UNSW

THE UNIVERSITY OF NEW SOUTH WALES

Postgraduate 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.

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UNSW Postgraduate 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. Detailed information is available on the web at **www.student.unsw.edu.au**

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 school notice-boards and the official notice-boards of the University.

It is important that students read the 'General University Rules and 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 postgraduate 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-only 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	programs available on the Research Training Scheme (RTS)
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
Session 1 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 section of this Handbook. 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
MNGT	Australian Graduate School of Management	
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 Postgraduate Programs

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

Fees for courses are now primarily be charged by unit of credit (UOC) according to the classification of the course (that is 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 (that is undergraduate, postgraduate or research).

Refer to the '2004 Fee Schedule' which follows the 'Schedule of UNSW Postgraduate 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 the Handbook.

The University provides facilities for approved students to engage in advanced studies and research leading to the award of higher degrees and graduate diplomas and certificates.

The higher doctorates of Doctor of Science, Doctor of Laws and Doctor of Letters may be awarded for published work of distinguished merit in any of these fields.

The degree of Doctor of Philosophy is available in all faculties and in the Australian Graduate School of Management. It requires the completion of a progam of research over a period of at least three years' full-time study and the preparation of a thesis. The degree of Doctor of Medicine requires either a similar program of study or may be awarded on the basis of published work.

The University also offers masters degrees by research and by coursework, as well as various programs leading to the award of a graduate diploma and graduate certificate.

Type: R = Research C = Coursework

Fee Categories Key:

A Programs available to Australian Full Fee Paying Students
H Programs available on a HECS-only basis
T Programs available on the Research Training Scheme (RTS)
I Programs available for International Fee Paying Students
* Programs no longer offered to commencing students

Program	Award	Code	Total UOC	Fee Category
Faculty of Arts and Social Sciences				
PhD				
Australian Studies	R	1190	–	T/I
Chinese Studies	R	1225	–	T/I
Criminology	R	1297	-	T/I
Education	R	1970	–	T/I
English	R	1200	–	T/I
European Studies	R	1235	–	T/I
French	R	1210	–	T/I
German Studies	R	1231	–	T/I
Health, Sexuality and Culture	R	1215	–	T/I
History	R	1240	–	T/I
History and Philosophy of Science	R	1251	–	T/I
Indonesian Studies	R	1228	–	T/I
Japanese Studies	R	1221	–	T/I
Korean Studies	R	1223	–	T/I
Linguistics	R	1208	–	T/I
Media and Commmunications	R	1245	–	T/I
Modern Greek Studies	R	1238	–	T/I
Music	R	1280	–	T/I
Music Education	R	1281	–	T/I
Philosophy	R	1260	–	T/I
Politics and International Relations	R	1270	–	T/I
Professional Ethics	R	1265	–	T/I
Russian Studies	R	1291	–	T/I
Social Science and Policy	R	1295	–	T/I
Social Work	R	1980	–	T/I
Sociology and Anthropology	R	1300	–	T/I
Spanish and Latin American Studies	R	1310	–	T/I
Theatre, Film and Dance	R	1181	–	T/I
Women's Studies	R	1305	–	T/I
EdD				
Education	R & C	1975	144	H/I
MA				
Arts	R	2353	–	T/I
Arts	C	8225	48	A/I
Couple and Family Therapy	C	8228	48	A
MEd				
Education	R	2354	–	T/I
Education	C	8910	48	A/I
MEdAdmin				
Educational Administration	R	2355	–	T/I
Educational Administration	C	8960	48	A/I
MIntSocDev				
International Social Development	C	8938	48	A/I
MMus				
Music	R	2356	–	T/I
Music	C	8226	48	A/I
MMusEd				
Music Education	R	2357	–	T/I
MProfEthics				
Professional Ethics	C	8227	48	A/I
MPS				
Policy Studies	C	8248	48	A/I

** no longer offered to commencing students*

Program	Award	Code	Total UOC	Fee Category
MSocSc				
Social Science	R	2358	–	T/I
MSW				
Social Work	R	2970	–	T/I
Couple and Family Therapy*	C	8930	48	A
DipEd				
Education (Secondary)	C	5560	48	H/I
GradDip				
Professional Ethics	C	5295	32	A/I
GradDipArts				
Arts	R & C	5275	48	A/I
Arts	C	5225	32	A
Couple and Family Therapy (exit program only)	C	5559	32	
GradDipIntSocDev				
International Social Development	C	5556	32	A
GradDipMus				
Music	C	5226	32	A
GradDipPolicy				
Policy Studies	C	5280	32	A
GradCert				
Policy Studies	C	7348	16	A
Program Evaluation	C	7347	16	A
GradCertArts				
Arts	C	7325	16	A
GradCertMus				
Music	C	7326	16	A

Faculty of the Built Environment

PhD				
Built Environment	R	1120	–	T/I
MArch				
Architecture	R	2200	–	T/I
Architecture	C	8142	48	A/I
MBEnv				
Built Environment	R	2240	–	T/I
MBEnv(SustDev)				
Sustainable Development	C	8132	48	A/I
MBuild				
Building	R	2210	–	H/I
MConstMgt				
Construction Management	C	8125	48	A/I
Construction Management (offshore program, Singapore)	C	8126	48	I
MID				
Industrial Design	C	8145	48	A/I
MLArch				
Landscape Architecture	R	2220	–	T/I
MRE				
Real Estate	C	8129	72	A/I
MSc				
Architecture	R	2206	–	T/I
MSc(IndDes)				
Industrial Design	C	8146	48	A/I
MTP				
Town Planning	R	2230	–	T/I

** no longer offered to commencing students*

Program	Award	Code	Total UOC	Fee Category
MUDD				
Urban Development and Design	C	8131	72	A/I
GradDip				
Town Planning	R & C	5205	36	A/I
GradDipBEnv				
Sustainable Development	C	5132	36	A/I
GradCertBEnv				
Sustainable Development	C	7332	24	A
Faculty of the College of Fine Arts				
PhD				
Art Education	R	1285	–	T/I
Art Theory	R	1286	–	T/I
Design	R	1288	–	T/I
Fine Arts	R	1287	–	T/I
MArt				
Art	C	9301	48	A/I
MArtAdmin(Hons)				
Art Administration	R	2264	–	T/I
MArtAdm				
Art Administration	C	9302	72	A/I
MArtDesEd				
Art and Design Education	C	9303	48	A/I
MArtEd(Hons)				
Art Education	R	2255	–	T/I
MArtTh				
Art Theory	R	2265	–	T/I
MDes(Hons)				
Design	R	2266	–	T/I
MDes				
Design	C	9304	72	A/I
Design (offshore program, Singapore)	C	9305	72	I
MFA				
Fine Arts	R	2245	–	T/I
GradDip				
Art	C	5307	48	A/I
GradDipArtAdmin				
Art Administration	C	5302	48	A/I
GradDipDes				
Design	C	5724	48	A/I
GradCert				
Art and Design Education*	C	7304	18	A/I
GradCert				
Art	C	7307	24	A/I
GradCertArtAdmin				
Art Administration	C	7302	24	A/I
GradCertDes				
Design*	C	7303	24	A/I
Faculty of Commerce and Economics				
PhD				
Accounting	R	1521	–	T/I
Actuarial Studies	R	1545	–	T/I
Banking and Finance	R	1561	–	T/I
Business Law and Taxation	R	1535	–	T/I

** no longer offered to commencing students*

Program	Award	Code	Total UOC	Fee Category
Economics	R	1540	–	T/I
Industrial Relations and Organisational Behaviour	R	1601	–	T/I
Information, Library and Archive Studies	R	1990	–	T/I
Information Systems, Technology and Management	R	1525	–	T/I
International Business	R	1603	–	T/I
Marketing	R	1550	–	T/I
MBT				
Business and Technology	C	8616	72	A/I
MCom(Hons)				
Accounting	R & C	2570	96	T/I
Actuarial Studies	R & C	2582	96	T/I
Banking and Finance	R & C	2574	96	T/I
Business Law and Taxation	R & C	2579	96	T/I
Economic History	R & C	2573	96	T/I
Econometrics	R & C	2572	96	T/I
Economics	R & C	2571	96	T/I
Employment Relations	R & C	2576	96	T/I
Human Resource Management	R & C	2578	96	T/I
Information Systems and Management	R & C	2575	96	T/I
Marketing	R & C	2580	96	T/I
Organisational Behaviour	R & C	2577	96	T/I
MCom				
International Professional Accounting (offshore program, Guangzhou, China)	C	8403	72	I
Commerce	C	8404	72	A/I
International Professional Accounting (offshore program, Beijing, China)	C	8405	72	I
Finance (offshore program, Beijing, China)	C	8408	72	I
MFin				
Finance	C	8406	48	A
MIM				
Information Management*	C	8923	72	A/I
MInfStud				
Information Studies	R	2980	–	T/I
MTM				
Technology Management	C	8007	48	A/I
GradDip				
Business and Technology	C	5457	48	A/I
Commerce (exit program only)	C	5391	36	A/I
GradCert				
Business and Technology	C	7333	24	A
GradCertCom				
Commerce (exit program only)	C	7355	24	A

Faculty of Engineering

PhD				
Biomedical Engineering	R	1710	–	T/I
Chemical Engineering	R	1010	–	T/I
Civil and Environmental Engineering	R	1630	–	T/I
Computer Science and Engineering	R	1650	–	T/I
Electrical Engineering	R	1640	–	T/I
Industrial Chemistry	R	1016	–	T/I
Mechanical and Manufacturing Engineering	R	1662	–	T/I
Mining Engineering	R	1050	–	T/I
Petroleum Engineering	R	1017	–	T/I

** no longer offered to commencing students*

Program	Award	Code	Total UOC	Fee Category
Photovoltaic Engineering	R	1655	–	T/I
Surveying and Spatial Information Systems	R	1681	–	T/I
MBiomedE				
Biomedical Engineering	C	8660	72	H/I
MCompSc				
Computer Science	C	8680	96	A/I
ME				
Biomedical Engineering	R	2675	–	T/I
Chemical Engineering	R	2150	–	T/I
Civil and Environmental Engineering	R	2650	–	T/I
Computer Science and Engineering	R	2665	–	T/I
Electrical Engineering	R	2660	–	T/I
Mechanical and Manufacturing Engineering	R	2692	–	T/I
Mining Engineering	R	2180	–	T/I
Petroleum Engineering	R	2156	–	T/I
Photovoltaic Engineering	R	2655	–	T/I
Surveying and Spatial Information Systems	R	2721	–	T/I
MEngSc				
Biomedical Engineering	C	8665	48	H/I
Civil Engineering (offshore program, Singapore)	C	8607	48	I
Civil Engineering	C	8612	48	A/I
Civil Engineering (external)	C	8617	48	A/I
Computer Science and Engineering	C	8685	48	A/I
Electrical Engineering	C	8501	48	A/I
Geographic Information Systems	C	8652	48	A/I
Land Administration	C	8653	48	A/I
Mechanical and Manufacturing Engineering	C	8710	48	A/I
Mechanical and Manufacturing Engineering (offshore program, Singapore)	C	8607	48	I
Mining Engineering	C	8055	48	A/I
Petroleum Engineering (external)	C	8655	48	A/I
Photovoltaics and Solar Energy	C	8512	48	A/I
Process Engineering	C	8016	48	A/I
Remote Sensing	C	8641	48	A/I
Surveying and Spatial Information Systems	C	8652	48	A/I
Telecommunications	C	8503	48	A/I
MEnvEngSc				
Environmental Engineering Science	C	8615	48	A/I
Environmental Engineering Science (external)	C	8618	48	A/I
MInfSc				
Information Science	C	8508	72	A/I
MSc				
Biomedical Engineering	R	2795	–	T/I
Chemical Engineering	R	2010	–	T/I
Civil and Environmental Engineering	R	2750	–	T/I
Computer Science and Engineering	R	2765	–	T/I
Electrical Engineering*	R	2760	–	T/I
Industrial Chemistry	R	2016	–	T/I
Mining Engineering*	R	2060	–	T/I
GradDip				
Aluminium Smelting Technology	C	5034	36	A/I
Biomedical Engineering	C	5445	36	H/I
Civil Engineering	C	5459	36	A/I
Civil Engineering (offshore program, Singapore)	C	5444	36	I

** no longer offered to commencing students*

Program	Award	Code	Total UOC	Fee Category
Civil Engineering (external)	C	5454	36	A/I
Coal Mine Strata Control (external)	C	5040	36	A/I
Computer Science	C	5452	72	A/I
Electrical Engineering	C	5458	54	A/I
Mechanical and Manufacturing Engineering	C	5710	36	A/I
Mechanical and Manufacturing Engineering (offshore program, Singapore)	C	5444	36	I
Mine Ventilation (external)	C	5045	36	A/I
Mining Engineering	C	5040	36	A/I
Petroleum Engineering	C	5031	36	A/I
Remote Sensing	C	5496	36	A/I
Surveying and Spatial Information Systems	C	5492	36	A/I
Telecommunications	C	5448	54	A
GradDipInfSc				
Information Science	C	5453	48	A/I
GradDipLandAdmin				
Land Administration	C	5493	36	A/I
GradCert				
Aluminium Smelting Technology	C	7334	24	A/I
Civil Engineering	C	7336	24	A/I
Environmental Engineering	C	7337	24	A/I
Mining Engineering	C	7335	24	A/I
Petroleum Engineering (external)	C	7341	24	A/I
Faculty of Law				
PhD				
Law	R	1730	–	T/I
SJD				
Juridical Science	R & C	1740	–	T/A/I
LLM				
Laws	R	2440	–	T/I
Laws	C	9200	48	A/I
MLM				
Law and Management	C	9210	60	A/I
MLS				
Legal Studies	C	9220	48	A/I
MTax				
Taxation	C	9250	48	A/I
MAppTax				
Applied Taxation	C	9260	48	A/I
GradDip				
Law	C	5740	32	A/I
GradDipAdvTax				
Advanced Taxation	C	5540	36	A/I
GradDipLS				
Legal Studies	C	5750	32	A/I
GradDipTaxStud				
Taxation Studies	C	5541	60	A/I
Faculty of Medicine				
MD				
Anatomy	R	0420	–	T
Community Medicine	R	0430	–	T
Medicine	R	0350-0353	–	T
Obstetrics and Gynaecology	R	0380	–	T
Paediatrics	R	0410	–	T

** no longer offered to commencing students*

Program	Award	Code	Total UOC	Fee Category
Pathology	R	0360	–	T
Physiology and Pharmacology	R	0370	–	T
Psychiatry	R	0390	–	T
Rural Health	R	0375	–	T
Surgery	R	0400-0403	–	T
PhD				
Anatomy	R	1750	–	T/I
Public Health and Community Medicine	R	1835	–	T/I
Community Medicine*	R	1760	–	T/I
Health Administration*	R	1950	–	T/I
Medical Education*	R	1841	–	T/I
Medicine	R	1770-1773	–	T/I
Obstetrics and Gynaecology	R	1820	–	T/I
Paediatrics	R	1830	–	T/I
Pathology	R	1780	–	T/I
Physiology and Pharmacology	R	1790	–	T/I
Psychiatry	R	1800	–	T/I
Rural Health	R	1795	–	T/I
Surgery	R	1810-1813	–	T/I
MClinEd				
Clinical Education (external)	C	9050	72	A/I
MHA				
Health Administration	R	2960	–	T/I
Health Administration	C	8900	60	H/I
MHEd				
Higher Education*	C	8911	48	H
MHPEd				
Health Professions Education	R	2885	–	T/I
MHSM				
Health Services Management	C	8941	48	H/I
MMed				
Medicine	R	2825-2828	–	T/I
Paediatrics	R	2515	–	T/I
Geriatrics (external)*	C	9025	72	A/I
MMedSc				
Drug Development (external)	C	9060	72	A/I
MPH				
Public Health	R	2845	–	T/I
Public Health	C	9045	60	H/I
MS				
Surgery	R	2860-2863	–	T/I
MSc				
Anatomy	R	2800	–	T/I
Community Medicine	R	2810	–	T/I
Medicine	R	2820-2823	–	T/I
Obstetrics and Gynaecology	R	2830	–	T/I
Paediatrics	R	2805	–	T/I
Pathology	R	2840	–	T/I
Physiology and Pharmacology	R	2850	–	T/I
Psychiatry	R	2880	–	T/I
Rural Health	R	2835	–	T/I
Surgery	R	2875-2878	–	T/I

** no longer offered to commencing students*

Program	Award	Code	Total UOC	Fee Category
MSpMed				
Sports Medicine	C	9055	60	A/I
DipPaed				
Paediatrics	C	5500	24	A/I
GradDip				
Geriatric Medicine (external)*	C	5506	48	A/I
GradDipClinEd				
Clinical Education (external)	C	5501	40	A/I
GradDipCommPaed				
Community Paediatrics*	C	5505	44	A/I
GradDipDD				
Drug Development (external)	C	5504	48	A/I
GradDipHEd				
Higher Education*	C	5561	32	H
GradDipPH				
Public Health	C	5507	40	H/I
GradDipSpMed				
Sports Medicine	C	5503	48	A/I
GradCert				
Geriatric Medicine (external)*	C	7364	24	A/I
Clinical Education (external)	C	7376	20	A/I
University Learning and Teaching	C	7375	16	UNSW staff only
GradCertDD				
Drug Development (external)	C	7370	24	A/I
GradCertHEd				
Higher Education*	C	7300	16	H
GradCertHSM				
Health Services Management	C	7360	20	H/I
GradCertPH				
Public Health	C	7368	22	H/I
GradCertSpMed				
Sports Medicine	C	7378	24	A/I

Faculty of Science

PhD				
Applied Geology	R	1000	–	T/I
Aviation	R	1900	–	T/I
Biochemistry and Molecular Genetics	R	1410	–	T/I
Biological Science	R	1435	–	T/I
Biotechnology	R	1036	–	T/I
Chemistry	R	1870	–	T/I
Food Science and Technology	R	1031	–	T/I
Geography	R	1080	–	T/I
Materials Science and Engineering	R	1045	–	T/I
Mathematics	R	1880	–	T/I
Microbiology and Immunology	R	1440	–	T/I
Optometry	R	1860	–	T/I
Physics	R	1890	–	T/I
Psychology	R	1400	–	T/I
Safety Science	R	1665	–	T/I
Theoretical Physics	R	1891	–	T/I
PhD MPsychol(Clin)				
Psychology (Clinical)	R & C	1404	–	T/A/I

