact: R Roberts
UOC6 HPW3 S2

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
Staff Contact: C Moran
UOC6 HPW3 S2

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
Staff Contact: E Fernandez
UOC6 HPW3 S1

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
Staff Contact: M Wearing
UOC6 HPW3 S1

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 - Casework
School of Social Work
Staff Contact: D Barnes
UOC6 HPW3 S1
Prerequisite/s: SOCW1002

Addresses practice theory and skills relevant to social work intervention at the direct personal level. Skills that are relevant to each of these phases are taught and practised in tutorials: exploratory interviewing and assessment skills, demand-for-work skills, and skills of reviewing and leave-taking.

SOCW2004
Society and Social Work 2
School of Social Work
Staff Contact: M Wearing
UOC6 HPW3 S2

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
Staff Contact: L Hughes
UOC6 HPW3 S2

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
Staff Contact: H Meekosha
UOC6 HPW3 S2
Prerequisite/s: SOCW1002, SOCW2003.

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
Staff Contact: D Barnes
Enrolment requires School approval
UOC3 S1
Corequisite/s: 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/s: Students who enter the BSW program with advanced standing take this course.

SOCW2100
Aboriginal People and Social Work
School of Social Work
Staff Contact: S Green
UOC6 HPW3 S2

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
Staff Contact: K Heycox
UOC12 S1
Prerequisite/s: SOCW2003, SOCW2006;
Corequisite/s: 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 - Groupwork
School of Social Work
Staff Contact: S Regan
UOC6 HPW3 S1
Prerequisite/s: SOCW2003, SOCW2006;
Corequisite/s: SOCW3001

Building on SWP-Casework and SWP-Community Work, this course provides the specialised knowledge needed for social work intervention at the social groupwork level of practice. Examines the phases of group development, the dynamics of group process, and a range of group work models which support the diversity of group work practice. An emphasis is placed on experiential learning and skills development in addition to theoretical/conceptual understanding.

SOCW3004
Social Policy 1
School of Social Work
Staff Contact: E Baldry
UOC6 HPW3 S2

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
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW4 S2

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
Staff Contact: J Breckenridge
UOC6 HPW3 S2

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
Staff Contact: M Hughes
UOC6 HPW3 S2

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
Staff Contact: R Roberts
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: M Hughes
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: R Roberts
UOC6 HPW3 S1
Prerequisite/s: SOCW3001, SOCW3002, SOCW3008.

Students take a second selected studies component to complement that taken in SOCW3008.

SOCW4004
Social Philosophy
School of Social Work
Staff Contact: R Hugman
UOC6 HPW3 S1

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
Staff Contact: E Baldry
Enrolment requires School approval
UOC6 HPW4 S1
Prerequisite/s: 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
Staff Contact: E Pittaway
UOC6 HPW3 S1

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
Staff Contact: J Breckenridge
UOC24 HPW15 S2
Prerequisite/s: 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.

SOLA1050
Introduction to Photovoltaics, Solar Energy and Computing 1
Centre for Photovoltaic Engineering
Staff Contact: J Cotter
UOC6 HPW4 S1

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 programing 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
Centre for Photovoltaic Engineering
Staff Contact: S Wenham
UOC3 HPW3 S2

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 programing 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.

SOLA1055
Introduction to Renewable Energy Technologies 1
Centre for Photovoltaic Engineering
Staff Contact: J Colter
UOC6 HPW4 S1

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
Centre for Photovoltaic Engineering
Staff Contact: S Wenham
UOC3 HPW3 S2

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
Centre for Photovoltaic Engineering
Staff Contact: A Sproul
UOC3 HPW3 S2

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 correspondening 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
Centre for Photovoltaic Engineering
Staff Contact: School Office
UOC9 HPW6 S2

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
Centre for Photovoltaic Engineering
Staff Contact: S Wenham
UOC6 HPW4 S1

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 optimise performance and maximise 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
Centre for Photovoltaic Engineering
Staff Contact: J Cotter
UOC6 HPW3 S1

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 personations, system design, modelling, etc.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.

SOLA2052
Project in Photovoltaics and Solar Energy 2
Centre for Photovoltaic Engineering
Staff Contact: School Office
UOC6 S2

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 personations, system design, modelling, etc. 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.

SOLA2053
Sustainable & Renewable Energy Technologies
Centre for Photovoltaic Engineering
Staff Contact: J Colter
UOC6 HPW4 S2

Includes an introduction into issues in sustainable and renewable energy, including environmental impact, life cycle costing, energy payback time 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 sustainable energy generation systems, including an overview of wind, solar thermal, photovoltaics, hydro and biomass technology and issues. The course will be conducted by external specialists where appropriate to provide a detailed working knowledge of related areas of engineering with which the renewable energy engineer is likely to interface.

SOLA3010
Photovoltaics in the Built Environment
Centre for Photovoltaic Engineering
Staff Contact: School Office
UOC6 HPW4 S2

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 envelope 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.

SOLA3540
Applied Photovoltaics
Centre for Photovoltaic Engineering
Staff Contact: A Sproul
UOC6 HPW4 S1

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
Centre for Photovoltaic Engineering
Staff Contact: School Office
UOC6 HPW5 S1 S2

SOLA4911
Thesis Part B
Centre for Photovoltaic Engineering
Staff Contact: School Office
UOC12 HPW10 S1 S2

The Thesis 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. 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.

SOLA5050
Renewable Energy Policy and International Programs
Centre for Photovoltaic Engineering
Staff Contact: School Office
UOC3 HPW3 S1

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
Centre for Photovoltaic Engineering
Staff Contact: A Sproul
UOC6 HPW4 S1

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.

SOLA5059
Industrial Elective
Centre for Photovoltaic Engineering
Staff Contact: School Office
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. 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 Centre for Photovoltaic Engineering.

SOLA5061
Industrial Elective
Centre for Photovoltaic Engineering
Staff Contact: School Office
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. 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 Centre for Photovoltaic Engineering.

SOMA1312
Photomedia 1
School of Media Arts
Staff Contact: School Office
UOC8 HPW6 S2
Prerequisite/s: SART1302, SART1402

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 focussed toward the development of the individual s visual language. Students will have the opportunity to explore the use of image-making processes such as digital imaging and the opportunity to consider the relationship of photomedia to time-based media and three-dimensional form.

SOMA1315
Time-Based Art 1
School of Media Arts
Staff Contact: School Office
UOC8 HPW6 S2
Prerequisite/s: SART1302, SART1402

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 1 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
Photomedia Elective 1
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S1 S2

The aim of these courses 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. The following basics are covered in Phototmedia Elective 1: overview of 35 mm camera operation; B/W film types and exposure; processing and printing; print finishing and presentation. The following Photomedia skills are covered in Photomedia Elective 2-3: colour photography and printing.