** no longer offered to commencing students*

Program	Award	Code	Total UOC	Fee Category
PhD MPsychol(For)				
Psychology (Forensic)	R & C	1405	–	T/A/I
PhD MPsychol(Org)				
Psychology (Organisational)	R & C	1406	–	T/A/I
ME				
Materials Science and Engineering	R	2175	–	T/I
Safety Science	R	2695	–	T/I
MMarSc				
Marine Science	C	8265	48	A/I
MOptom				
Optometry	C	8760	48	A/I
MPsychol(Clin)				
Psychology (Clinical)	C	8256	96	A/I
MPsychol(For)				
Psychology (Forensic)	C	8257	96	A/I
MPsychol(Org)				
Psychology (Organisational)	C	8258	96	A/I
MSafetySc				
Safety Science	C	8671	96	A/I
MSc				
Applied Geology	R	2000	–	T/I
Biochemistry and Molecular Genetics	R	2460	–	T/I
Biological Science	R	2485	–	T/I
Biotechnology	R	2036	–	T/I
Chemistry	R	2910	–	T/I
Food Science and Technology	R	2031	–	T/I
Geography	R	2040	–	T/I
Materials Science and Engineering	R	2055	–	T/I
Mathematics	R	2920	–	T/I
Microbiology and Immunology	R	2490	–	T/I
Optometry	R	2900	–	T/I
Physics	R	2930	–	T/I
Psychology	R	2450	–	T/I
Safety Science	R	2775	–	T/I
Theoretical Physics	R	2932	–	T/I
Biopharmaceuticals	C	8049	48	A/I
Biopharmaceuticals (offshore program, Hong Kong)	C	8039	48	I
Biotechnology	C	8048	48	A/I
Food Science and Technology	C	8033	48	A/I
MScTech				
Aviation	C	8738	48	A/I
Chemical Analysis and Laboratory Management	C	8708	48	A/I
Computation	C	8705	48	A/I
Corrosion Engineering	C	8716	48	A/I
Engineering Materials	C	8715	48	A/I
Environmental Science	C	8735	48	A/I
Ergonomics	C	8729	72	A/I
Fire and Explosion Safety Management	C	8736	48	A/I
Geographic Information Systems	C	8711	48	A/I
Geological Data Processing*	C	8703	48	A/I
Groundwater Studies	C	8702	48	A/I
Industrial Safety	C	8727	48	A/I
Mathematics	C	8718	48	A/I

** no longer offered to commencing students*

Program	Award	Code	Total UOC	Fee Category
Occupational Health and Safety	C	8733	72	A/I
Occupational Medicine	C	8734	48	A/I
Optoelectronics and Photonics	C	8722	48	A/I
Remote Sensing	C	8713	48	A/I
Risk Management	C	8728	72	A/I
MStats				
Statistics	C	8750	72	A/I
GradDip				
Biochemistry and Molecular Genetics	R & C	5345	48	A/I
Biological Science	R & C	5350	48	A/I
Microbiology and Immunology	R & C	5355	48	A/I
Physical Oceanography	R & C	5528	48	A/I
Physics	R & C	5533	48	A/I
Physics Research Techniques	R & C	5663	48	A/I
Psychology	R & C	5330	48	A/I
Aviation (Flying)*	C	5538	36	A/I
Aviation Management	C	5678	36	A/I
Biotechnology	C	5015	36	A/I
Chemical Analysis and Laboratory Management	C	5648	36	A/I
Computation	C	5645	36	A/I
Environmental Science	C	5675	36	A/I
Ergonomics	C	5669	48	A/I
Fire and Explosion Safety Management	C	5676	36	A/I
Food Technology	C	5020	36	A/I
Medical Physics	C	5661	36	A/I
Occupational Medicine	C	5674	36	A/I
Optoelectronics and Photonics	C	5662	36	A/I
Optometry	C	5665	36	A/I
Remote Sensing	C	5693	36	A/I
Risk Management	C	5668	48	A/I
Safety Science	C	5672	48	A/I
Statistics	C	5659	48	A/I
GradCert				
Aviation Management	C	7448	18	A/I
Chemical Analysis and Laboratory Techniques	C	7428	18	A/I
Environmental Science	C	7445	18	A/I
Ergonomics	C	7439	24	A/I
Food Science and Technology	C	7310	18	A/I
Industrial Safety	C	7437	18	A/I
Occupational Health and Safety Management	C	7443	24	A/I
Occupational Rehabilitation	C	7444	18	A/I
Optoelectronics and Photonics	C	7432	18	A/I
Optometry	C	7435	18	A/I
Risk Management	C	7438	24	A/I
Safety Science	C	7442	24	A/I

Institute of Environmental Studies

MEM				
Environmental Management	C	8619	72	A/I
GradDip				
Environmental Management	C	5499	48	A/I
GradCert				
Environmental Management	C	7339	24	A/I

** no longer offered to commencing students*

Program	Award	Code	Total UOC	Fee Category
Australian Graduate School of Management				
Refer to Australian Graduate School of Management for fees schedule				
PhD				
Management	R & C	1350	-	
MBA				
Business Administration – Full-time	C	8350	84	
MBA(Exec)				
Business Administration (Executive)	C	8355	84	
GradDipMgmt				
Management	C	5950	48	
GradCert				
Change Management	C	7315	24	
Management	C	7316	24	
University College, Australian Defence Force Academy				
IT.D				
Information Technology	R & C	9920	144	A/I
PhD				
Aerospace Engineering	R	1663	–	T/I
Chemistry	R	1871	–	T/I
Civil Engineering	R	1631	–	T/I
Computer Science	R	1885	–	T/I
Economics and Management	R	1541	–	T/I
Electrical Engineering	R	1643	–	T/I
English	R	1201	–	T/I
Geography and Oceanography	R	1081	–	T/I
History	R	1241	–	T/I
Mathematics and Statistics	R	1881	–	T/I
Mechanical Engineering	R	1661	–	T/I
Physics	R	1892	–	T/I
Politics	R	1321	–	T/I
MA(Hons)				
Economics and Management*	R	2271	–	T/I
English*	R	2281	–	T/I
Geography and Oceanography*	R	2301	–	T/I
History*	R	2321	–	T/I
Politics*	R	2401	–	H/I
MA				
Arts	R & C	2405	-	T/I
MA				
Arts	C	8175	48	A/I
English*	C	8172	48	A/I
MDefStud				
Defence Studies	C	9904	48	A/I
Defence Studies*	C	9902	48	A/I
Defence Studies (Distance)*	C	9903	48	A/I
ME				
Aerospace Engineering	R	2693	–	T/I
Civil Engineering	R	2651	–	T/I
Electrical Engineering	R	2663	–	T/I
Mechanical Engineering	R	2691	–	T/I
MEngSc				
Engineering Science	C	8569	48	A/I
Engineering Science*	C	8568	48	A/I

** no longer offered to commencing students*

Program	Award	Code	Total UOC	Fee Category
MMgtStud				
Management Studies	C	8398	48	A/I
Management Studies*	C	8396	48	A/I
Management Studies (Distance)*	C	8397	48	A/I
MSc				
Chemistry	R	2911	–	H/I
Computer Science	R	2925	–	H/I
Geography and Oceanography	R	2041	–	H/I
Mathematics and Statistics	R	2921	–	H/I
Physics	R	2931	–	H/I
Information Technology	C	8565	48	A/I
Operations Research and Statistics	C	8559	48	A/I
Science	C	8562	48	A/I
GradDip				
Engineering Science*	C	5888	36	A/I
Information Technology*	C	5865	36	A/I
GradDipArts				
Arts	C	5855	36	A/I
Arts (English)*	C	5852	36	A/I
GradDipDefStud				
Defence Studies	C	5914	36	A/I
Defence Studies*	C	5912	36	A/I
Defence Studies (Distance)*	C	5913	36	A/I
GradDipMgtStud				
Management Studies	C	5823	36	A/I
Management Studies*	C	5821	36	A/I
Management Studies (Distance)*	C	5822	36	A/I
GradDipEngSc				
Engineering Science	C	5889	36	A/I
GradDipORS				
Operations Research and Statistics*	C	5841	36	A/I
GradDipSc				
Science	C	5882	36	A/I
GradCert				
Defence Studies*	C	7399	24	A/I
Engineering Science*	C	7388	24	A/I
Information Technology*	C	7397	24	A/I
GradCertArts				
Arts	C	7385	24	A/I
Arts (English)*	C	7386	24	A/I
GradCertDefStud				
Defence Studies	C	7384	24	A/I
GradCertCivEng				
Civil Engineering*	C	7392	24	A/I
GradCertElecEng				
Electrical Engineering*	C	7393	24	A/I
GradCertEngSc				
Engineering Science	C	7387	24	A/I
GradCertMgtStud				
Management Studies	C	7383	24	A/I
Management Studies*	C	7391	24	A/I
Management Studies (Distance)*	C	7398	24	A/I
GradCertORS				
Operations Research and Statistics	C	7395	24	A/I
GradCertSc				
Science	C	7382	24	A/I

** 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 Details			***Course Classification***		
			Postgraduate		**Research**
			Student Classification		
Faculty and Course Prefixes	**Organisational Unit**	**Course ID Level (where applicable)**	**Postgraduate International Fee**	**Postgraduate Local Fee**	**Research International Fee**
			Fee Band per unit of Credit		
Faculty of Arts and Social Sciences					
ARTS	Faculty of Arts and Social Sciences		340	260	345
ASIA	Faculty of Arts and Social Sciences		340	260	345
AUST	Faculty of Arts and Social Sciences		340	260	345
CHIN	Department of Chinese and Indonesian Studies		340	260	345
COMD	Faculty of Arts and Social Sciences		340	260	345
CRIM	School of Social Science and Policy		340	260	345
DANC	School of Theatre, Film and Dance		340	260	345
EDST	School of Education		340	260	345
ENGL	School of English		340	260	345
EURO	Faculty of Arts and Social Sciences		340	260	345
FILM	School of Theatre, Film and Dance		340	260	345
FREN	Department of French		340	260	345
GENT	Faculty of Arts and Social Sciences		na	na	na
GERS	Department of German and Russian Studies		340	260	345
GREK	School of Modern Language Studies		340	260	345
HIST	School of History		340	260	345
HPSC	School of History and Philosophy of Science		340	260	345
INDO	Department of Chinese and Indonesian Studies		340	260	345
INST	Faculty of Arts and Social Sciences		340	260	345
INTD	Faculty of Arts and Social Sciences		340	260	345
IRSH	Faculty of Arts and Social Sciences		340	260	345
ITAL	Faculty of Arts and Social Sciences		340	260	345
JAPN	Department of Japanese and Korean Studies		340	260	345
JWST	School of Politics and International Relations		340	260	345
KORE	Department of Japanese and Korean Studies		340	260	345
LATN	School of Modern Language Studies		340	260	345
LING	Department of Linguistics		340	260	345
MDCM	School of Media and Communications		340	260	345
MODL	School of Modern Language Studies		340	260	345
MUSC	School of Music and Music Education		340	260	345
PFST	School of Theatre, Film and Dance		340	260	345
PHIL	School of Philosophy		340	260	345
POLS	School of Politics and International Relations		340	260	345
RUSS	Department of German and Russian Studies		340	260	345
SLSP	School of Social Science and Policy		340	260	345
SOCA	School of Sociology & Anthropology		340	260	345
SOCF	School of Social Work		na	315	na

Course Details			Postgraduate		Research
Faculty and Course Prefixes	Organisational Unit	Course ID Level (where applicable)	Postgraduate International Fee	Postgraduate Local Fee	Research International Fee
			Fee Band per unit of Credit		
SOCW	School of Social Work		340	260	345
SPAN	Department of Spanish and Latin American Studies		340	260	345
THFI	School of Theatre, Film and Dance		340	260	345
THST	School of Theatre, Film and Dance		340	260	345
WOMS	Faculty of Arts and Social Sciences		340	260	345
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	290	390
BENV	Faculty of the Built Environment		390	290	390
BLDG	Faculty of the Built Environment (Building)		390	290	390
CONS	Faculty of the Built Environment (Building Construction Management)		390	290	390
GENR	Faculty of the Built Environment		na	na	na
GEOH	Faculty of the Built Environment		390	290	390
GSBE	Faculty of the Built Environment		390	290	390
HERI	Faculty of the Built Environment		390	290	390
IDES	Faculty of the Built Environment (Industrial Design)		390	290	390
INTA	Faculty of the Built Environment (Interior Architecture)		390	290	390
LAND	Faculty of the Built Environment (Landscape Architecture)		390	290	390
PLAN	Faculty of the Built Environment (Planning and Urban Development)		390	290	390
REST	Faculty of the Built Environment (Building Construction Management)		390	290	390
SUSD	Faculty of the Built Environment		390	290	390
UDES	Faculty of the Built Environment		390	290	390
College of Fine Arts					
COFA	College of Fine Arts		390	290	390
GEND	College of Fine Arts		na	na	na
SAED	School of Art Education		390	290	390
SAHT	School of Art History and Theory		390	290	390
SART	School of Art		390	290	390
SDES	School of Design Studies		390	290	390
SOMA	School of Design Studies		390	290	390
Faculty of Commerce & Economics					
ACCT	School of Accounting		445	315	345
ACTL	School of Economics (Actuarial Studies)		445	315	345
COMM	Faculty of Commerce and Economics		445	315	345
ECON	School of Economics		445	315	345
FINS	School of Banking and Finance		445	315	345
GBAT	Business and Technology Programs		445	315	345
GENC	Faculty of Commerce and Economics		na	na	na
IBUS	School of International Business		445	315	345
IMGT	School of Information Systems, Technology and Management		445	315	345
INFS	School of Information Systems, Technology and Management		445	315	345
IROB	School of Industrial Relations and Organisational Behaviour		445	315	345
LEGT	School of Business Law and Taxation		445	315	345

Course Details			Postgraduate		Research
Faculty and Course Prefixes	Organisational Unit	Course ID Level (where applicable)	Postgraduate International Fee	Postgraduate Local Fee	Research International Fee
			Fee Band per unit of Credit		
MARK	School of Marketing		445	315	345
MGMT	Faculty of Commerce and Economics		445	315	345
TAHM	School of Marketing		445	315	345
Faculty of Engineering					
AERO	School of Mechanical and Manufacturing Engineering		445	290	480
AVEN	School of Mechanical and Manufacturing Engineering		445	290	480
BINF	School of Computer Science and Engineering		445	290	480
BIOM	Graduate School of Biomedical Engineering		445	290	480
CEIC	School of Chemical Engineering and Industrial Chemistry		445	290	480
CHEN	School of Chemical Engineering and Industrial Chemistry		445	290	480
COMP	School of Computer Science and Engineering		445	290	480
CVEN	School of Civil and Environmental Engineering		445	290	480
ELEC	School of Electrical Engineering and Telecommunications		445	290	480
FUEL	School of Chemical Engineering and Industrial Chemistry		445	290	480
GENE	Faculty of Engineering		na	na	na
GMAT	School of Surveying and Spatial Information Systems		445	290	480
INDC	School of Chemical Engineering and Industrial Chemistry		445	290	480
MANF	School of Mechanical and Manufacturing Engineering		445	290	480
MECH	School of Mechanical and Manufacturing Engineering		445	290	480
MINE	School of Mining Engineering		445	290	480
MINP	School of Chemical Engineering and Industrial Chemistry		445	290	480
MNNG	School of Mining Engineering		na	375	na
MTRN	School of Mechanical and Manufacturing Engineering		445	290	480
NAVL	School of Mechanical and Manufacturing Engineering		445	290	480
PHTN	School of Electrical Engineering and Telecommunications		445	290	480
POLY	School of Chemical Engineering and Industrial Chemistry		445	290	480
PTRL	School of Petroleum Engineering		445	290	480
SENG	School of Computer Science & Engineering		445	290	480
SOLA	Centre for Photovoltaic Engineering		445	290	480
TELE	School of Electrical Engineering and Telecommunications		445	290	480
Faculty of Law					
ATAX	Faculty of Law (Taxation)		390	290	345
GENL	Faculty of Law		na	na	na
GENQ	Faculty of Law (Taxation)		na	na	na
LAWS	School of Law		390	290	345
LAWX	School of Law		390	290	345
Faculty of Medicine					
ANAT	School of Medical Sciences		na	na	480
ANAM	School of Medical Sciences		na	na	na
CMED	School of Public Health & Community Medicine		na	na	na
CMED	School of Public Health & Community Medicine	9539 to 9550	390	290	na

Course Details			Postgraduate		Research
Faculty and Course Prefixes	Organisational Unit	Course ID Level (where applicable)	Postgraduate International Fee	Postgraduate Local Fee	Research International Fee
			Fee Band per unit of Credit		
GENM	Faculty of Medicine		na	na	na
MDCN	School of Medicine		na	na	480
MDSG	Faculty of Medicine		na	na	na
MEDM	School of Medicine		na	na	na
MFAC	Faculty of Medicine		na	na	480
OBST	School of Women's and Children's Health		na	na	480
PAED	School of Women's and Children's Health		na	315	480
PATH	School of Medical Sciences		na	na	480
PATM	School of Medical Sciences		na	na	na
PHCM	School of Public Health & Community Medicine		340	260	na
PHCM	School of Public Health & Community Medicine	0006 0007 9001 9002 9200 9201 9300 9301 9506	na	na	345
PHCM	School of Public Health & Community Medicine	9003 9004 9801	na	na	480
PHPH	School of Medical Sciences		na	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	340	315	na
PHPH	School of Medical Sciences	5461 5471 5481 5491 5501 5511 5521 5531 8006 9100 to 9119 9122 9123 9171 9172 9120 9121 9999	445	315	na
PHPM	School of Medical Sciences		na	na	na
PHYS	Faculty of Medicine		na	na	na
PROR	School of Medical Sciences		na	na	na
PSCY	School of Psychiatry		na	na	480
PSYM	School of Psychiatry		na	na	na
SURG	School of Surgery		na	na	480
Faculty of Science					
AVIA	Department of Aviation		445	290	480
BEES	School of Biological, Earth and Environmental Sciences		445	290	480
BIOC	School of Biotechnology and Biomolecular Science		445	290	480
BIOD	School of Biotechnology and Biomolecular Science		445	290	480
BIOS	School of Biological, Earth and Environmental Sciences		445	290	480
BSSM	Faculty of Science		445	290	480
BIOT	School of Biotechnology and Biomolecular Science		445	290	480
CHEM	School of Chemical Sciences		445	290	480
ENVS	Faculty of Science		445	290	480
FOOD	School of Chemical Sciences		445	290	480
GENS	Faculty of Science		na	na	na
GENB	Faculty of Science		na	na	na
GEOG	School of Biological, Earth and Environmental Sciences		445	290	480
GEOL	School of Biological, Earth and Environmental Sciences		445	290	480
GEOS	School of Biological, Earth and Environmental Sciences		445	290	480
INOV	Faculty of Science		445	290	480