SOMA1600
Language of Digital Media
School of Media Arts
Staff Contact: School Office
UOC4 HPW2 S1

Digital media create and communicate experience in ways which are both specific to the media and embedded in broader cultural, historical and political contexts. Digital media practice employs technical problem-solving skills and logical thought to generate content which is conceptually and aesthetically resolved and culturally meaningful. In this course, the analogy between digital media language and spoken and written language highlights the semantics and structures of computer languages. Distinguished from everyday languages by their use of formal logics and mathematics, computer programming languages are based on logical, abstract and systematic thought. Also explored are other aspects of digital media which are central to reading screen images and text: these include concepts of navigation and non-linear organisation, issues of keystroke function, game structure, resolution and frame rate. This course deals with the development of computer programming languages and the broader contexts within which those languages are deployed to make culturally meaningful communication.

SOMA1602
Web Authoring
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S2

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
Staff Contact: School Office
UOC4 HPW3 S1

The course is designed to explore and expand an understanding of video production methods and practice, analog then digital. The course is comprised of: technical demonstrations and workshops, discussions and tutorials, individual and group project development, assessment and critique, proficiency on analog 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
Staff Contact: School Office
UOC4 HPW3 S1

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
Staff Contact: School Office
UOC4 HPW3 S2

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 1
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S2

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 Elective 1
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S2

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
Animation Elective 1
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S1

The Animation Electives explore an overview of various animation techniques in both traditional film and computer graphic forms as well as ways of combining these various techniques. This sequence of courses encourage experimentation on the part of the student. Such techniques as pixilation, cell animation, smudge animation, computer graphic manipulation of the image, computer animation, cut out techniques, in camera techniques, concepts of the frame, and landscape animation may be explored.Through the development of an awareness of movement and timing and the application of rigorous techniques to the various media the student s individual and experimental artistic practice will be developed.

SOMA1661
Performance Elective 1
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S2

These courses enable students to develop critically aware multi-disciplinary approaches, which will intelligently utilise the traditions of sound performance and installation in order to form a contemporary art practice which is innovative, challenging and pertinent. By exploration of the theoretical overview and the development of relevant skills, students will formulate and implement an extensive study of a field of practice in this area.

SOMA1681
Multimedia Computing Elective 1
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S1

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
Staff Contact: School Office
UOC4 HPW2 S1

This course 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.

SOMA2321
Photomedia 2
School of Media Arts
Staff Contact: School Office
UOC8 HPW8 S1
Prerequisite/s: SART1312 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 development of photomedia technical skills by introducing the student to digital image manipulation/colour processes and advanced studio based equipment. Students are directed toward an analysis and critical awareness of current visual arts practice, central to the production and advancement of their own work.

SOMA2324
Time-Based Art 2
School of Media Arts
Staff Contact: School Office
UOC8 HPW8 S1
Prerequisite/s: SOMA1315 or SART1402

This course introduces the conceptual understanding and technical skills underpinning practice in time-based arts. 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 3
School of Media Arts
Staff Contact: School Office
UOC8 HPW8 S2
Prerequisite/s: SOMA2321

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 digital and analogue skills acquired in Photomedia 1 and 2 are refined and applied to project work. Students explore a diversity of conceptual approaches in order to extend their use of visual language.

SOMA2334
Time-Based Art 3
School of Media Arts
Staff Contact: School Office
UOC8 HPW8 S2
Prerequisite/s: SOMA2324

This course furthers the conceptual understanding and technical skills underpinning practice in time-based arts. 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.

SOMA2521
Photomedia Elective 2
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S1 S2

The aim of these courses 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. The following basics are covered in Phototmedia Elective 1: overview of 35 mm camera operation; B/W film types and exposure; processing and printing; print finishing and presentation. The following Photomedia skills are covered in Photomedia Elective 2-3: colour photography and printing.

SOMA2602
Sound Media 1
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S2

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
Multimedia Authoring 2
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S2

Multimedia Authoring 2 extends the students experience gained in Multimedia Authoring, furthering the conceptual understanding, appreciation and technical skills underpinning interactive practice.

SOMA2607
Multimedia Authoring 1
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S1

Multimedia authoring provides the platform for student 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. The pre requisite for Multimedia Authoring is Web Authoring.

SOMA2608
Digital Composite 2
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S1

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 Graphics & Modelling 1
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S1

This course introduces students to aspects of 3D Modelling including; modelling primitives, character generation, texture mapping, rendering, and ray tracing. The Graphics & Modelling course seeks to establish an awareness of the three-dimensional world and alertness to the possibilities within. Emphasis is placed on 3D-skill development and strategies suitable to the integration of the 3D into other digital media.

SOMA2610
Writing for the Digital Media
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S1

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
Animation Elective 2
School of Media Arts
Staff Contact: School Office
UOC4 HPW3

The Animation electives explore an overview of various animation techniques in both traditional film and computer graphic forms as well as ways of combining these various techniques. This sequence of courses encourages experimentation on the part of the student. Such techniques as pixilation, cell animation, smudge animation, computer graphic manipulation of the image, computer animation, cut out techniques, in camera techniques, concepts of the frame, and landscape animation may be explored.Through the development of an awareness of movement and timing and the application of rigorous techniques to the various media the student's individual and experimental artistic practice will be developed.

SOMA2661
Performance Elective 2
School of Media Arts
Staff Contact: School Office
UOC4 HPW3

These courses enable students to develop critically aware multi-disciplinary approaches, which will intelligently utilise the traditions of sound performance and installation in order to form a contemporary art practice which is innovative, challenging and pertinent. By exploration of the theoretical overview and the development of relevant skills, students will formulate and implement an extensive study of a field of practice in this area.

SOMA2681
Multimedia Computing Elective 2
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S2

These courses 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.

SOMA2811
Multimedia Computing Workshop
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S2

The course consists of a series of workshop/tutorials examining contemporary art issues as explored through relevant software, particularly the interactive manipulation of digital photographic images, planar and 3D animation and sound. Classes include demonstrations and workshops, treatments, discussions and tutorials, review and critique.

SOMA2813
Video Workshop
School of Media Arts
Staff Contact: School Office
UOC4 HPW3

The course is designed to explore and expand an understanding of video production methods and practice. The course is comprised of technical demonstrations and workshops, discussions and tutorials, individual and group project development, assessment and critique. Proficiency on A/B roll editing will be gained in the workshop. The use of timecode, telecine, and sound editing will also be introduced.

SOMA2814
Cinematography Workshop
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S1
Prerequisite/s: SART1302, 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
Photomedia: Digital Imaging Workshop
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S2 X2

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.

SOMA2816
Photomedia: Analogue Workshop
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S2

The course introduces the student to the basic analogue skills in photography. Students will acquire technical skills in B/W photographic processes and are encouraged to explore, experiment and develop ideas through set projects. The course addresses and questions the content and context of the photographic image with relationship to the intent of the student.

SOMA2817
Extended Photomedia Workshop
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S1

In this workshop the student is introduced to extended photomedia processes and applications outside of the utilisation of the camera. The student is provided with the opportunity to experiment with photo-sensitive methods for transferring and reproducing images onto a variety of materials. Innovative and interdisciplinary activity will extend the student's image making opportunities. An emphasis is placed on the application of these new skills in work which continues to explore the individual s current areas of concern.

SOMA2837
Sound Studio: Advanced Workshop
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S2
Prerequisite/s: SOMA2812 or SOMA2602 or SOMA1812

Through consultation with the lecturer, each student will develop projects based upon the utilisation of the audio studio. This may be a soundtrack for a film, video, performance or computer based work or a recorded sound work. This course, if taken in conjunction with Time-Based Art 3, will facilitate the completion of advanced film and video projects within that unit.

SOMA2839
Animation Workshop
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S2

The Animation Workshop explores an overview of various animation techniques in both traditional film and computer graphic forms as well as ways of combining these various techniques. Such techniques as pixilation, cell animation, smudge animation, computer graphic manipulation of the image, computer animation, cut out techniques, in camera techniques, concepts of the frame, and landscape animation are explored.

SOMA2854
Digital Illustration and Text Workshop
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S1 S2
Prerequisite/s: 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: Scripting Storyboarding and Design Documentation for Interactive Media & Games
School of Media Arts
Staff Contact: P George
UOC4 HPW3 S2

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.

SOMA3341
Photomedia 4
School of Media Arts
Staff Contact: School Office
UOC8 HPW8 S1
Prerequisite/s: SOMA2331

In this course, the student will concentrate on developing the production of a body of work which demonstrates an understanding and refinement of the 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 their digital/ 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. Interdisciplinary studies are encouraged where relevant to the projects undertaken.

SOMA3344
Time-Based Art 4
School of Media Arts
Staff Contact: School Office
UOC8 HPW8 S1
Prerequisite/s: 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 5
School of Media Arts
Staff Contact: School Office
UOC8 HPW8
Prerequisite/s: SOMA3341

In this course the student will concentrate on the production of a substantial body of work which demonstrates an understanding and refinement of the concepts and contexts central to their individual art practice. The works produced will be a culmination of intensive research and study within the area of photomedia. The investigation is initiated by the student and undertaken with lecturer supervision. It is expected that students will continue to refine their digital/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. Interdisciplinary studies are encouraged where relevant to the projects undertaken.

SOMA3354
Time-Based Art 5
School of Media Arts
Staff Contact: School Office
UOC8 HPW8
Prerequisite/s: 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.

SOMA3521
Photomedia Elective 3
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S1 S2

The aim of these courses 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. The following basics are covered in Phototmedia Elective 1: overview of 35 mm camera operation; B/W film types and exposure; processing and printing; print finishing and presentation. The following Photomedia skills are covered in Photomedia Elective 2-3: colour photography and printing.

SOMA3603
Digital Video 2
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S2

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
Staff Contact: School Office
UOC4 HPW3 S1

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. The pre-requisite for Digital Composite 3 is Digital Composite 2.

SOMA3609
Graphics and Modelling 2
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S2

This course builds on the experience and skills developed from Graphics & Modelling then extends the students experience into 3D animation, visualisation, broadcast graphics, special effects, multimedia and digital imaging.

SOMA3610
Digital Studio
School of Media Arts
Staff Contact: School Office
UOC6 HPW6 S1

The digital studio course has been establish 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
Staff Contact: P George
UOC4 HPW3 S2

The Industry Placement program is seen as a critical component of the BDM. Students are placed into appropriate industry settings, ether 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
Staff Contact: School Office
UOC4 HPW4 S2

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 discreet 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
Staff Contact: School Office
UOC4 HPW3 S1 S2
Prerequisite/s: SOMA2602 or SOMA2812 or SOMA2837

"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
Staff Contact: School Office
UOC4 HPW3 S1

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.

SOMA3651
Animation Elective 3
School of Media Arts
Staff Contact: School Office
UOC4 HPW3

The Animation Electives explore an overview of various animation techniques in both traditional film and computer graphic forms as well as ways of combining these various techniques. This sequence of courses encourages experimentation on the part of the student. Such techniques as pixilation, cell animation, smudge animation, computer graphic manipulation of the image, computer animation, cut out techniques, in camera techniques, concepts of the frame, and landscape animation may be explored.Through the development of an awareness of movement and timing and the application of rigorous techniques to the various media the student s individual and experimental artistic practice will be developed.

SOMA3661
Performance Elective 3
School of Media Arts
Staff Contact: School Office
UOC4 HPW3

These courses enable students to develop critically aware multi-disciplinary approaches, which will intelligently utilise the traditions of sound performance and installation in order to form a contemporary art practice which is innovative, challenging and pertinent. By exploration of the theoretical overview and the development of relevant skills, students will formulate and implement an extensive study of a field of practice in this area.

SOMA3681
Multimedia Computing Elective 3
School of Media Arts
Staff Contact: School Office
UOC4 HPW3

These courses 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.

SOMA3840
Advanced Multimedia Computing Workshop
School of Media Arts
Staff Contact: School Office
UOC4 HPW3

This advanced workshop explores concepts and techniques of 3D simulation. Notions of linear sequence and interactive structures in the production of artworks are both explored. Individual elements of sound, image and text are generated using these programs with the knowledge that these elements could become frames/fragments of time-based works.

SOMA3858
Advanced Analogue - Studio Lighting and Camera Workshop
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S1

In this studio workshop, the student is introduced to advanced techniques for studio based photography and their creative applications. The student will need to have a knowledge of B/W and colour photography, camera operation, exposure, film processing and print production. This knowledge will be extended to studio lighting techniques and large format camera operation. Projects are set which focus on the production of photographic images for contemporary visual art works. The emphasis is on the development of skills suitable for integration into visual arts practices.

SOMA3859
Advanced Digital Imaging - 3D Workshop
School of Media Arts
Staff Contact: School Office
UOC4 HPW3 S2

In this studio workshop, the student is introduced to advanced techniques for digital imaging and their creative application. The subject is founded on a pre-requisite knowledge of 2D digital imaging techniques. This knowledge is extended into a variety of 3D digital imaging techniques to be used by the student within projects which focus on image production and visualisation for contemporary visual art works. Students will also explore how to combine 2D and 3D digital imaging techniques together. Finally students will investigate a variety of options for digital print output, and how to navigate the colour correction of digital files to a selected print media. The emphasis is on the development of skills suitable for the integration of digital technologies into visual arts practices.

SOMA3861
Art Science & Visualisation
School of Media Arts
Staff Contact: School Office
UOC6

Assumed knowledge of photographic processes and digital imaging software is necessary for this course; the equivalant of SART1312. This course will introduce students to contemporary and historical crossovers and collaborations between art,science and medicine, looking at imaging and visualisation techniques such as microscopy, electron microscopy , anatomical photography, DNA sequencing and visualisation. Positioning these within the history of art and science from the seventeenth century to the present, it will examine the differences between documentation and representation in the scientific image, the concept of the clinical gaze, imaging the unseen and virtual representations of the organic and inorganic worlds. These concerns will be addressed at both a studio and theory level with equal time time spent on developing historical anad conceptual understanding of scientific imaging and acquiring basic technical skills in producing and working with various kinds of images.