Course Details			Postgraduate		Research
Faculty and Course Prefixes	Organisational Unit	Course ID Level (where applicable)	Postgraduate International Fee	Postgraduate Local Fee	Research International Fee
			Fee Band per unit of Credit		
LIFE	Faculty of Science		445	290	480
MATH	School of Mathematics		445	290	480
MATS	School of Materials Science and Engineering		445	290	480
MICM	School of Biotechnology and Biomolecular Science		445	290	480
MICR	School of Biotechnology and Biomolecular Science		445	290	480
MSCI	Centre for Marine and Coastal Studies		445	290	480
NANO	School of Materials Science and Engineering		445	290	480
OCEA	School of Mathematics (Oceanography)		445	290	480
OPTM	School of Optometry and Vision Science		445	290	480
PHYS	School of Physics		445	290	480
PSYC	School of Psychology		445	290	480
SCOM	Faculty of Science		445	290	480
SESC	School of Safety Science		445	290	480
University College – Australian Defence Force Academy					
ACHM	Chemistry		390	290	390
ACIV	Civil Engineering		390	290	390
ACSC	Computer Science		390	290	390
AECM	Economics and Management		390	290	390
AELE	Electrical Engineering		390	290	390
AENG	English		390	290	390
AGOC	Geography and Oceanography		390	290	390
AHIS	History		390	290	390
AIND	Indonesian		390	290	390
AINT	University College (Interdisciplinary)		390	290	390
AMAT	Mathematics		390	290	390
AMEC	Mechanical Engineering		390	290	390
APHY	Physics		390	290	390
APOL	Politics		390	290	390
ZBUS	School of Business		390	290	390
ZPEM	School of Physical, Environmental and Mathematical Sciences		390	290	390
ZITE	School of Information Technology and Electrical Engineering		390	290	390
ZACM	School of Aerospace, Civil and Mechancial Engineering		390	290	390
ZHSS	School of Humanities and Social Sciences		390	290	390
ZINT	University College (Interdisciplinary)		390	290	390
ZIND	School of Humanities and Social Sciences		390	290	390
Non Faculty Specific					
GENX	Aboriginal Research and Resource Centre		na	na	na
IEST	Institute of Environmental Studies		445	290	na

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 postgraduate coursework programs, admission requirements and enrolment procedures. This Office is located in Rm LG20, The Chancellery Building and is open from 9am-5pm, Monday to Friday.

Telephone: (02) 9385 1844/1866

Email: studentrecruitment@unsw.edu.au

Program information for prospective local students can also be 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**

Information for prospective postgraduate research students can be found at **www.unsw.edu.au/futurestudents/research** and on the relevant faculty website.

UNSW International is the initial referral point for **international students** for information on undergraduate and graduate programs and admission requirements. This office is located on the Ground Floor, East Wing of the Red Centre Building.

Telephone: (02) 9385 6996

Email: internationaloffice@unsw.edu.au

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

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

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

For both postgraduate coursework and research programs, please refer, in addition, to the 'English Proficiency' requirements detailed below.

Postgraduate Coursework Programs

The requirement for study at a postgraduate level in coursework is a completed undergraduate degree in a relevant field of study.

The undergraduate degree must be from a recognised tertiary institution. Competition is keen and admission is subject to selection but applicants with a good first degree have excellent prospects of admission.

Postgraduate Research Programs

Prospective local and international research students should check with the relevant school and/or faculty for specific entry requirements for the research program for which you are intending to apply.

As a general guide, the UNSW entry requirements for research programs are as follows:

Masters by Research Degrees (MRes):

A candidate for the degree should have been awarded an appropriate degree of Bachelor from the University of NSW or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Research Committee or Higher Degree Committee of the appropriate Faculty or Board.

A candidate for the degree should be able to display some evidence of prior research experience.

The Degree of Doctor of Philosophy (PhD):

A candidate for the degree shall have been awarded an appropriate degree of Bachelor with Honours from the University of NSW or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Research Committee or Higher Degree Committee of the appropriate Faculty or Board.

In exceptional cases, an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enroll for the degree.

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.

Local applicants

(1) Postgraduate Coursework Programs:

Applications forms for postgraduate coursework programs can be downloaded from the website at: **www.unsw.edu.au/futureStudents/postgradCourse/sad/how2apply.html** or contact the Student Recruitment Office, Lower Ground Floor, the Chancellery, telephone (02) 9385 1844.

You must include certified copies of your documents with your application. Please refer to the website for closing dates.

(2) Postgraduate Research Programs:

Local postgraduate research applicants should first refer to the web at **www.unsw.edu.au/futurestudents/research** for information on how to locate a suitable supervisor, how to apply and scholarship opportunities. Prospective students are strongly advised to make contact with potential supervisors before applying for research study at UNSW.

Application forms can be downloaded from **www.unsw.edu.au/futureStudents/postgradResearch/res/localappform.pdf** or are available from the Scholarships, Loans & Research Students Office (SLARSO) or the relevant faculty or school.

The Scholarships, Loans and Research Students Office is located at **NewSouth Q (Student Enquiries)**, Lower Ground Floor, the Chancellery, telephone (02) 9385 3093, email siso@unsw.edu.au. Enquiries about admission, changes in details of candidature and examination of theses should be directed to this office. SLARSO is responsible for administration of research students throughout all stages of candidature and also coordinates the thesis examination process.

International Applicants

International applicants seeking admission to postgraduate coursework or research programs should contact UNSW International **(www.international.unsw.edu.au)** for details regarding entry requirements and application procedures.

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 (coursework programs) or Scholarships, Loans and Research Students Office (+61 2) 9385 3106 (research programs), as appropriate.

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 as above. 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. Student 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. (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). This discount does not apply retrospectively and is only applicable to partial up-front payments of $500 or more.

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**

2.2 UNSW HECS Places – Postgraduate Coursework Programs

In 2004, UNSW will make HECS places available to students enrolled in full-time or part-time (in participating) postgraduate coursework programs (degrees, diplomas, certificates and qualifying programs). UNSW HECS places permit students to substitute a HECS liability for postgraduate tuition fees. They will be awarded to all local eligible applicants.

Students who receive a HECS place and who remain eligible will retain it for the duration of their program.

Eligibility Criteria: To be eligible for a UNSW HECS place a student must be able to demonstrate that he/she meets any one of the criteria outlined in the Postgraduate HECS Places brochure.

For details of eligibility criteria please refer to the brochure "Postgraduate HECS Places and Postgraduate Equity Scholarships and Postgraduate Education Loans Scheme (PELS) for Local Postgraduate Coursework Programs" available from NewSouth Q or on the web **www.student.unsw.edu.au/fees/PGRD_HECS.shtml**

All HECS applications must include a completed HECS payment options form and proof of eligibility (including residency if applicable). All applications must be finalised by the relevant census date (31st March, 31st August).

For further details on HECS, including citizenship and/or residency eligibility conditions, please see **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**

(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**

(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 courses 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 refer to the 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 using *NewSouth Student Online*, 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 using *NewSouth Student Online*. 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 re-instated following disenrolment will be required to pay a penalty fee of $250 plus all outstanding fees before re-instatement.

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.

- A request for leave should be made in writing to the Registrar either by letter or by using the Discontinuation/ Leave form available from program offices and the Student Centres at each campus.
- Leave must be sought prior to the census date: 31 March for Session 1 or whole year leave, or prior to 31 August for Session 2 leave.
- 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 re-enrolment. A student who discontinues after the Session 1 census date may apply for leave for Session 2.
- A student whose application for leave is rejected or who does not resume study at the end of the approved leave period must formally apply, in the usual manner, for re-admission to the program.
- Enquiries about re-admission to a program should be directed to the Admissions Office.

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. 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 notice-boards 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. Refer to the Student Guide or the Student Gateway for full details relating to assessment and the conduct of examinations.

6. Postgraduate Research Students

There are a number of issues which concern postgraduate research students. These include

- supervision
- review of progress
- thesis submission and examination
- intellectual property, safety and ethical issues

Information about the roles and responsibilities of the University, the faculty, school, supervisor and student in relation to the candidature of research students may be found in the booklet *Guidelines for the Supervision of Postgraduate Research*. These guidelines are available at **www.student.unsw.edu.au/research**

7. Postgraduate Coursework Advanced Standing, Credit Transfer and Articulation Guidelines

The following guidelines apply to credit granted in postgraduate coursework degrees, diplomas or certificates:

7.1 A postgraduate coursework student may be granted credit by the program authority. The credit granted must be consistent with the guidelines detailed below. Any credit granted must also be consistent with the rules governing progression within the program as determined by the relevant faculty.

7.2 (1)* Advanced standing will not normally be granted for completed postgraduate awards from other institutions. A postgraduate coursework Masters or Diploma student who is admitted to the University on the basis of either a completed or partially completed postgraduate degree, diploma or certificate from UNSW or a partially completed postgraduate degree, diploma or certificate from another institution may be granted credit up to a maximum of 50 per cent of the UNSW program requirements. A Faculty Standing Committee may, for a particular program, determine the maximum credit at less than 50 per cent of program requirements.

(2) A postgraduate coursework certificate student enrolling in a program that requires a total of 24 or more units of credit may be granted credit to a maximum of 50 per cent of program requirements. No credit will be granted where program requirements are less than 24 units of credit.

7.3 Some postgraduate programs include preliminary courses similar in content to undergraduate courses, and provide exemption from these courses for students with the appropriate undergraduate background. In such programs, a postgraduate coursework student may be granted credit on the basis of a completed undergraduate degree but must complete a program of study equivalent to one year of full-time study or 48 units of credit.

**Program authorities may consider substitution of alternative courses for core courses where the subject material has been covered in previously completed postgraduate awards.*

Articulated Programs

Articulated programs can be defined as a sequence of programs comprising Graduate Certificate and/or Graduate Diploma and/or Masters programs in which the requirements for completion of early programs in the sequence are embedded within the requirements for subsequent programs. This allows students to enrol initially in an early stage of the sequence (GradCert or GradDip) and subsequently "add on" further courses to complete a higher level program (GradDip and/or Masters) without loss of credit.

The following guidelines apply to credit granted in postgraduate articulated programs:

7.4 A postgraduate coursework student admitted to a UNSW articulated program is eligible for credit, based on guidelines 7.1, 7.2 and 7.3 above, at the time of initial enrolment in the articulated sequence.

7.5 (1) A postgraduate coursework student enrolled in an articulated program may apply to progress from Graduate Certificate to Graduate Diploma to Masters level with full credit for the courses completed in earlier programs in the sequence, provided that the earlier awards are not formally conferred.

(2) For progression of students who did not qualify for direct entry into a higher level program at initial enrolment in the sequence, a Faculty Standing Committee may stipulate a particular performance level (e.g. Credit average) in early programs in the articulated sequence. Students not meeting this performance level would be awarded the Graduate Certificate or Diploma for which they have completed requirements, and would apply for entry into the higher program under guideline 7.2 (1) above.

(3) A Faculty Standing Committee may determine that applications for progression through a particular articulated program sequence will be refused if a substantial time period (normally greater than 6 years) has elapsed since completion of requirements for the earlier award.

7.6 A postgraduate coursework student who chooses to have the Graduate Certificate or Diploma formally conferred, and then wishes to undertake further study in the articulated program sequence, either immediately or after a period of absence, is subject to the guidelines outlined above in 7.2 (1).

Academic Standing

Total units passed	Total units failed	Academic Standing	Implications for the student
Any	None	Good Standing	None
Fewer than 48	16 or fewer	Probation	Required to consult assigned advisor
Fewer than 48	More than 16	Exclusion	Excluded for four standard sessions (two years)
48 or more	18 or fewer	Probation	Required to consult assigned advisor
48 or more	More than 18	Exclusion	Excluded for four standard sessions (two years)

At the end of every standard 14 week session each postgraduate coursework 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.

Since postgraduate students are already experienced in university-level study and postgraduate coursework programs are normally of shorter duration than undergraduate programs, postgraduate coursework students are expected to complete program requirements with very few failures. A student who has no failures in the current session is assigned Good Standing. Otherwise his or her Standing is assigned on the basis of the total number of units passed and failed over all sessions up to and including the current session, as outlined in the table below.

In exceptional circumstances a student's academic advisor, in consultation with the program authority, may alter the student's standing, usually to replace exclusion by probation.

Academic Standing – Re-Enrolment Appeal Procedures

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

(1) Students who are suspended or excluded from a program have the right of appeal. An Undergraduate Re-enrolment Appeal Committee and a Postgraduate Re-enrolment Appeal Committee of the Academic Board will be constituted for the purpose of hearing such appeals.

(2) Each Committee will have a membership of five members of academic staff (with a quorum of three) and will be chaired by a member of the Academic Board nominated by the President. The remaining members of the Committee need not be members of the Academic Board but will be nominated by the President taking into account their relevant experience and expertise. Members will not currently be involved in managing student progress and will disqualify themselves if they have previously been involved in the case of a particular student.

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

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

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

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

Re-admission After Exclusion

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 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**

Special Consideration – Illness and Misadventure

On some occasions sickness, misadventure, or other circumstance 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 which 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 which 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 from NewSouth Q, program and course offices and from the web at **www.student.unsw.edu.au** The completed application form must be submitted to NewSouth Q.

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 which 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 which 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 which 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 related to your application, 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 loss or theft. Failure to do so may result in the cardholder being held responsible for items issued on the card after its loss or theft.

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

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

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

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

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

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 note-takers, 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.

A Message from the Dean

Welcome to postgraduate study in the Faculty of Arts and Social Sciences at the University of New South Wales. Whether you are intending to undertake postgraduate research work, are seeking professional qualifications or are pursuing a specially cherished interest through a coursework program, I hope and expect that you will find your postgraduate study in the Faculty a stimulating and exciting experience.

The Faculty prides itself on the quality of the research supervision it provides for its PhD and Masters by Research students and it attempts to ensure that students have access to the facilities they require to achieve to the best of their abilities and to interact with fellow research students in seminars and workshops. The Faculty offers around thirty different programs in its PhD and Masters by Research programs, covering all of the disciplines of the Faculty and some interdisciplinary programs.

Postgraduate coursework opportunities range from Graduate Certificate through Graduate Diploma to Masters degrees and from interest driven programs in the MA to such specialist fields as Applied Linguistics, International Relations and Media Education. Professionally oriented programs are offered in such fields as the Master of Educational Administration and the Master of Professional Ethics.

I wish you an enjoyable and fruitful period of postgraduate study in the Faculty.

Annette Hamilton
Dean
Faculty of Arts and Social Sciences

Faculty of Arts and Social Sciences

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Faculty Information and Assistance

Some People Who Can Help You

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.

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 course information for current students.

Admission

Applications forms for admission to all postgraduate programs should be obtained from the **Student Recruitment Office** at UNSW:

Student Recruitment Office
The University of New South Wales
Sydney NSW 2052
Tel: (02) 9385 1844
Email: studentrecruitment@unsw.edu.au

Applications for all coursework programs generally close at the end of November for entry in Semester 1 of the following year and end of May for entry in Semester 2. For research programs there is no set closing date, however, applicants should lodge their applications at least three months prior to the commencement of the session in which they wish to commence. Applications for enrolment in a research program should include an official academic transcript and a brief outline of the proposed research topic.

Advanced Standing

Students seeking advanced standing must submit documentary evidence of courses completed on admission 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 6 years previously.

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, outside class hours, 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.

Faculty Timetable

The graduate timetable for Arts and Social Sciences courses will be available on the web at **www.arts.unsw.edu.au** in November. Copies will also be available for consultation on enrolment. Students 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.

The Learning Centre

The Learning Centre at UNSW offers support to Arts and Social Sciences PhD and Masters by Research students with academic writing and academic English. Students may consult to discuss drafts of their chapters or proposals. Dr Sue Starfield, the Director of the Centre, also offers weekly academic English workshops, specifically for international PhD and research Masters students. For further information, please contact Dr Starfield at:

The Learning Centre
The Library – Level 2
The University of New South Wales
Sydney NSW 2052
Tel: (02) 9385 3369
Email: s.starfield@unsw.edu.au

Program Leave

A postgraduate research student may normally be granted up to two semesters of leave during their period of candidature for a particular degree. This period may be exceeded where a case is established to the satisfaction of the Research Committee that leave is appropriate on health, compassionate or other grounds accepted by the Committee.

Postgraduate coursework students whose progress is satisfactory may apply for leave of absence from their studies for no more than two semesters.

Progression

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.

Coursework students who fail to complete at least 16 units of credit or fail a course in any session may be required to 'show cause' as to why they should be permitted to proceed with their studies.

Research students' progress is reviewed each session and is overseen by the Faculty's Research Committee.

Re-enrolment Procedures

All re-enrolling postgraduate coursework students are expected to re-enrol via the web. Room G69 in the Morven Brown Building is available to students in the Faculty for re-enrolment purposes.

Re-enrolling research students should contact the Faculty's Research Office, Room 304B, Morven Brown Building, for details in November.

Postgraduate Study

The Faculty of Arts and Social Sciences offers a wide range of opportunities for postgraduate study, both by coursework and research, professional and interest driven, full-time and part-time.