SOMA4045
Honours Program - Bachelor of Digital Media
School of Media Arts
Staff Contact: School Office
UOC21 S1 S2
Prerequisite/s: Bachelor of Digital Media 4810.

The Bachelor of Digital Media (BDM) Honours program is a one-year full time program, at a higher level of study. 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 possible complexity of the media. It is with this in mind that the BDM Honours program may include, where appropriate collaborative work.

SOMA4046
Honours Program - Bachelor of Digital Media
School of Media Arts
Staff Contact: School Office
UOC15 S2
Prerequisite/s: Bachelor of Digital Media 4810.

The Bachelor of Digital Media (BDM) Honours program is a one-year full time program, at a higher level of study. 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 possible complexity of the media. It is with this in mind that the BDM Honours program may include, where appropriate collaborative work.

SPAN1001
Introductory Spanish 1A
Department of Spanish and Latin American
Staff Contact: C Cabot
UOC6 HPW6 S1
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/s: 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 and Latin American
Staff Contact: C Cabot
UOC6 HPW6 S2
Prerequisite/s: 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.

SPAN1021
Introductory Spanish 1C
Department of Spanish and Latin American
Staff Contact: D Palaversich
UOC6 HPW5 S1
Excluded: SPAN1000, SPAN1001, SPAN1020, SPAN1100.

Begins an intensive review of Spanish grammar and stimulates the development of writing skills. It also contains an introduction to the history, literature and culture of Spain and Latin America. Three hours language, two hours literature and one hour civilisation lecture. All language and literature teaching is in tutorial groups.
Note/s: For students with previous knowledge of Spanish. An assessment of each student's existing knowledge of Spanish will be made in Week 1.

SPAN1022
Introductory Spanish 1D
Department of Spanish and Latin American
Staff Contact: D Palaversich
UOC6 HPW5 S2
Prerequisite/s: SPAN1021;
Excluded: SPAN1000, SPAN1002, SPAN1020, SPAN1100.

For students who completed SPAN1021. Completes an intensive review of Spanish grammar and continues the development of writing skills. Also contains an introduction to the history, literature and culture of Spain and Latin America. Three hours language, two hours literature and one hour civilisation lecture.

SPAN2003
Intermediate Spanish A
Department of Spanish and Latin American
Staff Contact: G Funegra
UOC6 HPW5 S1
Prerequisite/s: 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 and Latin American
Staff Contact: School Office
UOC6 HPW5 S2
Prerequisite/s: SPAN2001 or SPAN2003;
Excluded: SPAN2002.

Two hours audio/visual comprehension and two hours of grammar/reading/written expression, plus one hour of cultural studies.

SPAN2023
Intermediate Spanish C
Department of Spanish and Latin American
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: SPAN1020 at credit level or SPAN1022;
Excluded: SPAN2021.

One hour grammar, one hour aural comprehension, one hour discussion, one hour video.

SPAN2024
Intermediate Spanish D
Department of Spanish and Latin American
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: SPAN2023;
Excluded: SPAN2022.

One hour grammar, one hour aural comprehension, one hour discussion, one hour video.

SPAN2401
Colonising the Americas: The Spanish and Portuguese Empires
Department of Spanish and Latin American
Staff Contact: P Ross
UOC6 HPW3 S1
Prerequisite/s: 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.

SPAN2406
Modern Spain: From Loss of Empire to European Integration
Department of Spanish and Latin American
Staff Contact: P Ross
UOC6 HPW3 S1
Prerequisite/s: 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.

SPAN2418
Amazonia
Department of Spanish and Latin American
Staff Contact: P Ross
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit in Arts and Social Science courses;
Excluded: GENS4529, GENT0403.

The geography of the region examined with the object of delineating its natural ecosystems and the impact on these of contemporary development programs.

SPAN2421
Special Topic in Latin American History 1
Department of Spanish and Latin American
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 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.

SPAN2422
Special Topic in Latin American History 2
Department of Spanish and Latin American
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: 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.

SPAN2428
(Un)Making the Third World: History and Global Development B
Department of Spanish and Latin American
Staff Contact: M Berger
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit in Arts and Social Science courses;
Excluded: COMD2010, 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 and Latin American
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: HIST2061, COMD2020, 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 and Latin American
Staff Contact: M Berger
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: 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.

SPAN2432
Twentieth Century World History
Department of Spanish and Latin American
Staff Contact: M Berger
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: HIST2000, INST2001

Focuses on the major forces and features of twentieth century world history. Includes colonialism, nationalism, decolonisation, revolution and the Cold War. In particular, this course seeks to place the post-Cold War era within the context of twentieth century world history.

SPAN3003
Advanced Spanish A
Department of Spanish and Latin American
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 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 and Latin American
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: SPAN3001 or SPAN3003;
Excluded: SPAN3002.

Two hours grammar, one hour aural comprehension, one hour audiovisual.

SPAN3031
An Introduction to Translation
Department of Spanish and Latin American
Staff Contact: J Brotherton
UOC6 HPW3 S2
Prerequisite/s: SPAN1020 or SPAN1010 or SPAN1022

A practical study of translation methodology in a series of contexts - welfare, legal, commercial and literary, but with an emphasis towards preparation for NAATI examinations.

SPAN3040
Spanish Linguistics
Department of Spanish and Latin American
Staff Contact: C Cabot
UOC6 HPW3 S1
Prerequisite/s: 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/s: The language of instruction is Spanish.

SPAN3310
The Theatre of Garcia Lorca
Department of Spanish and Latin American
Staff Contact: J Brotherton
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit

Federico Garcia Lorca is one of the leading playwrights of the twentieth century. The course, with seminars in English and tutorials in Spanish or English, analyses Lorca's major plays, tracing his quest for a dramatic form suitable to express his constant preoccupations - death, time, frustration and impotence.

SPAN3900
Special Topic in Hispanic Studies (Advanced)
Department of Spanish and Latin American
Staff Contact: C Cabot
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit including 12 units of Spanish at credit level

This course is tailor-made to individual student requirements in consultation with staff members in the Department. Students will undertake an extensive reading of primary and secondary sources on selected areas in Spanish and Latin American Studies. They will be required to produce bibliographies and a number of essays or papers displaying a developed understanding of the materials involved in their chosen topics.

SPAN4000
Spanish and Latin American Studies Honours F/T
Department of Spanish and Latin American
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 54 units of credit in SPAN at an average of 65% 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 P/T
Department of Spanish and Latin American
Staff Contact: School Office
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 54 units of credit in SPAN at an average of 65% 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 and Latin American
Staff Contact: School Office
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 48 units of credit in SPAN at an average of 65% 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 SPAN1020 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 and Latin American
Staff Contact: School Office
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 48 units of credit in SPAN at an average of 65% 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 SPAN1020 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.

TAHM1666
Tourism and Hospitality Operational Studies 1
School of Marketing
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW6 S1
Prerequisite/s: Admission to program 3571

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 750 hours of industry employment in stages 2, 3 and 4.

TAHM1777
Tourism and Hospitality Operational Studies 2
School of Marketing
Staff Contact: School Office
UOC6 HPW6 S2
Prerequisite/s: TAHM1666

This course provides theoretical and practical training in food and beverage management, food production or meetings and events, and management principles. The training takes place at an accredited hospitality and tourism training college and prepares students for the program requirement of 750 hours of industry employment in stages 2, 3 and 4.

TAHM2001
Tourism Policy and Planning 1
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: MARK1012

This course provides a grounding in the fundamental strategic and managerial components of the tourism and the hospitality industry, and analyses the characteristics of key industry segements. Strategic, managerial and policy issues are analysed and evaluated. Topics include: structural frameworks of the industry, legislative frameworks, environmental and market frameworks, transport, lodging, events and attractions, and special interests.

TAHM2002
Tourism Marketing
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: TAHM2001

This course examines the marketing context of tourism and hospitality. Major topics include: marketing of public and private sector tourism products and destinations; global dimensions of tourism; strategic destination marketing; consumer decision processes; strategic marketing systems of multinational tourism companies. The course includes seminars with industry executives and field trips.

TAHM2888
Applied Tourism & Hospitality Management 1
School of Marketing
Staff Contact: School Office
UOC6 S2
Prerequisite/s: TAHM1777

This course complements the theory and operational training gained in stage 1 with a period of at least 250 hours of industry employment in the summer vacation at the end of that year.

TAHM3001
Legal Aspects of Tourism
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: TAHM2002

This course examines the legal foundations of commerce in the tourism and hospitality industry. Topics include: national and international laws relating to tourism; legal environment of facilities, agents and operators; interaction of community and developer needs, consumer rights, and the implication of national and international regulations governing the sale and supply of hospitality services including food.

TAHM3002
Tourism and Hospitality Operations Management
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: TAHM2002

This course examines the competitive operational methods that Tourism and Hospitality businesses use to achieve their strategic goals. Topics include: environmental scanning; identifying forces driving change; choosing competitive methods; portfolios of products and services; competitive advantage; core competencies as competitive methods; managing service quality; globalisation, multinationals and corporate strategies.

TAHM3003
Tourism Policy and Planning 2
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: TAHM3002

This course analyses the institutional, financial, regulatory, legal and industrial environment of tourism and hospitality, and the strategic relationships between investors, developers, operators and regulators within it. Resulting policy and investment planning issues are analysed and evaluated.

TAHM3004
Managing People in the Tourism and Hospitality Industry
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: TAHM3002

This course examines the management of employees in hospitality and tourism operations. It uses human resources, organisational development and services marketing frameworks to understand contemporary and future employment in these sectors. Topics include: recruiting and selection; training and development; leadership; teamwork; stress management and managing turnover; corporate culture and climate; performance evaluation and career pathing.

TAHM3888
Applied Tourism and Hospitality Management 2
School of Marketing
Staff Contact: School Office
UOC6 S2
Prerequisite/s: TAHM2888

This course complements the theory and operational training gained in stage 2 with a period of at least 250 hours of industry employment in the summer vacation at the conclusion of that stage.

TAHM4001
Customer Experience Management
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: TAHM3004

This course uses a services marketing approach to examine the management of customer experience. These experiences are experiential and physical. The experiential elements include a focus on the principles of hospitality as a specific strategy in the process of service provision. The physical elements of the service environment are explored through the planning and management of the facilities that comprise the servicescape. Typically, topics include: defining service and the customer experience, hospitality as a theoretical framework, measuring service quality, measuring experiences and satisfaction, planning and designing the servicescape, the branded service environment, service delivery, the role of personnel and customers, service recovery, managing supply and demand, service product pricing.

TAHM4002
Project Report in Tourism and Hospitality
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: TAHM3004

This course builds on the thoretical principles of marketing research in an original, investigative project in tourism and hospitality policy or management.

TAHM4003
Strategic Management in Tourism and Hospitality
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: TAHM4001

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. It involves experiential learning with industry executives in workshops and seminars, debating current issues.

TAHM4888
Applied Tourism and Hospitality Management 3
School of Marketing
Staff Contact: School Office
UOC6 S2
Prerequisite/s: TAHM3888

This course complements the theory and operational training gained in stage 3 with a period of at least 250 hours of industry employment in the summer vacation.

TELE1010
Introduction to Telecommunications
School of Electrical Eng and Telecommunications
Staff Contact: I MacGill
UOC3 HPW3 S1

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 Eng and Telecommunications
Staff Contact: J Yuan K Willey
UOC6 HPW4 S1 S2
Prerequisite/s: 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, inters symbol 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 Eng and Telecommunications
Staff Contact: I Skinner
UOC3 HPW3 S2
Prerequisite/s: PHYS2939 or PHYS2949.

Maxwell equations & electromagnetic waves; polaraization & 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 Eng and Telecommunications
Staff Contact: T Moors
UOC6 HPW4 S2
Prerequisite/s: COMP1021and ELEC1041.

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 Eng and Telecommunications
Staff Contact: I Skinner
UOC6 HPW4 S1
Prerequisite/s: TELE3013;
Excluded: ELEC9350and 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-bases devices. Nonlinear and anisotropic effects.

TELE4323
Digital Modulation and Coding
School of Electrical Eng and Telecommunications
Staff Contact: J Choi
UOC6 HPW4 S1
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: J Yuan
UOC6 HPW4 S1 S2
Prerequisite/s: 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 acess (BWA). Application of wireless services. Future wireless services and software radios.

TELE4343
Source Coding and Compression
School of Electrical Eng and Telecommunications
Staff Contact: D Taubman
UOC6 HPW4 S2
Prerequisite/s: TELE3013 and ELEC3004

Characteristics of analogue information sources (speech, audio, images, video). Sampling methods. Scalar and vector quantisation. Information and entropy. Elementary coding tools. Lossless compression methods. Lossy compression and distortion measures. Rate-distortion analysis and optimization. Basic waveform coding methods: PCM, DM, DPCM, etc.. Advanced waveform coding methods: linear transforms, including DCT and subband/Wavelet transforms; and predictive methods. Non-waveform methods, including vocoders and frequency domain methods. Major coding methods and standards for speech, audio, images and video. Embedded/progressive coding with applications in modern communication systems. Real time transmission of speech, audio and video in telecommunication systems, including fixed and variable bit rate coding.

TELE4352
Data Networks 2
School of Electrical Eng and Telecommunications
Staff Contact: B Thai
UOC6 HPW4 S1
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: P Rapajic
UOC6 HPW4 S2
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: A Seneviratne
UOC6 HPW4 S1
Prerequisite/s: 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 examine the concepts of content distribution networks.