At the graduate level the degrees of Doctor of Philosophy, Doctor of Education, Master of Arts, Master of Education, Master of Educational Administration, Master of International Social Development, Master of Music, Master of Music Education, Master of Policy Studies, Master of Professional Ethics and Master of Social Work are offered. In addition, the Faculty offers Graduate Diplomas in Arts (Research and Coursework), Education, International Social Development, Music, Policy Studies and Professional Ethics and Graduate Certificates in Arts, Music, Policy Studies and Program Evaluation.

To enter one of the postgraduate coursework programs in the Faculty, whether at Certificate, Diploma or Masters level, an applicant is normally required to have completed a relevant undergraduate degree. In some cases an applicant may be admitted who submits evidence of other academic or professional qualifications which satisfy the Faculty as appropriate.

Entry to the Masters by Research requires a good Honours degree in an appropriate discipline or a relevant Bachelor together with acceptable

professional experience. Entry to the PhD and EdD programs requires a good Honours degree or its equivalent.

Doctor of Philosophy Degree

PhD

The degree of Doctor of Philosophy is offered in the Faculty of Arts and Social Sciences in the following schools/departments/programs:

Program

1190 Australian Studies
1225 Chinese Studies
1297 Criminology
1970 Education
1200 English
1235 European Studies
1210 French
1231 German Studies
1215 Health, Sexuality and Culture
1240 History
1250 History and Philosophy of Science
1228 Indonesian Studies
1221 Japanese Studies
1223 Korean Studies
1208 Linguistics
1245 Media and Communications
1238 Modern Greek Studies
1280 Music
1281 Music Education
1260 Philosophy
1265 Professional Ethics
1270 Politics and International Studies
1291 Russian Studies
1295 Social Science and Policy
1980 Social Work
1300 Sociology
1310 Spanish and Latin American Studies
1181 Theatre, Film and Dance
1305 Women's Studies

Enrolment in more than one school/department/program is also possible.

Masters by Research

Master of Arts	Program 2353
Master of Education	Program 2354
Master of Educational Administration	Program 2355
Master of Music	Program 2356
Master of Music Education	Program 2357
Master of Social Science	Program 2358

These are Masters programs which are research degrees involving three courses and a research thesis or project. The degree is completed in four sessions (full-time). It is designed for students wishing to engage in serious research but not able to devote the three years required to complete a PhD or with a research project which does not lend itself to that level of extended treatment. Clear indication of potential to undertake research is required, either through a relevant Honours degree or through a period of professional work following a relevant undergraduate degree.

Successful completion may be used as an entry path to PhD study.

Contacts for PhD and Masters by Research

Chinese Studies	Dr Jon von Kowallis Email: j.kowallis@unsw.edu.au
Cognitive Science	Dr Peter Slezak Email: p.slezak@unsw.edu.au
Education	Professor John Sweller Email: j.sweller@unsw.edu.au
English	A/Professor Bill Ashcroft Email: english@unsw.edu.au
European Studies	Professor John Milfull Email: j.milfull@unsw.edu.au
French	Dr Maurice Blackman Email: m.blackman@unsw.edu.au
German & Russian Studies	Dr Ludmila Stern Email: l.stern@unsw.edu.au
Greek, Modern	Dr Eleni Amvrazi Email: e.amvrazi@unsw.edu.au
History	Dr Jean Gelman Taylor Email: jeant@unsw.edu.au
History and Philosophy of Science	Dr John Schuster Email: j.a.schuster@unsw.edu.au
Indonesian Studies	A/Professor David Reeve Email: d.reeve@unsw.edu.au
Japanese & Korean Studies	Dr Gregory Evon Email: g.evon@unsw.edu.au
Linguistics	Dr Rod Gardner Email: rod.gardner@unsw.edu.au
Media & Communications	Dr Gay Hawkins Email: mdcm@unsw.edu.au
Music and Music Education	Dr Jill Stubington Email: jill.stubington@unsw.edu.au
Philosophy	Dr Ros Diprose Email: r.diprose@unsw.edu.au
Politics & International Relations	A/Professor Gavin Kitching Email: g.kitching@unsw.edu.au
Professional Ethics	School of Philosophy Email: philosophy@unsw.edu.au
Social Science & Policy	Professor Janet Chan Email: j.chan@unsw.edu.au
Social Work	Dr Richard Roberts Email: r.roberts@unsw.edu.au
Sociology	Ms Maria Markus Email: m.markus@unsw.edu.au Dr Jocelyn Pixley Email: j.pixley@unsw.edu.au
Spanish & Latin American Studies	Dr Diana Palaversich Email: d.palaversich@unsw.edu.au
Theatre, Film and Dance	Dr Jodi Brooks Email: j.brooks@unsw.edu.au
Women's Studies	Dr Hélène Bowen Raddeker Email: hbowenr@unsw.edu.au

Graduate Diploma in Arts by Research

The Graduate Diploma in Arts by Research (program **5275**) is offered by Schools and approved disciplinary programs in the Faculty of Arts and Social Sciences. It is designed primarily to enable students with substantial concentration in an area of study in an undergraduate or postgraduate coursework degree to achieve a qualification to meet the requirements for entry to postgraduate research programs in the Faculty.

The Diploma involves the writing of a 15 – 20,000 word research thesis under supervision and the completion of two session length courses. The program is undertaken on a full-time basis over one year or two years part-time. Appropriately qualified applicants may seek advanced standing for the coursework components of the program only.

Master of Arts by Coursework

MA

The program for the Master of Arts degree by coursework (program **8225**) in the Faculty of Arts and Social Sciences offers the following areas of study:

Asian Studies
Chinese-English Translation and Interpreting
Chinese Studies
Cognitive Science
Couple and Family Therapy (program **8228**)
Creative Writing (School of English)
English
International Relations
Japanese Applied Linguistics
Japanese Studies
Korean Applied Linguistics
Linguistics, Applied
Linguistics, TESOL
Media Education
New Media
Science, Technology and Society (School of History & Philosophy of Science)
Sociology
Theatre

Graduate Diploma in Arts by Coursework

GradDipArts

The program for the Graduate Diploma in Arts (program **5225**) in the Faculty of Arts and Social Sciences offers the following areas of study:

Asian Studies
Chinese-English Translation and Interpreting
Chinese Studies
Cognitive Science
Creative Writing (School of English)
English
International Relations
Japanese Applied Linguistics
Japanese Studies
Korean Applied Linguistics
Linguistics, Applied
Linguistics, TESOL
Media Education
New Media
Philosophy
Science, Technology and Society (School of History & Philosophy of Science)
Sociology
Theatre

Graduate Certificate in Arts by Coursework

GradCertArts

The program for the Graduate Certificate in Arts (program **7325**) in the Faculty of Arts and Social Sciences offers the following areas of study:

Chinese-English Translation and Interpreting
Chinese Studies
Cognitive Science
Creative Writing (School of English)
English
Environmental Policy
International Relations
Korean Applied Linguistics
Japanese Applied Linguistics
Japanese Studies
Linguistics, Applied
Linguistics, TESOL
Science, Technology and Society (School of History & Philoosophy of Science)
Sociology
Theatre

Master of Education and Educational Administration Degrees

The Master of Education by coursework (program **8910**) is designed for educationists who wish to study education at an advanced level to enhance their professional development. The Master of Education in Applied Linguistics by coursework (program **8910**) is designed to provide those working or intending to work in TEFL/TESL or TESOL with a vocationally relevant degree.

The Master of Educational Administration by coursework (program **8960**) is a specialist program designed to equip current and aspiring administrators to manage education at all levels in government and independent schools, school systems, universities, TAFE and other educational organisations.

Graduate Diploma in Education (Secondary)

The Graduate Diploma in Education (program **5560**) is designed to give professional training to graduate students in secondary school level teacher education. The program is undertaken on a full-time basis over one year or part-time over one-and-a-half or two years.

Master of International Social Development
Graduate Diploma in International Social Development

The Master of International Social Development (MInTSocDev - program **8938**) and the Graduate Diploma in International Social Development (GradDipIntSocDev – program **5556**) are offered by the School of Social Work at UNSW.

The overall goal of the program is to offer a graduate degree in social development practice with an international focus. By the end of the program, candidates can expect to have substantial knowledge and a range of skills related to the planning, delivery and evaluation of programs relevant to international social community development and aid work, refugee and immigrant resettlement. The program is based on a social justice philosophy, a human rights framework and a community development approach.

The Masters program includes 4 core courses and 2 electives. The Graduate Diploma involves 4 courses.

Masters Degrees in Music and Music Education
Master of Music by Coursework

MMus

The MMus coursework degree (program **8226**) involves the successful completion of six session-length units. Courses can be taken in any combination of options.

Graduate Diploma in Music

GradDipMus
GradDipMus (Suzuki Pedagogy)

Four session-length units from the Master of Music list are required for the Graduate Diploma in Music (program **5226**).

For Suzuki Pedagogy, the student must undertake the special Suzuki core course and three electives.

Graduate Certificate in Music

GradCertMus
GradCertMus (Suzuki Pedagogy)

Two session-length units from the Master of Music list are required for the Graduate Certificate in Music (program **7326**).

For Suzuki Pedagogy, the student must undertake the special Suzuki core course and one elective.

Master of Policy Studies
Graduate Diploma and Certificate in Policy Studies
Graduate Certificate in Program Evaluation

The Master of Policy Studies (MPS program **8248**) is offered by the School of Social Science and Policy. It is designed to prepare students for effective participation and leadership in problem solving and policy making in a variety of organisational contexts, and for work which requires analytical skills and a practical appreciation of the processes of policy making and implementation. In addition to a common core curriculum, students complete two specialised electives.

The degree is open to graduates in any field who have significant work experience in an area appropriate to the degree program. In exceptional circumstances applicants may be admitted without a first degree but with general and professional attainments acceptable to the School.

The Graduate Diploma (program **5280**), Graduate Certificate in Policy Studies (program **7348**) and Graduate Certificate in Program Evaluation (program **7347**) are also offered. For details, see the Policy Studies section of this Handbook.

Master of Professional Ethics
Graduate Diploma in Professional Ethics

While open to anyone with an interest in the area, these courses (Master of Professional Ethics, program **8227** and the Graduate Diploma in Professional Ethics, program **5295**) have been devised as a response to pressing demands from two quarters: first, from professionals and the professions, who wish to ensure high standards of ethical practice, and to complement the requirements of legal regulation with those of coherent and consistent moral positions; second, from public demand and expectation of higher standards of accountability and responsible conduct from the professions and their practitioners.

The Master Degree and Graduate Diploma are both offered in distance mode as well as on-campus.

Masters Degrees and Graduate Diplomas in Social Work

The Master of Social Work (Research), program **2970**, is a research degree that requires a candidate to demonstrate his or her ability to undertake research by the submission of a thesis.

The School of Social Work also offers articulated Postgraduate programs in Couple and Family Therapy and International Social Development. For information on the Couple and Family Therapy program, refer to the Master of Arts section, program **8228**. The International Social Development programs (**8938** and **5556**) appear alphabetically listed after the Education section in this Handbook.

Program and Course Information

Master of Arts by Coursework
Program 8225

Six courses within a selected program need to be completed to satisfy the requirements for the award of the degree.

The minimum period of enrolment is two sessions (full-time) or three sessions (part-time). The maximum period of enrolment for part-time study is eight sessions.

You must enrol in at least one course in each session. Progress will be reviewed at end of each year, and students who have completed less than 16 units of credit or failed a course may be required to 'show cause' as to why they should be permitted to continue.

Graduate Diploma in Arts
Program 5225

The Graduate Diploma in Arts is available in a number of disciplines. Students are required to enrol in one of the programs and to complete four courses from the listed options.

The minimum period of enrolment for the Graduate Diploma is two sessions. The maximum period of enrolment is four sessions. You must enrol in at least one course each session.

Graduate Certificate in Arts
Program 7325

The Graduate Certificate in Arts is available in a number of disciplines. Students are required to enrol in one of the programs and to complete two courses from the listed options.

The minimum period of enrolment is one session and the maximum period three sessions. You must enrol in at least one course in each session.

Asian Studies

Available: MA; GradDipArts
Coordinator: A/Prof David Reeve, Department of Chinese and Indonesian Studies
Email: d.reeve@unsw.edu.au

Master of Arts

The Asian Studies degree (program **8225**, plan code **ASIAAS8225**) is designed to combine an interdisciplinary approach with specialisation in one or two disciplines. It is specifically designed for graduates who wish to extend their understanding of contemporary Asian societies. The program is especially suitable for people already involved in, or wishing to enter, careers such as education, journalism, government and professional or commercial areas with organisations having involvement with Asian countries. There is an opportunity within the program for a student to specialise in one country.

Students enrolled in the Asian Studies program must complete 48 units of credit in courses offered in the program, including **ASIA5001** Approaches to Asia. Students are advised that they are only allowed to complete one Law course as part of the program.

Core Course

ASIA5001	Approaches to Asia	S1

Optional Courses

ASIA5003	East Asian Poetry and Poetics*	
ASIA5100	Research Project	S1 & S2
ASIA5200	Reading Program (Asian Studies)	S1 & S2
CHIN5000	China's Provinces	S2
CHIN5906	Chinese Business and Management	S1
HIST5203	US Foreign Relations since 1900*	
HIST5204	Politics and Society in Indonesia	S1
HIST5222	Australian Images of Asia	S2
HIST5233	Modern China: History and Historiography	S1
HIST5235	De/Constructing History – 'Japan'	S2
JAPN5001	Features of a Language: Japanese	S1
JAPN5002	Trends & Issues in Teaching & Learning Japanese as a Foreign Language	S1
JAPN5005	Who are the Japanese?	S1
JAPN5006	Japanese Sociolinguistics	S2
LAWS4120	Themes in Asian and Comparative Law	S1
LAWS4127	Japanese Law in Context	S1
LAWS4129	Japanese Law and Society	S2
LAWS4130	Japanese Law and the Economy	S2
LING5007	Translation: Theory and Practice	S2
POLS5120	The International System	S1
POLS5121	International Institutions	S2
POLS5122	The International Political Economy	S2
POLS5127	China and Asia-Pacific Security	S1
SOCW7852	Politics of International Aid	S1

**Not offered in 2004.*

Graduate Diploma in Arts

Students enrolled in the Asian Studies Graduate Diploma in Arts (program **5225,** plan code **ASIAAS5225**) must complete 32 units of credit in courses offered in the program, including **ASIA5001** Approaches to Asia and three of the options. These do not include **ASIA5100** Research Project and **ASIA5200** Reading Program.

Chinese-English Translation and Interpreting

Available: MA; GradDipArts; GradCertArts
Coordinator: Dr Yong Zhong
Email: y.zhong@unsw.edu.au

The Master of Arts by coursework in Chinese-English Translation and Interpreting (program **8225**, plan code **CHINDS8225**) provides an applied education in the skills involved in Chinese-English translation and interpreting for students wishing to enter a professional career in those services. Students enrolling in this program are required to have third year-level proficiency in Chinese.

The courses in this program are CHIN5900, CHIN5901, CHIN5905, CHIN5908, CHIN5909 and CHIN5910. Students must complete six courses, including five core courses, to qualify for the MA, and four core courses, including CHIN5900 and CHIN5901, to qualify for the Graduate Diploma (program **5225**, plan code **CHINDS5225**). They may graduate with a Graduate Certificate (program **7325**, plan code **CHINDS7325**) after the successful completion of the two courses CHIN5900 and CHIN5901.

Core Courses

CHIN5900	Chinese-English Translation Project	S1
CHIN5901	Chinese-English Professional Interpreting	S2
CHIN5905	Chinese Sociolinguistics*	
CHIN5908	Chinese Management Terminology	S1
CHIN5909	Chinese for Commercial Use	S2
CHIN5910	Chinese Poetry and Poetics: Theories of Translation	S1

Elective

LING5006	Bilingualism	S1

**Not offered in 2004.*

Chinese Studies

Available: MA; GradDipArts; GradCertArts
Coordinator: Dr Jon von Kowallis
Email: j.kowallis@unsw.edu.au

The Master of Arts in Chinese Studies (program **8225**, plan code **CHINAS8225**) provides an interdisciplinary approach to the study of Modern and Contemporary China and advanced Chinese language usage. It is intended for students who wish to deepen their understanding of Chinese society and culture and their skills in Chinese language for professional or academic purposes.

Prerequisites

Students enrolling in this program are required to have third year-level proficiency or equivalent in Chinese and a BA with a major in an area of Chinese studies, preferably at credit level or above. Qualifications from other appropriately qualified people will be considered on an individual basis.

Program Requirements

Students are required to undertake six courses, including four core courses, to qualify for the MA and four courses, including three core courses, to qualify for the Graduate Diploma (program **5225**, plan code **CHINAS5225).** They may graduate with a Graduate Certificate (program **7325**, plan code **CHINAS7325**) after the successful completion of two core courses.

Core Courses

CHIN5000	China's Provinces	S2
CHIN5902	Chinese In-Country Research Project I	S1 or S2
CHIN5903	Chinese In-Country Research Project II	S1 or S2
CHIN5905	Chinese Sociolinguistics*	
CHIN5906	Chinese Business and Management	S1

CHIN5910	Chinese Poetry and Poetics: Theories of Translation	S1
CHIN5913	Chinese Performing Arts	S1
CHIN5914	Chinese Musical Culture	S2
CHIN5915	Chinese Autobiography	S2

Electives

HIST5233	Modern China: History and Historiography	S2
POLS5127	China and Asia-Pacific Security	S1

**Not offered in 2004.*

Cognitive Science

Available: MA; GradDipArts; GradCertArts
Coordinator: Dr Peter Slezak, School of History and Philosophy of Science
Email: p.slezak@unsw.edu.au

Cognitive Science has recently emerged as an exciting and fruitful domain of scientific inquiry in which there has been a convergence of a number of disciplines including artificial intelligence, psychology, philosophy, linguistics and neuroscience. Since the revolutionary developments in these fields during the 1950s and 1960s, there has come to be a broad consensus that the problems of mind, language, knowledge and perception do not belong exclusively to any one discipline, but fall to all of them. The Master of Arts in Cognitive Science (program **8225**, plan code **HPSCBS8225**) has been established with a view to providing a comprehensive perspective on Cognitive Science, in the same interdisciplinary spirit which is characteristic of the field.