TELE4363
Telecommunications Systems 2
School of Electrical Eng and Telecommunications
Staff Contact: T Moors
UOC6 HPW4 S1
Prerequisite/s: 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, Asymchronous 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 Eng and Telecommunications
Staff Contact: T Blackburn
UOC3 HPW4 S1 S2
Prerequisite/s: 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 required for Part B.

TELE4911
Thesis Part B
School of Electrical Eng and Telecommunications
Staff Contact: T Blackburn
UOC9 HPW10 S1 S2
Prerequisite/s: 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 Eng and Telecommunications
Staff Contact: T Blackburn
UOC3 HPW4 S1 S2
Prerequisite/s: 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 required for Group Thesis Part B.

TELE4915
Group Thesis Part B
School of Electrical Eng and Telecommunications
Staff Contact: T Blackburn
UOC9 HPW10 S1 S2
Prerequisite/s: 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.

THFI1002
Reading Performance
School of Theatre, Film and Dance
Staff Contact: M Meyer
UOC6 HPW3.5 S2
Excluded: THFI1000, THFI1001

Examines a range of performance practices in theatre, film, video and dance, to providing an introduction to different ways of theorising and analysing performance and performing bodies.

THFI2010
Comedy and Power
School of Theatre, Film and Dance
Staff Contact: J McCallum
UOC6 HPW3 S2
Prerequisite/s: DANC1103 or FILM1101 or PFST1103 or THFI1002 or THST1101 or 48 units of credit in credit in Arts and Social Sciences.

Studies stand-up, group and sketch-based comedy in live performance and on television since the 1950s, incorporating selected examples from Australia, New Zealand, USA, Canada and the UK.

THFI3903
Issues in Contemporary Film Theory
School of Theatre, Film and Dance
Staff Contact: J Brooks
UOC6 HPW3 S2
Prerequisite/s: 24 units of credit in DANC/FILM/PFST/THFI/THST at an average of credit grade or better

Focuses on specific debates in contemporary film theory. Topics will vary from year to year. Issues addressed: film sound, psychoanalysis and cinema, feminist film theory and practice: and theories of film time.

THFI4000
Theatre Film and Dance Honours (Research) F/T
School of Theatre, Film and Dance
Staff Contact: M Meyer
Enrolment requires School approval
UOC24 S1 S2
Prerequisite/s: 54 units of credit in DANC/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 dance or in theatre/film, theatre/dance or film/dance. In addition to seminar and practical project/thesis work, students are required to attend and contribute to regular thesis workshops.

THFI4050
Theatre Film & Dance Honours (Research) P/T
School of Theatre, Film and Dance
Staff Contact: M Meyer
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 54 units of credit in DANC/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 dance or in theatre/film, theatre/dance or film/dance. In addition to seminar and practical project/thesis work, students are required to attend and contribute to regular thesis workshops.

THFI4500
Combined Theatre and Film Studies Honours (Research) F/T
School of Theatre, Film and Dance
Staff Contact: M Meyer
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 48 units of credit in DANC/FILM/PFST/THFI/THST courses at 70% including THFI3902 and THFI3903 and permission from head of school.

Students who have 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.

THFI4550
Combined Theatre and Film Studies Honours (Research) P/T
School of Theatre, Film and Dance
Staff Contact: M Meyer
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 48 units of credit in DANC/FILM/PFST/THFI/THST courses at 70% including THFI3902 and THFI3903 and permission from head of school.

Students who have 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.

THST1101
Introduction to Theatre and Performance Studies
School of Theatre, Film and Dance
Staff Contact: J McCallum
UOC6 HPW3 S1
Excluded: THFI1000, THFI1001

Introduces the basic principles of and analytic vocabulary for the study of theatrical performance.

THST2111
Revolution and Change: Theatre in Nineteenth & Twentieth Century
School of Theatre, Film and Dance
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: THST1101 or FILM1101 or DANC1002 or THFI1002;
Excluded: THST2105, THST2106, THST2107, THST2183.

Studies European theatre, commencing with the rise of melodrama in the aftermath of the French Revolution, the influence of Romanticism and the development of Realism and Naturalism, with particular reference to the English, French and Scandinavian stages.

THST2135
Production Exercise
School of Theatre, Film and Dance
Staff Contact: C Grant
UOC6 S1 S2
Prerequisite/s: DANC1002 or FILM1101 or PFST1103 or THFI1002 or THST1101

Practical work on a theatrical presentation wIthin the School aimed at providing direct experience of the production process and its evaluation. ***Note/s:*** 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.

THST2143
Modern Theories of Acting
School of Theatre, Film and Dance
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: DANC1002 or DANC1103 or FILM1101 or PFST1103 or THFI1002 or THST1101 or 48 units of credit in Arts and Social Sciences

Explores some of the major innovations in the theory and practice of acting in the twentieth century.

THST2145
Writing for Performance
School of Theatre, Film and Dance
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: DANC1002 or DANC1103 or FILM1101 or PFST1103 or THFI1002 or THST1101 or 48 units of credit in Arts and Social Sciences

An introduction to writing for a performance space, with special focus on the writer and her/his material. Practical exercises and discussion which develop some strategies for approaching writing for live performance.

THST2161
Contemporary Theatre
School of Theatre, Film and Dance
Staff Contact: J McCallum
UOC6 HPW3 S2
Prerequisite/s: DANC1002 or DANC1103 or FILM1101 or PFST1103 or THFI1002 or THST1011 or 48 units of credit in Arts and Social Sciences;
Excluded: IRSH2021

Studies recent developments in theatre and drama, in various countries, over the last 40 years.

THST2163
Staging Australia
School of Theatre, Film and Dance
Staff Contact: J McCallum
UOC6 HPW3 S1
Prerequisite/s: DANC1002 or DANC1103 or FILM1101 or PFST1002 or THFI1002 or THST1101 or 48 units of credit in Arts and Social Sciences;
Excluded: AUST2027

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.

WOMS1001
Introduction to Feminism
School of History
Staff Contact: H Bowen Raddeker
UOC6 HPW3 S2

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
Staff Contact: H Bowen Raddeker
UOC6 HPW3 S1
Excluded: 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 periodisations 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.

WOMS2001
Twentieth-Century Women Writers
School of English
Staff Contact: E McMahon
UOC6 HPW3 S1
Prerequisite/s: 36 units of credit;
Excluded: ENGL2400

Introduces the work of major and adventurous women writers of this century, which draws on the genres of novel, short story, poetry and drama. A wide range of issues will be explored, including formal innovation, identity formation and the interaction of gender, race and class within the practices of writing and reading.

WOMS2002
Gender, Race, Nature and Reason
School of History
Staff Contact: J Milfull
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: EURO2001, HIST2761, SOCA3315.

Vital concepts like equality, freedom and emancipation seem inseparable from the European 'Enlightenment'. Yet the following century saw the development of a new and more subtle form of patriarchy, the increasing discrimination and exploitation of colonised peoples and minorities, and the emergence of nationalism and Fascism. Explores a range of texts in literature, philosophy and social history from the eighteenth century to the present, and seeks to analyse both the so-called 'failure(s) of enlightenment' and the impact of the two central and inter-related concepts, nature and reason, that shaped its program.

WOMS2003
A History of Sexualities
School of History
Staff Contact: M Azzolini
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: H Pringle
UOC6 HPW3 S1
Prerequisite/s: 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
Staff Contact: V Kirby
UOC6 HPW3 S2
Prerequisite/s: 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
Staff Contact: V Farrer
UOC6 HPW3 S2
Prerequisite/s: 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.

WOMS2007
Crime, Gender and Sexuality
School of Sociology
Staff Contact: School Office
UOC6 HPW3 X1
Prerequisite/s: 36 units of credit;
Excluded: GENT1207, SOCA3409

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.

WOMS2008
Australian Masculinities: Reading Gender, Sex and Culture
School of English
Staff Contact: E McMahon
UOC6 HPW3 S2
Prerequisite/s: 36 units of credit;
Excluded: AUST2033, ENGL3470

Explores the construction of masculinities through the study of a range of Australian texts. Beginning with an examination of key theoretical readings in the area of gender, sex and masculinity, the course will move on to analyse these issues in a number of texts from various genres, both fictional and non-fictional, and various media, including literature, film and television.

WOMS4500
Combined Women's and Gender Studies Honours (Research) F/T
School of History
Staff Contact: H Bowen Raddeker
Enrolment requires School approval
UOC12 S1 S2
Prerequisite/s: 48 units of credit, including 6 Level 1 in WOMS at credit level and permission from the Co-ordinator.

Students are required to complete coursework nominated by the Women's and Gender Studies Co-ordinator. 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) P/T
School of History
Staff Contact: H Bowen Raddeker
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: 48 units of credit, including 6 Level 1 in WOMS at credit level and permission from the Co-ordinator.

Students are required to complete coursework nominated by the Women's and Gender Studies Co-ordinator. 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.

The University of New South Wales • Kensington Campus

Theatres

Applied Science Theatre **F11**
Athol Lykke Theatre **C27**
Biomedical Theatres **E27**
Central Lecture Block (CLB) **E19**
Clancy Auditorium **C24**
Classroom Block *(Western Grounds)* **H3**
Fig Tree Theatre **B14**
Hefffron Theatres *(Dwyer, Mellor, Murphy, Nyholm, Smith)* **E12**
Io Myers Studio **D9**
Keith Burrows Theatre **J14**
Macauley Theatre **E15**
Mathews Theatres **D23**
Parade Theatre **E3**
Physics Theatre **K14**
Rex Vowels Theatre **F17**
Science Theatre **F13**
Webster Theatres **G15**

Buildings

AGSM **G27**
Applied Science **F10**
Arcade **D24**
Barker Apartments **N13**
Basser College **C18**
Baxter College **D14**
Biological Sciences **D26**
Blockhouse **G6**
Chancellery **C22**
Civil Engineering **H22**
Dalton **F12**
Electrical Engineering **G17**
Goldstein College **D16**
Goodsell **F20**
Golf House **A27**
Heffron **E12**
International House **C6**
Kensington Colleges *(Office)* **C17**
Library *(University)* **E21**
Library Stage 2 **F21**
Mechanical Engineering **J17**
Main **K15**
Mathews **F23**
Morven Brown **C20**
Myers, Sir Rupert **M15**
New College **L6**
Newton **J12**
NIDA **D2**
Parking Station (Barker Street) **N18**
Parking Station (Botany Street) **H25**
Pavilions, The **E24**
Philip Baxter College **D14**
Quadrangle **E15**
Red Centre **H13**
Roundhouse **E6**
Sam Cracknell Pavilion **H8**
Samuels **F25**
Shalom College **N9**
Squarehouse **E4**
The Scientia **G19**
University Regiment **J2**
Vallentine Annexe **H22**
Wallace Wurth School of Medicine **C27**
Warrane College **M7**
Webster, Sir Robert **G14**
Willis Annexe **J18**

Faculty Offices

Arts and Social Sciences **C20**
Australian Graduate School of Management AGSM **G27**
Built Environment **H13**
Commerce and Economics **F20**
Engineering **K17**
Law (Library Stage 2) **F21**
Medicine **B27**
Science **D26**