Students must complete all six courses to qualify for the MA, and four courses to qualify for the Graduate Diploma (program **5225**, plan code **HPSCBS5225**), including HPSC5200 and excluding HPSC5020. They may graduate with a Graduate Certificate (program **7325,** plan code **HPSCBS7325**) after the successful completion of two courses, including HPSC5200 and excluding HPSC5020.

Courses

EDST5303	Human Cognitive Architecture	S1
HPSC5020	Supervised Reading Program	S1 & S2
HPSC5200	Foundations of Cognitive Science	S1
HPSC5210	Philosophical Issues in Cognitive Science	S2
LING5012	Language and Mind	S2
PHIL5206	Artificial Intelligence and Computer Science	S1

Couple and Family Therapy

Available: MA
Coordinator: Carmel Flaskas, School of Social Work
Email: c.flaskas@unsw.edu.au

Master of Arts in Couple and Family Therapy

This program is available on a part-time basis only. Students complete the Masters degree (program **8228,** plan code **SOCFAS8228**) in two years and are required to complete 6 courses.

The Masters program is an interdisciplinary clinical training program that prepares counselling professionals for specialist practice in the field of couple and family therapy. The program of study emphasises theory and clinical studies in couple and family therapy, and research issues related to this field. The program is taught jointly by the School of Social Work and the clinical training organisation Relationships Australia (NSW).

Some courses are subject to prerequisite and corequisite requirements. All courses are dependent on staff availability and student enrolments.

Admission Requirements

Admission is strictly limited and competitive; the selection process uses both written applications and interviews. Applications close each year at the end of October. Admission requirements include an approved Bachelor's degree, professional training and two years professional experience in counselling.

Core Courses		**UOC**
Year 1		
Session 1		
SOCF5001	Theory of Couple and Family Therapy	4
SOCF5002	Clinical Studies A	8
Session 2		
SOCF5003	Clinical Studies B	12
Year 2		
Session 1		
SOCF5004	Contemporary Theory Issues	8
SOCF5005	Research Issues	4
Session 2		
SOCF5006	Clinical Studies C	12

Graduate Diploma in Couple and Family Therapy

The program is articulated with the Graduate Diploma in Couple and Family Therapy (program **5559**). However, the Graduate Diploma is available as an exit-point only from the Masters – a student may be awarded the Graduate Diploma if circumstances prevent the completion of the Masters. In this situation, courses SOCF5001, 5002, 5003 and 5004 must be successfully completed for a student to become eligible to exit with the Graduate Diploma award.

English

Available: MA; GradDipArts; GradCertArts in English; Creative Writing
Head of School: Dr Richard Madelaine
School Office: Room 145, Morven Brown Building
Tel: (02) 9385 2298 **Fax:** (02) 9385 1047
Email: english@unsw.edu.au

Through the Masters, Graduate Diploma and Graduate Certificate programs in English or Creative Writing, the School of English offers a flexible and articulated sequence of postgraduate coursework degrees. Students who successfully complete studies for the Graduate Certificate or Graduate Diploma may apply to upgrade to the full Masters program. At the same time, the Graduate Diploma and Graduate Certificate provide possible exit points for students who find they are unable to complete the full MA program due to changing commitments at work or at home.

Prerequisites

The normal requirement for entry to the MA, GradDipArts, and GradCertArts within the School of English is a BA with a major in English or in a related area, preferably at Credit level or higher. The School particularly encourages applications from primary and secondary teachers. Our program includes new courses which deal directly with material relevant to the new HSC English curriculum. Applicants for the Creative Writing programs whose undergraduate degree is not in English may be requested to provide samples of their creative writing. Applicants whose first language is not English may be required to provide a sample of their critical writing in English. Applications from other appropriately qualified people to any of our programs will be considered on an individual basis. Entry to individual courses may be permitted at the discretion of the Head of School.

Master of Arts in English

The Master of Arts in English (program **8225**, plan code **ENGLAS8225**) aims to provide an opportunity for further coursework study of current critical issues or special interest areas in English. The program includes courses which deal directly with material relevant to the new HSC English curriculum.

Students undertaking the MA program must complete 48 units of credit in English. All courses are worth 8 units of credit and are of one session's duration. The MA courses may be taken as a full-time program over one year (6 hours per week over 2 sessions) or as a part-time program over two or three years.

Courses

ENGL5000	Individual Reading Program	S1 & S2
ENGL5001	Critical Theory A	S1
ENGL5002	Critical Theory B	S2
ENGL5009	Shakespeare and Revenge	S1
ENGL5023	Contemporary Australian Literature	S1
ENGL5031	Post-colonial Representations	S2
ENGL5032	Precocious Writing: A Study of Literary Juvenilia	S2
ENGL5305	Literary Controversies	S2
ENGL5600	Introduction to Cultural Studies	S1
ENGL5601	Critical Approaches to Reading Texts	S2
ENGL5602	Epic: Homer, Virgil, Milton	S1

Elective Courses

Approved elective courses may be taken from outside the program from the following list (only two courses may be taken):

ENGL5300	Poetry Plus	S1
ENGL5301	Innovative Fiction	S2
ENGL5302	Intergeneric Writing	S2

Graduate Diploma in Arts in English

The Graduate Diploma in English (program **5225**, plan code **ENGLAS5225**) aims to introduce greater flexibility in the range of articulated courses offered in English and to make available a vocationally relevant degree enabling students to upgrade their knowledge and skills.

To complete the program, students are required to take 4 courses from those offered in the MA program. Students who successfully complete the 4 courses may apply to upgrade to enrolment in the Master of Arts degree. They would then need to complete a further 2 courses. The Graduate Diploma also provides a possible exit point for students who find they are unable to complete the MA (Pass) program due to changing commitments at work or at home.

Courses

ENGL5000	Individual Reading Program	S1 & S2
ENGL5001	Critical Theory A	S1
ENGL5002	Critical Theory B	S2
ENGL5009	Shakespeare and Revenge	S1
ENGL5023	Contemporary Australian Literature	S1
ENGL5031	Post-colonial Representations	S2
ENGL5032	Precocious Writing: A Study of Literary Juvenilia	S2
ENGL5305	Literary Controversies	S2
ENGL5600	Introduction to Cultural Studies	S1
ENGL5601	Critical Approaches to Reading Texts	S2
ENGL5602	Epic: Homer, Virgil, Milton	S1

Approved elective courses may be taken from outside the program from the following list (only two courses may be taken)

ENGL5300	Poetry Plus	S1
ENGL5301	Innovative Fiction	S2
ENGL5302	Intergeneric Writing	S2

Graduate Certificate in Arts in English

The Graduate Certificate in English (program **7325**, plan code **ENGLAS7325**) aims to make available a vocationally relevant certificate enabling students to upgrade their knowledge and skills. To complete the program, students are required to take 2 courses from those offered in the MA program. The certificate is offered 4 hours per week over one session or 2 hours per week over two sessions. Students who successfully complete the 2 courses may apply to upgrade to enrolment in either the Graduate Diploma (requiring completion of a further 2 courses) or the Master of Arts degree (requiring a further 4 courses). The Graduate Certificate also provides a possible exit point for students who find they are unable to complete the MA (Pass) or Graduate Diploma programs due to changing commitments at work or at home.

Courses

ENGL5000	Individual Reading Program	S1 & S2
ENGL5001	Critical Theory A	S1
ENGL5002	Critical Theory B	S2
ENGL5009	Shakespeare and Revenge	S1
ENGL5023	Contemporary Australian Literature	S1
ENGL5031	Post-colonial Representations	S2
ENGL5032	Precocious Writing: A Study of Literary Juvenilia	S2
ENGL5305	Literary Controversies	S2
ENGL5600	Introduction to Cultural Studies	S1
ENGL5601	Critical Approaches to Reading Texts	S2
ENGL5602	Epic: Homer, Virgil, Milton	S1

Master of Arts in Creative Writing

The School of English offers a coursework program, which leads to the award of Master of Arts in Creative Writing (program **8225**, plan code **ENGLCS8225**). The program is distinctive for the wide range of opportunities it offers, and for its adventurous and contemporary thrust. While many creative writing programs are based on the standardisation of genres of writing, our program encourages students to cross genres and to link creative writing with both relevant theory and other art forms. The program is also unusual because it encourages students to experiment with new technologies, such as hypertext, and to submit work, if they wish, in forms other than the written page.

Program requirements

Students undertaking the MA in Creative Writing must complete 48 units of credit. The program of study will normally be constituted as 6 session-length courses. These must be successfully completed over no fewer than two sessions by full-time students or four sessions by part-time students. The MA in Creative Writing consists of three core Creative Writing courses and a Writing Workshop, plus two electives from other MA courses offered by the School. The maximum period of candidature for full-time students is two sessions; for part-time students it is generally six sessions. Each course is taught in a two-hour seminar per week.

The 48 units of credit are as follows:

The three core courses (ENGL5300 Poetry Plus, ENGL5301 Innovative Fiction and ENGL5302 Intergeneric Writing) and ENGL5303 Writing Workshop plus two approved MA coursework electives from other MA courses offered by the School.

Core Courses

ENGL5300	Poetry Plus	S1
ENGL5301	Innovative Fiction	S2
ENGL5302	Intergeneric Writing	S2
ENGL5303	Writing Workshop	S1

Elective Courses

Approved elective courses from outside the program (only two courses may be taken)

ENGL5000	Individual Reading Program	S1 & S2
ENGL5001	Critical Theory A	S1
ENGL5002	Critical Theory B	S2
ENGL5009	Shakespeare and Revenge	S1
ENGL5023	Contemporary Australian Literature	S1
ENGL5031	Post-colonial Representations	S2
ENGL5032	Precocious Writing: A Study of Literary Juvenilia	S2
ENGL5305	Literary Controversies	S2
ENGL5600	Introduction to Cultural Studies	S1
ENGL5601	Critical Approaches to Reading Texts	S2
ENGL5602	Epic: Homer, Virgil, Milton	S1

Graduate Diploma in Arts in Creative Writing

In the Graduate Diploma in Creative Writing (program **5225**, plan code **ENGLCS5225**) students take 4 courses from those offered in the MA in Creative Writing program. Students who have successfully completed the requirements for the Graduate Diploma in Creative Writing may apply to upgrade to the Master of Arts program in Creative Writing, requiring completion of a further 2 courses. The Graduate Diploma also provides a possible exit point for students who find they are unable to complete the MA (Pass) program due to changing commitments at work or at home.

The 32 units of credit include the 3 Core courses (ENGL5300 Poetry Plus, ENGL5301 Innovative Fiction and ENGL5302 Intergeneric Writing) plus ENGL5303 Writing Workshop.

ENGL5300	Poetry Plus	S1
ENGL5301	Innovative Fiction	S2
ENGL5302	Intergeneric Writing	S2
ENGL5303	Writing Workshop	S1

Graduate Certificate in Arts in Creative Writing

In the Graduate Certificate in Creative Writing (program **7325**, plan code **ENGLCS7325**) students undertake 2 courses from those offered in the MA and Graduate Diploma in Creative Writing programs. Students who have successfully completed the requirements for the Graduate Certificate in Creative Writing may apply to upgrade to either the Graduate Diploma in Creative Writing (requiring a further 2 courses) or the Master of Arts program in Creative Writing (requiring a further 4 courses). The Graduate Certificate also provides a possible exit point for students who find they are unable to complete the MA (Pass) program due to changing commitments at work or at home.

The 16 units of credit may be taken from (ENGL5300 Poetry Plus, ENGL5301 Innovative Fiction and ENGL5302 Intergeneric Writing).

ENGL5300	Poetry Plus	S1
ENGL5301	Innovative Fiction	S2
ENGL5302	Intergeneric Writing	S2

Environmental Studies

Available: GradCertArts
Coordinator: Dr Paul Brown, School of History & Philosophy of Science, Room LG16, Morven Brown
Tel: (02) 9385 1497
Email: paul.brown@unsw.edu.au

This Graduate Certificate (program **7325,** plan code **HPSCFS7325**) is designed for graduates wishing to learn more about the social and political context of environmental policy making and management. It is highly relevant for those already working in these areas of government or the private sector, and for teachers, educational planners and community service coordinators. Practitioners concerned with the built environment, such as architects and planners, will also benefit from the program. It is also offered in distance mode.

Central concerns of the certificate are the rise of modern environmentalism, the concept and interpretation of ecological sustainability, and the assessment and management of technological risk.

The prescriptions of international treaties reflect the globalisation of environmental problems, yet the action which flows from these prescriptions requires action at the national and local level. Increasingly, managers and policy makers must respond using their understanding of ecological sustainability, taking account of a broad range of environmental, political and social matters. 'Sustainable Development' is characterised quite differently by various constituencies, putting an onus on decision makers to engage with participatory processes in order to reach agreement about how environmental management for sustainability should proceed.

With these matters in mind, the certificate aims to equip participants to analyse, negotiate and apply practical and scientific knowledge in the social and policy contexts of their professions.

The Graduate Certificate is articulated within the framework of the Master of Environmental Management coordinated by the Institute of Environmental Studies (Contact: Ronnie Harding Ph: (02) 9385 5687, Email: r.harding@unsw.edu.au). Students should enquire about this as they proceed through the Graduate Certificate in Environmental Policy since they may want to articulate their current courses with the Masters program.

Entry Requirements

The normal qualification for entry is a three year degree, which can be in any discipline. In appropriate cases, relevant professional experience may be accepted in lieu of formal qualifications.

Course Structure

The certificate consists of two courses taken in order: HPSC5500 Society, Environmental Policy and Sustainability, and HPSC5510 Risk Policy, Decision Making and Communication.

Duration

Classes two hours per week over two fourteen week sessions, in the timeslot 6-8 pm.

Courses

HPSC5500	Society, Environmental Policy and Sustainability	S1
HPSC5510	Risk Policy, Decision Making and Communication	S2

International Relations

Available: MA; GradDipArts; GradCertArts
Coordinator: Dr Shirley Scott, Politics and International Relations
Email: s.scott@unsw.edu.au
Administration: Pat Hall-Ingrey
Tel: (02) 9385 3786
Email: p.hall-ingrey@unsw.edu.au
Web Address: www.arts@unsw.edu.au/politics/

The **MA program in International Relations** (program **8225**, plan code **POLSBS8225**) is a comprehensive approach to the key subject components which make up this now very significant sub-discipline. The subject matter is drawn from politics, economics, and history and the underlying theme is an understanding of global politics from both theoretical and practical perspectives.

Prerequisites

The normal requirement for admission to the International Relations program is an undergraduate degree in the social sciences or humanities, with performance at Credit level or better. Relevant work experience may be taken into account in cases where academic qualifications fall short of these requirements.

Program in International Relations

Students must complete 48 units of credit made up as follows:

16 units of credit obtained from the two compulsory courses (Monday evenings)

32 units of credit obtained from any four of the elective courses

8 of these 32 elective units of credit may, with the permission of the MA Coordinator, be obtained from courses outside the program, but within the Faculty.

Each semester-length course, which is worth 8 units of credit, involves participating in one two-hour lecture/seminar each week for fourteen weeks and writing at least one minor research essay and a substantial major research essay. Part-time students are not permitted to enrol in elective courses unless they have completed or are enrolled in at least one of the compulsory courses.

Compulsory Courses

POLS5120	The International System	S1
POLS5122	The International Political Economy	S2

Elective Courses

Not all of these may be offered in any one year and new or alternative courses may be offered – consult the Coordinator.

POLS5100	Issues in Australian Public Policy: Internship Program	S2
POLS5102	Australia in the World	S1
POLS5103	Law, War and Justice	S2
POLS5108	Regional Orders in the Asia Pacific	S2
POLS5121	International Institutions	S2
POLS5125	The Politics of International Law	S1 & S2
POLS5126	Nationalism and Ethnicity	S1 & S2
POLS5127	China and Asia-Pacific Security	S1
POLS5154	International Business and International Politics	S1
POLS5156	The International Political Economy of East Asian Development	S1
POLS5113	Research Project	S1 & S2

Graduate Diploma in Arts

Prerequisites

See prerequisites for the MA program in International Relations

Program

Applicants are encouraged to enrol in a Masters program and to use the Graduate Diploma (program **5225**) as an exit point only for those who for various reasons are unable to complete the Masters program. In order to obtain a Graduate Diploma in International Relations students must complete 32 units of credit made up as follows:

16 units of credit obtained from the two compulsory courses and 16 units of credit obtained from two of the International Relations electives.

Graduate Certificate in Arts

Prerequisites

See prerequisites for the MA program in International Relations

Program

In order to obtain a Graduate Certificate in International Relations (program **7325**) students must complete 16 units of credit made up as follows:

8 units of credit obtained from one of the compulsory courses and 8 units of credit obtained from one of the International Relations electives.

Japanese Applied Linguistics

Available: MA; GradDipArts; GradCertArts
Coordinator: Dr Kazuhiro Teruya
Tel: (02) 9385 5848
Email: k.teruya@unsw.edu.au

Master of Arts

The Master of Arts in Japanese Applied Linguistics (program **8225**, plan code **JAPNFS8225**) aims to provide current and future teachers of the Japanese language and those who plan to pursue academic careers in Japanese Applied Linguistics with a well-founded basis and practical experience in the field.

The program draws from the existing expertise of both the Department of Linguistics and the Department of Japanese and Korean Studies to offer a unique opportunity to study Japanese linguistics and its application to teaching. Students enrolling in this program are required to have third year proficiency or equivalent in Japanese.

To be awarded the degree, students are required to complete six courses (48 units of credit): at least two JAPN courses from List A and up to two LING courses from List B, plus the remainder from List C. In fulfilling the requirements for LING courses students must use Japanese data or examples. The program may be taken full-time or part-time.

The MA includes at least 2 courses from List A:

List A

JAPN5001	Features of a Language: Japanese	S1
JAPN5002	Trends and Issues in Teaching and Learning Japanese as a Foreign Language	S1
JAPN5006	Japanese Sociolinguistics	S2
JAPN5018	Discourse and Society in Japan	S2

plus up to 2 courses from List B:

List B

LING5001	Second Language Acquisition	S2
LING5002	Language Teaching Methodology	S1
LING5003	Testing and Evaluation	S1
LING5004	Syllabus Design	S2

LING5012	Language and Mind	S2
LING5015	Discourse Analysis	S2
LING5020	Adult Language Learning and Teaching	S1
LING5021	Language for Specific Purposes	S2

plus the remainder from List C:

List C

JAPN5000	Special Project	S1 & S2
JAPN5001	Features of a Language: Japanese	S1
JAPN5002	Trends and Issues in Teaching and Learning Japanese as a Foreign Language	S1
JAPN5003	Japanese In-Country Research Project I	S1 & S2
JAPN5004	Japanese In-Country Research Project II	S1 & S2
JAPN5005	Who are the Japanese?	S1
JAPN5006	Japanese Sociolinguistics	S2
JAPN5007	Creative Reading and Writing A	S1
JAPN5008	Creative Reading and Writing B	S2
JAPN5011	Japanese Teaching Practicum	S1 & S2
JAPN5012	Foundations in Japanese Studies	S2
JAPN5013	Special Reading Program for Teaching Interns	S2
JAPN5014	Teaching Internship in Japanese	S2
JAPN5015	Research Methods in Japanese Studies	S1
JAPN5016	Japanese Literature in Verbal Art	S1
JAPN5018	Discourse and Society in Japan	S2

Graduate Diploma in Arts

The Graduate Diploma in Japanese Applied Linguistics (program **5225**, plan code **JAPNFS5225**) aims to provide current and future teachers of the Japanese language and those who plan to pursue academic careers in Japanese Applied Linguistics with a well-founded basis and practical experience in the field.

The program draws from the existing expertise of both the Department of Linguistics and the Department of Japanese and Korean Studies to offer a unique opportunity to study Japanese linguistics and its application to teaching.

Students enrolling in this program are required to have third year proficiency or equivalent in Japanese.

Students are required to complete four courses from the MA in Japanese Applied Linguistics program – two JAPN courses from List A and two LING courses from List B.

Graduate Certificate in Arts

The Graduate Certificate in Japanese Applied Linguistics (program **7325**, plan code **JAPNFS7325**) aims to provide current and future teachers of the Japanese language and those who plan to pursue academic careers in Japanese Applied Linguistics with a well-founded basis and practical experience in the field.

The program draws from the existing expertise of both the Department of Linguistics and the Department of Japanese and Korean Studies to offer a unique opportunity to study Japanese linguistics and its application to teaching. Students enrolling in this course are required to have third year proficiency or equivalent in Japanese.

Students are required to complete two courses from the MA in Japanese Applied Linguistics program – one JAPN course from List A and one LING course from List B.

Japanese Studies

Available: MA; GradDipArts; GradCertArts
Coordinator: Dr Julia Yonetani
Tel: (02) 9385 2314
Email: j.yonetani@unsw.edu.au

Master of Arts

The Master of Arts in Japanese Studies (program **8225**, plan code **JAPNAS8225**) aims to provide an interdisciplinary approach to the study of contemporary Japan and advanced Japanese language in a communicative context.

Students will enhance their practical and theoretical knowledge of an area of specialisation of contemporary Japanese language and upgrade their vocationally relevant language skills. Areas of specialisation include cultural studies, intercultural communication, linguistics and applied linguistics. Students enrolling in this program are required to have third year proficiency or equivalent in Japanese.

To be awarded the degree, students are required to complete six courses (48 units of credit): the core courses, at least one course from the JAPN electives, and the remaining from JAPN elective courses or other elective courses. The program may be taken full-time or part-time.

Core courses

JAPN5012	Foundations in Japanese Studies	S2
JAPN5015	Research Methods in Japanese Studies	S1

JAPN elective courses

JAPN5000	Special Project	S1 & S2
JAPN5002	Trends and Issues in Teaching and Learning Japanese as a Foreign Language	S1
JAPN5003	Japanese In-Country Research Project I	S1 & S2
JAPN5004	Japanese In-Country Research Project II	S1 & S2
JAPN5005	Who are the Japanese?	S1
JAPN5006	Japanese Sociolinguistics	S2
JAPN5007	Creative Reading and Writing A	S1
JAPN5008	Creative Reading and Writing B	S2
JAPN5016	Japanese Literature in Verbal Art	S1
JAPN5017	Japan in the World (Advanced)	S1

Other elective courses

LAWS4127	Japanese Law in Context	S1 (online)
LAWS4129	Japanese Law and Society	S2 (online)
LAWS4130	Japanese Law and the Economy	S1 (online)
HIST5235	De/Constructing History – 'Japan'	S2

On approval from the MA program Coordinator, students may select courses from the MA in Japanese Applied Linguistics program.

Graduate Diploma in Arts

The Graduate Diploma in Japanese Studies (program **5225**, plan code **JAPNAS5225**) aims to provide an interdisciplinary approach to the study of contemporary Japanese culture and society and to advanced study of the Japanese language in a communicative context.

Students will enhance their practical and theoretical knowledge of an area of specialisation in contemporary Japanese language, society and culture and upgrade their vocationally relevant Japanese language skills. Areas of specialisation include cultural studies, intercultural communication, linguistics and applied linguistics. Students enrolling in this program are required to have third year proficiency or equivalent in Japanese.

Students are required to complete four courses from the MA in Japanese Studies program – at least two courses must be chosen from JAPN courses.

Graduate Certificate in Arts

The Graduate Certificate in Japanese Studies (program **7325**, plan code **JAPNAS7325**) aims to provide an interdisciplinary approach to the study of contemporary Japanese culture and society and to advanced study of the Japanese language in a communicative context.

Students will enhance their practical and theoretical knowledge of an area of specialisation in contemporary Japanese language, society and culture and upgrade their vocationally relevant Japanese language skills. Areas of specialisation include cultural studies, intercultural communication, linguistics and applied linguistics. Students enrolling in this program are required to have third year proficiency or equivalent in Japanese.

Students are required to complete JAPN5012 and a course chosen from JAPN courses in the MA in Japanese Studies program.

Korean Applied Linguistics

Available: MA; GradDipArts; GradCertArts
Coordinator: Mr Seong-Chul Shin
Tel: (02) 9385 3724
Email: s.shin@unsw.edu.au

Master of Arts

The Master of Arts in Korean Applied Linguistics (program **8225**, plan code **KORECS8225**) aims to provide current and future teachers of the Korean language and those who plan to pursue academic careers in Korean Applied Linguistics with a well-founded basis and practical experience in the field.

The program draws from the existing expertise of both the Department of Linguistics and the Department of Japanese and Korean Studies to offer a unique opportunity to study Korean linguistics and its application to teaching. Students enrolling in this program are required to have third year proficiency or equivalent in Korean.

To be awarded the degree, students are required to complete six courses (48 units of credit) from the list including KORE5006 and KORE5007 and two LING courses. In fulfilling the requirements for LING courses students must use Korean data or examples. The program may be taken full-time or part-time.

Course List

KORE5000	Special Project	S2
KORE5001	Foundations in Korean Studies	S1
KORE5002	Creative Reading and Writing A	S1
KORE5003	Creative Reading and Writing B	S2
KORE5004	Korean In-Country Project I	S1
KORE5005	Korean In-Country Project II	S2
KORE5006	Workshop in Teaching Korean	X1
KORE5007	Korean Grammar	X1
KORE5008	Korean Teaching Practicum	S1 & S2
KORE5009	Research Methods in Korean Studies	S1
LING5002	Language Teaching Methodologies	S1
LING5003	Testing and Evaluation	S1
LING5004	Syllabus Design	S2
LING	other courses also available	

Graduate Diploma in Arts

Students who enrol in this program need to complete KORE5006 and KORE5007 and two other courses from the course list.

Graduate Certificate in Arts

Students who enrol in this program need to complete the two courses: KORE5006 and KORE5007.

Linguistics

Available: MA; GradDipArts; GradCertArts in Applied Linguistics and TESOL
Coordinators: Dr Barbara Mullock (S1), Dr Rod Gardner (S2)
Email: linguistics@unsw.edu.au

Master of Arts in Applied Linguistics

The MA program in Applied Linguistics (program **8225**, plan code **LINGBS8225**) aims to provide those who work or plan to work in a language-related area (teachers of English as a second or foreign language or of a language other than English, translators and interpreters, curriculum designers, and other language professionals) with a vocationally relevant degree which will enable them to refresh and upgrade their knowledge and skills.

Applicants require a relevant undergraduate degree (normally with specialisation in Linguistics, English, or a foreign language), with preference given to applicants with relevant work experience.

The program may be taken full-time over two semesters or part-time over a period of no less than three semesters and no more than six semesters. Students are required to complete six courses.

Courses

LING5000	Special Project in Applied Linguistics	S1 & S2
LING5001	Second Language Acquisition	S1 & S2
LING5002	Language Teaching Methodology	S1 & S2
LING5003	Testing and Evaluation	S1 & S2
LING5004	Syllabus Design	S1 & S2
LING5005	The Structure of English	S1
LING5006	Bilingualism	S1
LING5007	Translation: Theory and Practice	S2
LING5011	Functional Grammar	S2
LING5012	Language and Mind	S2
LING5015	Functional Discourse Analysis	S1
LING5020	Adult Language Learning and Teaching	S1
LING5021	Language for Specific Purposes	S2
LING5023	Analysing Spoken Discourse	S2

Approved elective courses from outside the program

One approved elective course may be taken from outside the program from the following list:

JAPN5001	Features of a Language: Japanese	S1
JAPN5002	Trends and Issues in Teaching and Learning Japanese as a Foreign Language	S1
JAPN5006	Japanese Sociolinguistics	S2

Graduate Diploma in Arts in Applied Linguistics

The Graduate Diploma in Applied Linguistics (program **5225**, plan code **LINGBS5225**) aims to provide those who work or plan to work in a language-related area (teachers of English as a second or foreign language or of a language other than English, translators and interpreters, curriculum designers, and other language professionals) with a vocationally relevant degree which will enable them to refresh and upgrade their knowledge and skills.

Applicants require a relevant undergraduate degree (normally with specialisation in Linguistics, English, or a foreign language), with preference given to applicants with relevant work experience.

The diploma is offered both full-time (4 hours per week over 2 semesters) or part-time (over 3 or 4 semesters). Students are required to complete four courses.

Courses

LING5000	Special Project in Applied Linguistics	S1 & S2
LING5001	Second Language Acquisition	S1 & S2
LING5002	Language Teaching Methodology	S1 & S2
LING5003	Testing and Evaluation	S1 & S2
LING5004	Syllabus Design	S1 & S2
LING5005	The Structure of English	S1
LING5006	Bilingualism	S1
LING5007	Translation: Theory and Practice	S2
LING5011	Functional Grammar	S2
LING5012	Language and Mind	S2
LING5015	Functional Discourse Analysis	S1
LING5020	Adult Language Learning and Teaching	S1
LING5021	Language for Specific Purposes	S2
LING5023	Analysing Spoken Discourse	S2

Graduate Certificate in Arts in Applied Linguistics

The Graduate Certificate in Applied Linguistics (program **7325**, plan code **LINGBS7325**) aims to provide those who work or plan to work in a language-related area (teachers of English as a second or foreign language or of a language other than English, translators and interpreters, curriculum designers, and other language professionals) with a vocationally relevant degree which enables them to refresh and upgrade their knowledge and skills.

Applicants require a relevant undergraduate degree (normally with specialisation in Linguistics, English, or a foreign language), with preference given to applicants with relevant work experience.

The certificate is offered 4 hours per week over 1 semester or 2 hours per week over 2 semesters. Students are required to complete two courses as listed in the Diploma in Applied Linguistics program.

Master of Arts in TESOL

The MA program in TESOL (program **8225**, plan code **LINGCS8225**) aims to provide those who work or plan to work in the teaching of English to speakers of other languages (including teachers, curriculum designers, language testers, education administrators, etc.) with a vocationally relevant degree which will enable them to refresh and upgrade their knowledge and skills.

Applicants require a relevant undergraduate degree (normally with specialisation in Linguistics, English, or a foreign language), with preference given to applicants with relevant work experience.

The program may be taken full-time over two semesters or part-time over a period of no less than three semesters and no more than six semesters. Students are required to complete three core courses plus 3 electives as listed below:

Core Courses

LING5002	Language Teaching Methodology	S1 & S2
LING5003	Testing and Evaluation	S1 & S2
LING5004	Syllabus Design	S1 & S2

Elective Courses

LING5001	Second Language Acquisition	S1 & S2
LING5005	The Structure of English	S1
LING5011	Functional Grammar	S2
LING5015	Functional Discourse Analysis	S1
LING5020	Adult Language Learning and Teaching	S1
LING5021	Language for Specific Purposes	S2
LING5023	Analysing Spoken Discourse	S2
LING5050	Special Project in TESOL	S1 & S2

Graduate Diploma in Arts in TESOL

The Graduate Diploma in TESOL (program **5225**, plan code **LINGCS5225**) aims to provide those who work or plan to work in the teaching of English to speakers of other languages (including teachers, curriculum designers, language testers, education administrators, etc.) with a vocationally relevant degree which will enable them to refresh and upgrade their knowledge and skills.

Applicants require a relevant undergraduate degree (normally with specialisation in Linguistics, English, or a foreign language), with preference given to applicants with relevant work experience.

The program may be taken full-time over two semesters or part-time over a period of no less than three semesters and no more than six semesters. Students are required to complete two core courses plus 2 electives as listed below:

Core Courses

LING5002	Language Teaching Methodology	S1 & S2
LING5004	Syllabus Design	S1 & S2

Elective Courses

LING5001	Second Language Acquisition	S1 & S2
LING5003	Testing and Evaluation	S1 & S2
LING5005	The Structure of English	S1
LING5011	Functional Grammar	S2
LING5015	Functional Discourse Analysis	S1
LING5020	Adult Language Learning and Teaching	S1
LING5021	Language for Specific Purposes	S2
LING5023	Analysing Spoken Discourse	S2
LING5050	Special Project in TESOL	S1 & S2

Graduate Certificate in Arts in TESOL

The Graduate Certificate TESOL (program **7325**, plan code **LINGCS7325**) aims to provide those who work or plan to work in the teaching of English to speakers of other languages (including teachers, curriculum designers, language testers, education administrators, etc.) with a vocationally relevant degree which will enable them to refresh and upgrade their knowledge and skills.

Applicants require a relevant undergraduate degree (normally with specialisation in Linguistics, English, or a foreign language), with preference given to applicants with relevant work experience.

The certificate is offered 4 hours per week over 1 semester or 2 hours per week over 2 semesters. Students are required to complete two core courses as listed in the Graduate Diploma in TESOL program.

Master of Education (Applied Linguistics)

A cross-disciplinary program is also available in Applied Linguistics and Education (for details, see the Education section of this Handbook).

Further details may be obtained from the Linguistics handbook available from the Department of Linguistics or the Administrative Assistant (linguistics@unsw.edu.au).

Media Education

Available: MA; GradDipArts
Coordinator: Prof 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

Master of Arts

The revolution in digital media is changing how educators and media trainers think about, as well as practise, media and communications. Media, and their cultural and educational significance, are therefore increasingly relevant to the formal curriculum of secondary and post-secondary, including professional, education. The Masters of Arts in Media Education (program **8225,** plan code **MDCMBS8225**) focuses on current approaches to media production and teaching the media – their social, cultural and political significance, introducing creative, low-technology media production skills, suitable for use in the class-room or in intra-organisational contexts. Broadcast and new digital multi-media are studied within the context of education and training. No prior formal study of the media is necessary for enrolment. To complete the Master of Arts in Media Education, students must enrol in six of the courses listed below.

Graduate Diploma in Arts

To complete the Graduate Diploma in Media Education (program **5225,** plan code **MDCMBS5225**), students enrol in four courses:

MDCM5001 New Media, Technology and Education
MDCM5002 Teaching Television
MDCM5003 Teaching Cinema
MDCM5004 Media Production in Education
or
MDCM5008 Web-based Technologies

Courses

Most courses consist of weekly 2-hour seminars, held in the evening over a single session (14 weeks). All courses carry a weighting of 8 units of credit.

MDCM5001	New Media, Technology and Education	S2
MDCM5002	Teaching Television	S1
MDCM5003	Teaching Cinema	S2
MDCM5004	Media Production in Education	S1
MDCM5005	Media Advocacy and Public Education	S1
MDCM5006	Research Project	S1 & S2
MDCM5007	Reading Program	S1 & S2
MDCM5008	Web-based Technologies	S2

New Media

Available: MA; GradDipArts
Coordinator: Dr Chris Chesher
Administrative Assistant: Julie Miller
Tel: (02) 9385 6811 **Fax:** (02) 9385 6812
Email: mdcm@unsw.edu.au
Website: http://mdcm.arts.unsw.edu.au
Mode: Part-time only

The MA in New Media (program **8225**, plan code **MDCMCS8225**) helps people working in new media industries make sense of the rapidly changing mediascape. Students are introduced to communication and cultural studies approaches to techno-cultural change, and survey recent theoretical work in the field. At the same time, they extend their engagements with professional writing, audiovisual production, and critical evaluation in a range of new media genres. This program takes an interdisciplinary approach to the cultural, textual and social implications of computer-based media, connecting day-to-day media production problems with contemporary critical humanities. To complete the Master of Arts in New Media, students must enrol in six courses. Additional courses will be available in 2005.

Graduate Diploma in Arts

To complete the Graduate Diploma in New Media (program **5525**, plan code **MDCMCS5225**), students enrol in four courses.

Courses

All courses consist of weekly 2-hour seminars, held in the evening over a single session (14 weeks). All courses carry a weighting of 8 units of credit.

MDCM5009	New Media and Technologies	S1
MDCM5013	New Media Criticism	S2
MDCM5014	Professional Writing – New Media	S1

Philosophy

Available: GradDipArts
Coordinator: Dr Rosalyn Diprose
Email: r.diprose@unsw.edu.au

Graduate Diploma in Arts

The Graduate Diploma in Arts in Philosophy (program **5225**, plan code **PHILAS5225**) is designed to provide knowledge and skills in philosophy for graduates from other disciplines or, for those with some philosophy in an undergraduate degree, it provides the opportunity to extend and upgrade their existing knowledge base. In some cases, if other criteria are met, the diploma can provide the basis for undertaking research in philosophy (via the Graduate Diploma in Arts by Research).