School Offices

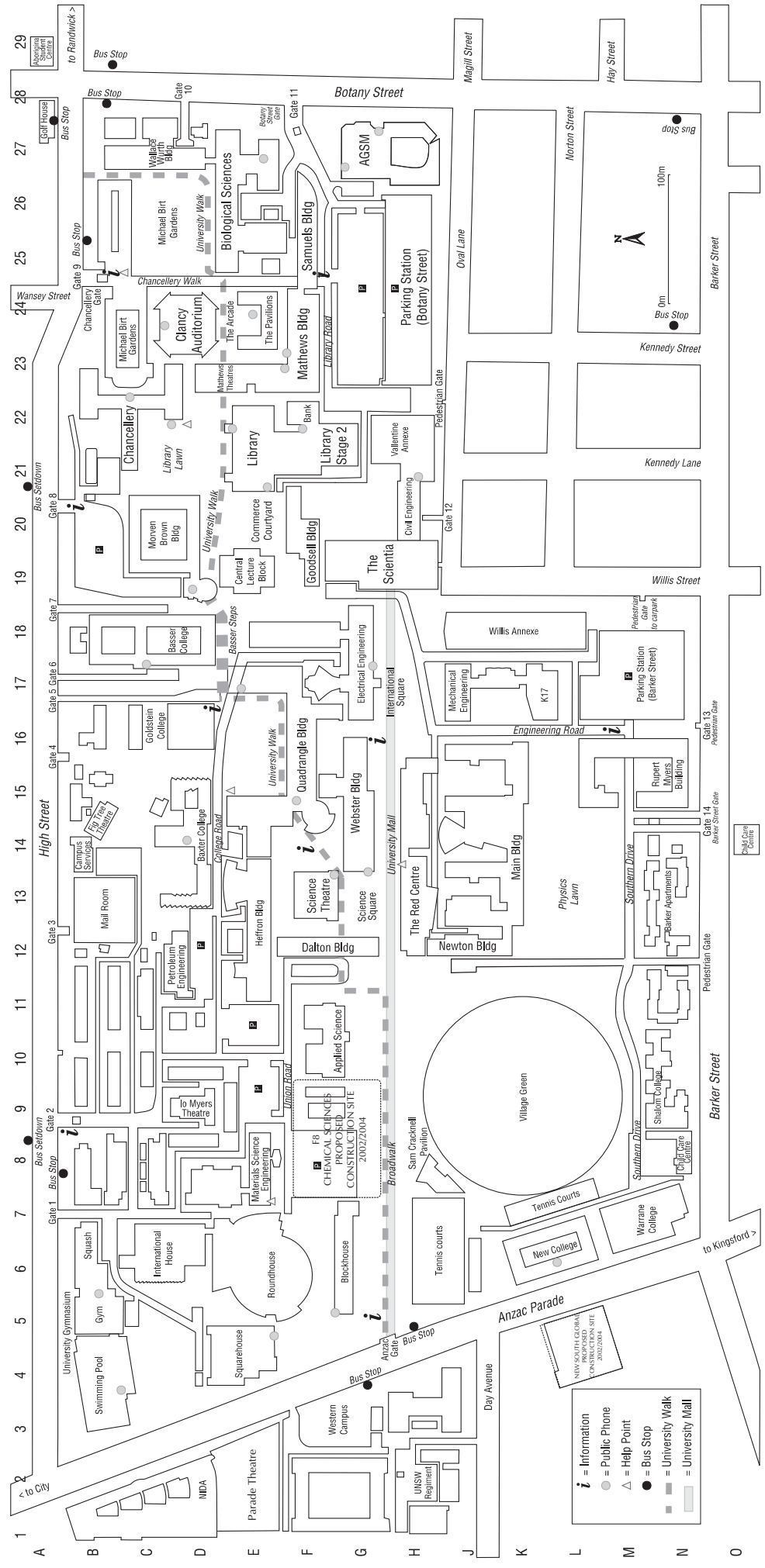
Accounting **E15**
Anatomy **B27**
Applied Bioscience **D26**
Architecture Program **H13**
Banking and Finance **E15**
Biochemistry and Molecular Genetics **D26**
Biological Science **D26**
Building Construction Management Program **H13**
Business Law and Taxation **E15**
Chemical Engineering and Industrial Chemistry **F10**
Chemistry **E12**
Civil and Environmental Engineering **H20**
Community Medicine **D26**
Computer Science and Engineering **K17**
Economics **F20**
Education Studies **F23**
Electrical Engineering and Telecommunications **G17**
English **C20**
Geography **F10**
Geology **F10**
Geomatic Engineering **G17**
Health Services Management **F25**
History **C20**
Industrial Design Program **H13**
Industrial Relations and Organisational Behaviour **F20**
Information, Archive and Library Studies **F23**
Information Systems **E15**
Interior Architecture Program **H13**
International Business **E15**
Landscape Architecture Program **H13**
Law (Library Stage 2) **F21**
Marketing **F20**
Materials Science and Engineering **E8**
Mathematics **H13**
Mechanical and Manufacturing Engineering **J17**
Media and Communications **G15**
Medical Education **C27**
Microbiology and Immunology **D26**
Mining Engineering **K15**
Modern Language Studies **C20**
Music and Music Education **G15**
Optometry and Vison Science **M15**
Paediatrics **C27**
Pathology **C27**
Petroleum Engineering **D12**
Philosophy **C20**
Physics **K15**
Physiology and Pharmacology **C27**
Planning and Urban Development Program **H13**
Political Science **C20**
Psychology **F23**
Safety Science **B11a**
Science and Technology Studies **C20**
Social Science and Policy **C20**
Social Work **F23**
Sociology **C20**
Theatre Film and Dance **G14**

Services

Aboriginal Student Centre **A29**
Access Scheme – Equity and Diversity Unit **E15**
Accommodation– Housing Office **E15**
Admissions and Enrolment – Student Centre **C22**
Biomedical Library **F23**
Campus Conferencing **C22**
Campus Services **B14a**
Cashier **C22**
Careers and Employment Office **E15**
Chaplains **E4**
Child Care Centres -
- House at Pooh Corner **N8**
- Kangas House **O14**
- Tiggers/Honey Pot – 34 Botany St.

Co-op program **M15**
CONTACT **E15**
Counselling Service **E15**
Equity and Diversity Unit **E15**
Facilities Department **C22**
Graduate Programs in Business Technology **J12**
Health Service **E15**
Housing Office **E15**
Human Resources **C22**
Law Library **F21**
NewSouthQ Student Centre **C22**
Public Affairs and Development **C22**
Publishing and Printing Services **C22**
Religious Services **E4**
Research Office **M15**
Roundtable Conferencing and Catering **E4**
SECURITY /Lost Property/Parking **H13**
Sports Association **H8**
Student Centre **C22**
Student Guild **E15**
Student Recruitment Office **C22**
Unisearch Limited **M15**
University Gymnasium **B5**
University Union
- Blockhouse **G6**
- Roundhouse **E6**
- Squarehouse **E4**

UNSW Bookshop **E15**
UNSW International **H13**



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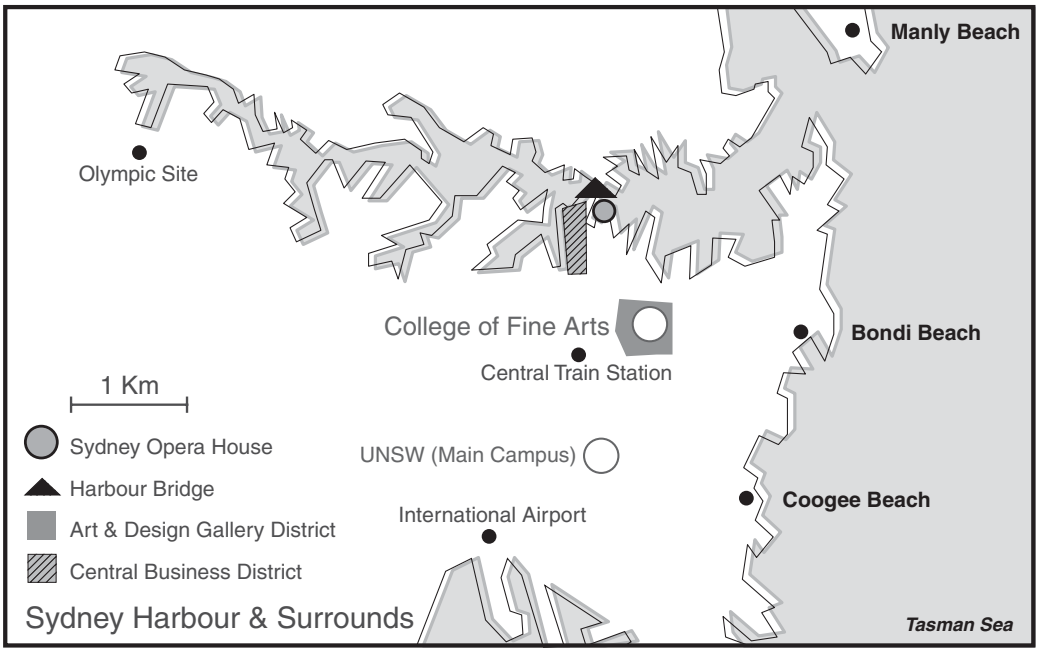
COFA Campus Location



Paddington