The entrance requirement is an undergraduate (pass) degree of good quality in any field. Full-time students complete the diploma in one year; part-time students normally complete in two years. Students are required to complete 4 of the courses listed below:

PHIL5002	Themes in the History of Philosophy	S1
PHIL5004	Contemporary Epistemology and Metaphysics	S2
PHIL5005	Directions in European Philosophy	S1 & S2
PHIL5006	Developments in Moral Philosophy	S1
PHIL5007	Issues in Philosophy of Mind	S1 & S2
PHIL5008	Themes in Social and Political Philosophy	S1
PHIL5009	Advanced Study Project	S1 & S2

Science, Technology and Society

Available: MA; GradDipArts; GradCertArts
Coordinator: Dr John Schuster, School of History and Philosophy of Science
Email: j.a.schuster@unsw.edu.au

The programs in Science, Technology and Society are offered through the School of History and Philosophy of Science and reflect the wide scope of the modern discipline of History and Philosophy of Science [HPS]. This includes not only the foundational HPS areas of history and philosophy of science, technology and medicine; but also the study of

contemporary science, technology, environment and society, involving issues about the social shaping and social and ethical impacts of modern science and technology, the politics of environmental controversy, and the assessment and management of technological risk. A wide choice of courses allows students to design a program of study suited to their interests and aims.

Students interested in the traditional HPS areas will engage with some of the deepest intellectual and cultural issues of modern times. These include, amongst others: the nature, dynamics and future of modern science; philosophical foundations of science; relations of science to religion; comparative development of science and technology in the West and other cultures and civilisations past and present; and the shaping of science, past and present, by intellectual, institutional, economic and political contexts.

Students interested in the newer domains of HPS, dealing with contemporary science, technology, environment and society, will find there more applied, interdisciplinary, and problem oriented approaches, engaging contemporary questions about technology and social change, the politics of medicine and health, the place of science and technology in a globalised world economy, as well as the social and political context of environmental policy making and management. These courses are particularly relevant to those working in related areas in government or the private sector. They are also suitable for those with technical and scientific training who want to broaden their approaches, as well as environmental education practitioners, managers in industry and government, and practitioners concerned with the built environment and urban development.

Students must complete six of the courses listed below to qualify for the Master of Arts in Science, Technology and Society (program **8225**, plan code **HPSCDS8225**). Eight units of credit (one standard course) may, with the permission of the Program Coordinator, be obtained from courses outside this program, but within the Faculty. For the Graduate Diploma (program **5225**, plan code **HPSCDS5225**), students must complete four of the courses listed below. For the Graduate Certificate (program **7325**, plan code **HPSCDS7325**), students must complete two of the courses listed below.

Compulsory Courses

HPSC5001	Introduction to History and Philosophy of Science	S1
HPSC5002	Environment, Sustainability and Development	S1

Elective Courses

HPSC5010	Key Themes in the History of Science	S2
HPSC5020	Supervised Reading Program*	S1 & S2
HPSC5120	Issues in the History of Life Sciences & Biotechnology	S2
HPSC5130	History & Politics of Medicine & Health	S1
HPSC5200	Foundations of Cognitive Science	S1
HPSC5210	Philosophical Issues in Cognitive Science	S2
HPSC5300	History of Technology: Concepts & Cases	S2
HPSC5350	Technoscience Futures	S1
HPSC5500	Society, Environmental Policy & Sustainability	S1
HPSC5510	Risk Policy, Decision Making & Communication	S2
HPSC5600	Environment and Development in the Asia Pacific†	

**Only available as part of the MA, and then only by permission of the Head of School.*

†Not offered in 2004.

Sociology

Available: MA; GradDipArts; GradCertArts
Coordinators: Ms Maria Markus & Dr Jocelyn Pixley
Tel: (02) 9385 2301
Email: m.markus@unsw.edu.au & j.pixley@unsw.edu.au
Website: www.arts.unsw.edu.au/sociology/

The Master of Arts in Sociology (program **8225**, plan code **SOCAAS8225**), the Graduate Diploma in Arts in Sociology (program **5225**, plan code **SOCAAS5225**), and the Graduate Certificate in Arts in Sociology (program **7325**, plan code **SOCAAS7325**) aim to provide an introduction to Sociology for graduates from other disciplines and an opportunity for Sociology graduates to update and extend their knowledge of the discipline. Some courses offered will be taught in distance mode or intensive mode; others are offered only on campus during semester. MA students may, with permission of the Program Coordinator, replace one course with a Project Report on a supervised research topic or carry out a directed Reading Program. The Reading Program is also available with permission in the GradDipArts and GradCertArts.

The entrance requirement is a three year pass degree or equivalent. The MA comprises six courses and may be taken full time over two semesters or part time. The GradDipArts comprises four courses and the GradCertArts two courses.

Summer 2004/5

SOCA5006	Crime, Sexuality and Gender**	X1
SOCA5009	Immigration and Australian Society**	X1
SOCA5121	Feminism in Australian Society**	X1

2004

SOCA5003	Aboriginality and Gender in Australia	S2
SOCA5004	Colonisation, Neo-Colonialism and Indigenous Identity	S1
SOCA5005	Creative Relationships	S1
SOCA5010	Pacific Islands Fieldwork**	S2
SOCA5012	Social Change: Mechanisms and Traumas	S2
SOCA5013	Social Research*	S2
SOCA5017	Project Report	S2
SOCA5019	Reading Program	S1 & S2
SOCA5020	Ageing and Australian Society	S1
SOCA5123	Sociological Theory Past and Present*	S1
SOCA5124	Sociology of the Professions*	X2

**Distance mode*
***Intensive mode*

Theatre

Available: MA; GradDipArts; GradCertArts
Coordinator: John McCallum
Email: j.mccallum@unsw.edu.au

Master of Arts

Full-time students complete the Masters degree (program **8225,** plan code **THFIDS8225**) in one year. Part-time students normally complete the program in between two and three years. Students in this program are required to complete six (6) courses as listed in the Masters program.

Courses in the Masters program are designed to offer a wide-ranging program in the study of both the theory and practice of theatre as performing arts, principally in the twentieth century. These courses are each worth 8 units of credit and of one session's duration. Students undertaking this program must complete all 48 units of credit within the School of Theatre, Film and Dance.

Entrance Requirements

The normal requirement for entry is at least a BA (Pass) degree of good quality (i.e. with Credit grades or better), preferably with a major in theatre or in a cognate discipline.

All courses are of equal value (8 units of credit). Most courses meet for two hours per week.

All courses are dependent on staff availability and student enrolments.

THST5103	Performance Arts in Australia since 1950	S1
THST5107	Reading Program	S1 or S2
THST5108	Dramaturgy	S1
THST5109	Theatre and Society	S1
THST5119	Writing for the Theatre	S2
THST5122	Research Project	S1 or S2
THST5126	Performance Theory and Cultural Studies	S2

Graduate Diploma in Arts

Full-time students complete the Graduate Diploma in Arts (program **5225**, plan code **THFIDS5225**) in one year. Part-time students normally complete the program in between two and three years. Students in this program are required to complete four of the courses listed above, with the exception of THST5122.

Graduate Certificate in Arts

Full-time students complete the Graduate Certificate in Arts (program **7325,** plan code **THFIDS7325**) in one session. Part-time students complete the program in one year. Students in this program are required to complete two of the courses listed above, with the exception of THST5122.

Master of Education Degrees

Master of Education by Research

Coordinator: John Sweller
Email: j.sweller@unsw.edu.au

The Master of Education by Research (program **2354**) is intended for those who wish to undertake a research thesis. Candidates would

normally have completed an undergraduate degree in Education at Honours level but those who have undertaken a Master degree in Education by coursework with superior results may be eligible for admission. The program involves three coursework components and a thesis undertaken over two years of full-time study (or the part-time equivalent).

Master of Education by Research in Applied Linguistics

Coordinators:
Maria Varvaressos (Email: m.varvaressos@unsw.edu.au)
Rod Gardner (Email: rod.gardner@unsw.edu.au)

This is a cross-disciplinary program (program **2354**, plan code **EDSTNR2354**) run by the School of Education and the Department of Linguistics. Students are required to complete a 30,000 word thesis (which may be supervised in either the School of Education or the Department of Linguistics depending on the topic and available expertise) and to take three courses, as follows: one compulsory course on research methods, plus two electives (one from Linguistics and one from Education).

Compulsory Course on Research Methods

Either

EDST5101	Introduction to Design and Analysis	S2

or

EDST5120	Qualitative Research Methodology	S1

Elective Courses in Linguistics

LING5000	Special Project in Applied Linguistics	S1 & S2
LING5001	Second Language Acquisition	S1 & S2
LING5002	Language Teaching Methodology	S1 & S2
LING5003	Testing and Evaluation	S1 & S2
LING5004	Syllabus Design	S1 & S2
LING5005	The Structure of English	S1
LING5006	Bilingualism	S1
LING5007	Translation: Theory and Practice	S2
LING5011	Functional Grammar	S2
LING5012	Language and Mind	S2
LING5015	Functional Discourse Analysis	S1
LING5020	Adult Language Learning and Teaching	S1
LING5021	Language for Specific Purposes	S2
LING5023	Analysing Spoken Discourse	S2

Elective Courses in Education

Students may choose any one of the Master of Education courses offered in the School of Education.

Master of Education by Coursework

Coordinator: Putai Jin
Email: p.jin@unsw.edu.au

This degree (program **8910**, plan code **EDSTAS8910**) is designed for educationists who wish to study education by coursework at an advanced level to enhance their professional development in school and training sectors.

The degree consists of courses to the value of 48 units of credit (ie six courses).

Students may choose some courses from the Master of Educational Administration program. Subject to the discretion of the Head of the School of Education, students may select up to three courses offered by other Schools in the Faculty or by any faculty within the University of New South Wales, or may receive credit for courses of comparable standard successfully completed within the University of New South Wales or another recognised institution.

Master of Education in Applied Linguistics by Coursework

Coordinators:
Maria Varvaressos (Email: m.varvaressos@unsw.edu.au)
Rod Gardner (Email: rod.gardner@unsw.edu.au)

The Master of Education in Applied Linguistics (program **8910**, plan code **EDSTNS8910**) is a cross-disciplinary program in Education and Applied Linguistics designed to provide those working or intending to work in TEFL/TESL or TESOL (teachers, curriculum designers, educational administrators, etc.) with a vocationally relevant degree which combines theory and practice. Students are required to complete six courses: LING5020 plus two electives from Linguistics and three electives from Education.

Core Course in Linguistics

LING5020	Adult Language Learning and Teaching	S1

Elective Courses in Linguistics

LING5000	Special Project in Applied Linguistics	S1 & S2
LING5001	Second Language Acquisition	S1 & S2
LING5002	Language Teaching Methodology	S1 & S2
LING5003	Testing and Evaluation	S1 & S2
LING5004	Syllabus Design	S1 & S2
LING5005	The Structure of English	S1
LING5006	Bilingualism	S1
LING5007	Translation: Theory and Practice	S2
LING5011	Functional Grammar	S2
LING5012	Language and Mind	S2
LING5015	Functional Discourse Analysis	S1
LING5021	Language for Specific Purposes	S2
LING5023	Analysing Spoken Discourse	S2

Elective Courses in Education

Students may choose any three of the Master of Education courses offered in the School of Education.

Note: Not all courses are available in any given year. Consult the School for timetable details. Course descriptions are found in a later section of this Handbook.

Master of Educational Administration Degrees

Coordinator: John McCormick
Email: j.mccormick@unsw.edu.au

Master of Educational Administration by Research

The degree of Master of Educational Administration by Research (program **2355**) is intended for those who wish to undertake a research thesis. Candidates would normally have completed an undergraduate degree at Honours Level but those who have undertaken a Master degree in Educational Administration by coursework with superior results may be eligible for admission. The program involves three coursework components and a thesis undertaken over two years of full-time study (or the part-time equivalent).

Master of Educational Administration by Coursework

The Master of Educational Administration degree by Coursework (program **8960**, plan code **EDSTCS8960**) is a specialist program designed to equip current and aspiring administrators to manage education at all levels in government and independent schools, school systems, universities, TAFE and other educational organisations.

Candidates for the degree are required to take courses to the value of 48 units of credit (6 courses) including one compulsory core course. A minimum of three elective courses must be chosen from those offered in the Master of Educational Administration program.

Subject to the discretion of the Head of School, students may choose up to two of their electives from courses offered by other Schools in the Faculty or by other faculties within UNSW, or may receive credit for a maximum of 12 units for courses of a comparable standard successfully completed within UNSW or another recognised institution.

Master of Education Courses

EDST5101	Introduction to Design and Analysis	S1
EDST5103	Multivariate Design and Ananlysis	S2
EDST5104	Educational Assessment and Measurement	S1
EDST5108	Introduction to Modern Test Theory	S2
EDST5120	Qualitative Research Methodology	S1
EDST5201	Philosophical Issues in Education	S2
EDST5204	History and Philosophy in Science Education	S2
EDST5303	Human Cognitive Architecture	S1
EDST5306	Child Growth and Development	S1
EDST5307	Mental Processes and Instructional Procedures	S2
EDST5312	Using Technology in the Workplace	S1
EDST5314	Stress Management Research and Practice in the Workplace	S2
EDST5320	Individual Differences and Education	S1
EDST5451	Politics of Education	S2
EDST5608	Effective Teaching and Effective Schools	S1
EDST5704	Contemporary Issues in Education	S1 & S2
EDST5800	Current Issues in the Education of Intellectually Gifted Children	S1 & S2
EDST5803	Development and Evaluation of Educational Programs for Intellectually Gifted Children	S1
EDST5805	Curricula and Teaching Strategies for Intellectually Gifted Children	S2
EDST5888	Project	X1 & S1 & X2 & S2

Master of Educational Administration Courses

Core Compulsory Course

EDST5433	Organisation Theory in Education	S1

Elective Courses

EDST5314	Stress Management Research and Practice in the Workplace	S2
EDST5432	Administrative and Organisational Behaviour	S1
EDST5436	Development and Evaluation of Educational Programs	S1
EDST5438	Leadership Theory, Research and Practice	S2
EDST5439	Legal Aspects of Educational Administration	S2
EDST5451	Politics of Education	S2
EDST5445	Supervised Fieldwork in Educational Administration	X1 & S1 & X2 & S2
EDST5608	Effective Teaching and Effective Schools	S1
EDST5888	Project	X1 & S1 & X2 & S2

Doctor of Education

Coordinator: John Sweller
Email: j.sweller@unsw.edu.au

This degree (EdD program **1975**) involves both formal coursework and a significant research thesis. It is intended to serve the needs of top-level educational professionals who wish to consolidate, refine and expand their theoretical bases for the benefit of educational practitioners in general. The orientation of the course is towards the improvement of professional practice by the application of research findings to the problems, issues and development of teaching, learning, educational management and politics. Compulsory Research Methods courses constitute two of the coursework components. Three additional electives must also be completed.

The EdD degree may be completed over 3 years full-time or 6 years part-time.

Doctor of Education Courses

EDST5014	Science and Humanities: Bridging the Two Cultures	S2
EDST5015	Modes of Thought and their Instructional Implications	S1 & S2
EDST5016	Knowledge Structures in Mathematical Problem Solving	S1
EDST5020	Education of Intellectually Gifted Students	S1 & S2
EDST5025	Organisational Learning and Research	S1 & S2
EDST5027	Advanced Educational Measurement in the Social Sciences	S2
EDST5031	Research Methods 1	S1 & S2
EDST5032	Research Methods 2	S1 & S2
EDST5801	EdD Project	S1 & S2

Graduate Diploma in Education (Secondary)

Coordinator: Dr Paul Ayres, School of Education
Email: p.ayres@unsw.edu.au

The program (DipEd program **5560**) is designed to give professional training to graduate students in secondary school level teacher education. The course is undertaken on a full-time basis over one year or on a part-time basis over one-and-a-half or two years. It is available to graduates of UNSW or other approved universities where their previous studies meet entry prerequisites for the selected specialisation/s.

Teaching Specialisations

The program requires students to study in either one double method (teaching specialisation) or in two single method courses. Students must meet entry prerequisites to undertake their preferred teaching method/s. These prerequisites normally involve at least a Major sequence (three consecutive years of study) in the main teaching method and a Minor sequence (two years of study) in the second teaching method (if applicable).

Double Method Courses

Mathematics
Science

Single Method Courses

English, Literacy/ESL(English as a Second Language)
Drama
History, Geography, Economics/Business Studies*, Junior HSIE
French, German, Greek(Modern), Spanish, Chinese, Japanese, Indonesian
Computing Studies

** Students who wish to specialise in Economics/Business Studies only at senior level should also enrol in Junior HSIE.*

Most combinations of two single methods are permissible although not all method courses may be available in any given year.

Other Courses

The following courses must be undertaken regardless of the teaching methods studied.

EDST4093	Special Education	S1
EDST4095	Gifted and Talented Students: Recognition and Response	S1
EDST4094	Teaching Experience	S2
EDST4092	Computer Skills for Teachers	S2
EDSTXXXX	Education Elective course	S1
EDSTXXXX	Second Education Elective course	S1 or S2

Course Descriptions

For details of all courses refer to Course Descriptions in the Undergraduate Handbook. Note especially that DipEd compulsory courses are listed together with Year 4 courses in the Faculty of Arts and Social Sciences section under the entry "School of Education".

Master of International Social Development
Graduate Diploma in International Social Development

Available: MA; GradDip
Coordinator: Eileen Baldry, School of Social Work
Email: e.baldry@unsw.edu.au

Master of International Social Development (MInTSocDev)

One year full-time program. Two 14-week sessions, six hours per week.

The overall goal of this program **8938** (plan code **SOCWES8938**) is to offer a graduate degree in social development practice with an international focus. By the end of the program candidates can expect to have substantial knowledge and a range of skills related to the planning, delivery and evaluation of programs relevant to international social community development and aid work, refugee and immigrant resettlement. The program is based on a social justice philosophy, a human rights framework and a community development approach.

Admission Requirements

Admission is competitive and based on qualifications and experience. Applicants should have a Bachelor's degree with a credit average, from an approved university or tertiary institution. In exceptional circumstances applicants without a degree may be admitted on the basis of general and professional experience.

Core Courses		**UOC**
Year 1		
Session 1		
SOCW7850	Issues and Policy in International Social Development	8
SOCW7851	Community Development	8
SOCW7852	Politics of International Aid	8
Session 2		
SOCW7855	Program Design and Evaluation	8

Select two courses from the list below as electives

Electives

Choose at least one and up to two of the following:

Session 2		
SOCW7853	Community Education Strategies	8
SOCW7856	Program Management in Social Development	8
SOCW7857	Refugees and Forced Migration	8
Session 1 & 2		
SOCW7858	International Social Development Project	8

And, if only one of the above is chosen, students may select a course, which must be approved by the ISD Coordinator, from the following programs:

Master of Policy Studies (program **8248**)	8
MA in International Relations (program **8225**)	8

or other relevant Masters courses from the Faculty of Arts and Social Sciences.

Graduate Diploma in International Social Development (GradDipIntSocDev)

One year full-time, two 14 week sessions, 4 hours in S1 and 4 hours in S2 or 6 hours in S1 and 2 hours in S2. The program **5556** (plan code **SOCWES5556**) offers a graduate qualification in social development practice with an international focus. It articulates with the Master of International Social Development (program **8938**). Candidates must complete four courses: two courses offered in Session 1 (one of which is SOCW7850) and two other courses of those offered either in Session 1 or in Session 2, excluding the ISD project elective. Overseas students or those on scholarships should check the unit of credit requirement for each session.

Admission Requirements

Admission is competitive and based on qualifications and experience. Applicants should have a Bachelor's degree from an approved university or tertiary institution. In exceptional circumstances applicants without a degree may be admitted on the basis of general or professional experience.

Applications must include the applicant's *curriculum vitae* and a letter providing reasons for applying. Applicants must also have some appropriate work/voluntary experience.

Master of Music, Graduate Diploma in Music and Graduate Certificate in Music

Coordinator: Dr Jill Stubington
Email: jill.stubington@unsw.edu.au

Coursework degrees, graduate diplomas and graduate certificates in Music and Music Education will offer flexible possibilities for postgraduate students. For the Graduate Certificate in Music (Suzuki Pedagogy) (program **7326**) – MUSC5402 Suzuki Pedagogy and one other course. For the Graduate Diploma in Music (program **5226**) – four courses and for the Master of Music (program **8226**) – six courses.

Master of Music by Coursework

MMus (program **8226**, plan code **MUSCAS8226**)

The MMus coursework program involves the successful completion of six session-length courses. Courses can be taken in any combination of options. There is a wide range of topics to cater to most musical vocations. Also, these options can be tailored to meet the special needs of musicians teaching in secondary schools or who are involved in the organisation and direction of musical practice and performance in schools or the community.

The aim of this program is to give students the opportunity to experience a range of music courses which provide the flexibility to pursue either a musicological, music educational, or ethnomusicological direction. The objective is to provide students with a broad range of musical knowledge with emphases on their fields of interest. Such interests may lie in the fields of Australian music, music pedagogy, world music, and in music history. Courses are presented in both practical and theoretical formats.

Graduate Diploma in Music

GradDipMus (program **5226**, plan code **MUSCAS5226**)

Four session-length courses from the Master of Music list are required for the Graduate Diploma in Music.

For **Suzuki Pedagogy** (plan code **MUSCCS5226)**, students must undertake the special Suzuki core course MUSC5402 (Suzuki Pedagogy) and three electives. Options available for Suzuki Pedagogy students must be chosen in consultation with Mr Colin Watts (c.watts@unsw.edu.au).

Graduate Certificate in Music

GradCertMus (program **7326**, plan code **MUSCAS7326**)

Two session-length courses from the Master of Music list are required for the Graduate Certificate in Music.

For **Suzuki Pedagogy** (plan code **MUSCCS7326**), students must undertake the special Suzuki core course MUSC5402 (Suzuki Pedagogy) and one elective.

The Graduate Diploma and Graduate Certificate are generally exit points only for those who, for various reasons, are unable to complete the Master's course (except for Suzuki pedagogy courses). Such reasons might include difficulties in coping with the program or a sudden work transfer interstate or overseas. Please state clearly in your initial application your reasons for applying for enrolment in the Graduate Diploma or Graduate Certificate, as preference is given to students enrolling in the Master's program for quota reasons.

Students who complete a Graduate Certificate will be able to credit completed courses towards a Graduate Diploma or a Master's degree.

Music Courses

MUSC5104	An Ethnomusicological Exploration of Australian Traditional and Popular Music	S1
MUSC5122	Research in Music Education	S1
MUSC5123	Curriculum in Music Education	S2
MUSC5125	Australian Music in the Twentieth Century	S2
MUSC5130	Research in Music Studies	S1
MUSC5134	Mozart the Dramatist	S2

Master of Policy Studies
Graduate Diploma in Policy Studies
Graduate Certificate in Policy Studies
Graduate Certificate in Program Evaluation

Coordinator: A/Prof Michael Johnson, School of Social Science and Policy
Email: michael.johnson@unsw.edu.au
Tel: (02) 9385 3481
Website: www.arts.unsw.edu.au/ssp/

The graduate program in policy studies applies a social science perspective to questions of policy and management in modern organisations. Students acquire a solid grounding in policy analysis and the policy process, specialise in a field of applied policy studies, and then complete a Policy Project.

The program prepares students for work which requires analytical skills and a practical appreciation of the processes of policy-making and implementation. The program is oriented to the practice of policy, and participants are required to have relevant work experience. This may be in the public sector, unions, business organisations or community bodies.

Duration

The Master of Policy Studies is a coursework degree (program **8248**, plan code **SLSPBS8248**) which takes two sessions full-time or four sessions part-time. There are four core units and two electives.

The Graduate Diploma in Policy Studies (program **5280**, plan code **SLSPBS5280**) requires students to complete two of the core units of the MPS program (**SLSP5001**, **SLSP5002** or **SLSP5004**), and two approved electives. Students in the MPS who complete the requirements of the Graduate Diploma in Policy Studies may graduate in that program.

Students who complete two of the three core units qualify for the Graduate Certificate in Policy Studies (program **7348,** plan code **SLSPBS7348**)**.**

Eligibility for Admission

Applicants should hold a Bachelor's degree in any field from an approved university or college of advanced education and have significant work experience in an area appropriate to the degree program.

Applicants who have completed at least one year (or equivalent) of appropriate study beyond the first degree may be admitted with a lesser work experience requirement.

In exceptional circumstances, applicants may be admitted without a first degree but with general and professional attainments acceptable to the Faculty.

Core Units

SLSP5001	Policy Analysis	S1
SLSP5002	Information and Research for Policy	S1
SLSP5004	Management and Policy in Organisations	S2
SLSP5092	Policy Project	S1 & S2

Electives

The Master of Policy Studies and the Graduate Diploma in Policy Studies requires completion of two of the following electives. Not all courses will be offered each year; the School tries to match its offerings to student preferences. The School can approve courses in other graduate programs related to students' field of policy interest being substituted for the courses listed here.

SLSP5013	Program Evaluation	S2
SLSP5015	International Development Policy	S1
SLSP5016	Social Policy	S2
SLSP5017	Policy and Advocacy	S2
SLSP5040	Contemporary Public/Private Sector Relationships	S2
SLSP5041	The Public Policy Process	S2
SLSP5050	Linkage Project	S1 & S2

Graduate Certificate in Program Evaluation

Coordinator: Prof Ralph Hall, School of Social Science and Policy
Email: r.hall@unsw.edu.au
Tel: (02) 9385 2427
Website: www.arts.unsw.edu.au/ssp/

A Graduate Certificate in the evaluation of programs (program **7347**, plan code **SLSPDS7347**) consists of the two courses listed below. The program provides students with a knowledge of current approaches to evaluation and the skills required in conducting them.

Eligibility for Admission

Applicants should hold a Bachelor's degree in any field from an approved university or college of advanced education and have significant work experience in an area appropriate to the degree program.

In exceptional circumstances, applicants may be admitted without a first degree but with general and professional attainments acceptable to the Faculty.

Courses

SLSP5501	Theory of Program Evaluation	S1 & S2
SLSP5502	The Practice of Program Evaluation	S1 & S2

Master of Professional Ethics
Graduate Diploma in Professional Ethics

Coordinator: A/Prof Stephen Cohen
Email: s.cohen@unsw.edu.au

These programs are offered through the **School of Philosophy**. While open to anyone with an interest in the area, both of these programs (the Graduate Diploma, program **5295**, plan code **PHILBS5295**; and the Masters Degree, program **8227**, plan code **PHILBS8227**) have been devised as a response to pressing demands from two quarters: first, from professionals, the professions and business, who wish to ensure high standards of ethical practice, and to complement the requirements of legal regulation with those of coherent and consistent moral positions; second, from public demand and expectation of higher standards of accountability and responsible conduct from business and the professions and their practitioners. The Graduate Diploma articulates into the Masters program. Both programs accept part-time and full-time enrolments. The programs are available by distance-mode as well as on-campus.

The Graduate Diploma consists of the following four courses, which are also the core courses in the Masters program:

PHIL5400	Moral Theory and Moral Reasoning
PHIL5401	The Professions and Society
PHIL5402	Ethical Issues in Business and the Professions
PHIL5403	Ethics in Organisations

The Master of Professional Ethics extends the material available in the Graduate Diploma. Besides the core courses, students in the Masters program enrol in two additional courses:

Any one of the following:

PHIL5404	Supervised Readings in Professional Ethics
SLSP5001	Policy Analysis
SLSP5002	Information and Research for Policy

or any of the electives approved for the Master of Policy Studies

and

either one of the following:

PHIL5405	Organisational Structures for Ethical Conduct
PHIL5406	Research Project – Ethical Systems

Duration

Either program can be completed in one or two years. It is strongly recommended that with the Masters program, students allow themselves more than one year. Each course is one session (14 weeks) in length, and the on-campus mode involves class-contact time of one two-hour meeting per week per course.

Entry Requirements

The normal qualification for entry is a Bachelor's degree or its equivalent from a recognised institution of higher education. Professional experience may be taken into account in cases where an applicant does not possess the appropriate tertiary qualification.

Sequence of Courses

Students intending to complete the Graduate Diploma in one year will enrol in PHIL5400 and PHIL5401 in session 1, and PHIL5402 and PHIL5403 in session 2 of that year. Students intending to complete this program over two years (4 sessions) will typically enrol in PHIL5400 in session 1, PHIL5402 in session 2, PHIL5401 in session 3, and PHIL5403 in session 4.

Students intending to complete the Master of Professional Ethics will normally complete the core courses in one year, and their electives in either one or two additional sessions – a total of either one and a half or two years.

Both programs allow for mid-year entry.

Core Courses

PHIL5400	Moral Theory and Moral Reasoning	S1
PHIL5401	The Professions and Society	S1
PHIL5402	Ethical Issues in Business and the Professions	S2
PHIL5403	Ethics in Organisations	S2

Electives

PHIL5404	Supervised Readings in Professional Ethics	S1 or S2
PHIL5405	Organisational Structures for Ethical Conduct	S1 or S2
PHIL5406	Research Project – Ethical Systems	S1 or S2

Any of the approved core courses and any of the electives from the Master of Policy Studies program:

SLSP5001	Policy Analysis	S1
SLSP5002	Information and Research for Policy	S1

Conditions for the Award of Degrees

Higher Degrees

For the list of postgraduate programs by research and coursework see the table, arranged in Faculty order, at the front of this Handbook. For the rules, regulations and conditions of postgraduate coursework programs (Masters, Graduate Diplomas and Graduate Certificates) turn to the program description in this Handbook. The Conditions for postgraduate degrees by research follow.

Doctor of Philosophy (PhD)

1. The degree of Doctor of Philosophy may be awarded by the Council on the recommendation of the Research Committee of the appropriate faculty or board (hereinafter referred to as the Committee) to a candidate who has made an original and significant contribution to knowledge.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor with Honours from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment as a candidate for the degree.

Enrolment

3. (1) An application to enrol as a candidate for the degree shall be lodged with the Registrar at least one month prior to the date at which enrolment is to begin.

(2) In every case before making the offer of a place the Committee shall be satisfied that initial agreement has been reached between the *School and the applicant on the topic area, supervision arrangements, provision of adequate facilities and any coursework to be prescribed and that these are in accordance with the provisions of the guidelines for promoting postgraduate study within the University.

(3) The candidate shall be enrolled either as a full-time or a part-time student.

(4) A full-time candidate will present the thesis for examination no earlier than three years and no later than five years from the date of enrolment and a part-time candidate will present the thesis for examination no earlier than four years and no later than six years from the date of enrolment, except with the approval of the Committee.

(5) The candidate may undertake the research as an internal student ie. at a campus, teaching hospital, or other research facility with which the University is associated, or as an external student not in attendance at the University except for periods as may be prescribed by the Committee.

(6) An internal candidate will normally carry out the research on a campus or at a teaching or research facility of the University except that the Committee may permit a candidate to spend a period in the field, within another institution or elsewhere away from the University provided that the work can be supervised in a manner satisfactory to the Committee. In such instances the Committee shall be satisfied that the location and period of time away from the University are necessary to the research program.

(7) The research shall be supervised by a supervisor and where possible a co-supervisor who are members of the academic staff of the School or under other appropriate supervision arrangements approved by the Committee. Normally an external candidate within another organisation or institution will have a co-supervisor at that institution.

Progression

4. The progress of the candidate shall be considered by the Committee following report from the School in accordance with the procedures established within the School and previously noted by the Committee.

(i) The research proposal will be reviewed as soon as feasible after enrolment. For a full-time student this will normally be during the first year of study, or immediately following a period of prescribed coursework. This review will focus on the viability of the research proposal.

(ii) Progress in the course will be reviewed within twelve months of the first review. As a result of either review the Committee may cancel enrolment or take such other action as it considers appropriate. Thereafter, the progress of the candidate will be reviewed annually.

Thesis

5. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the investigation.

(2) The candidate shall give in writing to the Registrar two months notice of intention to submit the thesis.

(3) The thesis shall comply with the following requirements:

(a) it must be an original and significant contribution to knowledge of the subject;

(b) the greater proportion of the work described must have been completed subsequent to enrolment for the degree;

(c) it must be written in English except that a candidate in the Faculty of Arts and Social Sciences may be required by the Committee to write a thesis in an appropriate foreign language;

(d) it must reach a satisfactory standard of expression and presentation;

(e) it must consist of an account of the candidate's own research but in special cases work done conjointly with other persons may be accepted provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may not submit as the main content of the thesis any work or material which has previously been submitted for a university degree or other similar award but may submit any work previously published whether or not such work is related to the thesis.

(5) Four copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(6) It shall be understood that the University retains the four copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

6.(1) There shall be not fewer than three examiners of the thesis, appointed by the Committee, at least two of whom shall be external to the University.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that one of the following:

(a) The thesis merits the award of the degree.

(b) The thesis merits the award of the degree subject to minor corrections as listed being made to the satisfaction of the head of school.

(c) The thesis requires further work on matters detailed in my report. Should performance in this further work be to the satisfaction of the higher degree Committee, the thesis would merit the award of the degree.

(d) The thesis does not merit the award of the degree in its present form and further work as described in my report is required. The revised thesis should be subject to re-examination.

(e) The thesis does not merit the award of the degree and does not demonstrate that resubmission would be likely to achieve that merit.

(3) If the performance in the further work recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to submit the thesis for re-examination as determined by the Committee within a period determined by it but not exceeding eighteen months.

(4) After consideration of the examiners' reports and the results of any further examination of the thesis, the Committee may require the candidate to submit to written or oral examination before recommending whether or not the candidate be awarded the degree. If it is decided that the candidate be not awarded the degree, the Committee shall determine whether or not the candidate be permitted to resubmit the thesis after a further period of study and/or research.

Fees

7. A candidate shall pay such fees as may be determined from time to time by the Council.

** 'School' is used here and elsewhere in these conditions to mean any teaching unit authorised to enrol research students and includes a department where that department is not within a school, a centre given approval by the Academic Board to enrol students, and an interdisciplinary unit within a Faculty and under the control of a Dean of a Faculty. Enrolment is permitted in more than one such teaching unit.*

Doctor of Education (EdD)

1. The degree of Doctor of Education may be awarded by the Council on the recommendation of the Research Committee of the Faculty of Arts and Social Sciences (hereinafter referred to as the Committee) to a candidate who has completed a specified program of advanced study and demonstrated ability to conduct research by the submission of a thesis embodying the results of a substantial original investigation.

Qualifications

2. (1) (a) A candidate for the degree shall have been awarded the degree of Master of Education, Master of Educational Administration, Master of Education in Teaching, Master of Higher Education or an appropriate degree of Bachelor with Honours or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee; and

(b) have completed at least three years' professional experience in a branch of education, or in some other area that is judged by the Committee to be appropriate; and

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar.

(2) In every case before making the offer of a place the Committee shall be satisfied that initial agreement has been reached between the School of Education Studies and the applicant on the topic area, provision of adequate facilities and any course work to be prescribed, and that these are in accordance with the guidelines for promoting postgraduate study within the University.

4. (1) A candidate for the degree shall be required:

(a) to undertake a course of study in which the candidate shall be required to pass, at a standard acceptable to the Committee, such courses as may be required;

(b) to undertake a substantial original investigation on an approved topic;

The candidate may also be required to undergo such assessment and perform such other work as may be prescribed by the Committee.

(2) The investigation shall be carried out under the direction of a supervisor and where possible a co-supervisor appointed from among the members of the academic staff of the school or under other appropriate supervision arrangement approved by the Committee.

(3) (a) An approved candidate shall be enrolled as a full-time or part-time student.

(b) No candidate shall be awarded the degree until the elapse of six academic sessions from the date of enrolment in the case of a full-time candidate, or twelve academic sessions in the case of a part-time candidate.

(c) The Committee may in special circumstances approve other variations to the period of study.

5. The progress of the candidate shall be considered by the Committee following report from the School in accordance with the procedures established within the School and previously noted by the Committee.

(i) The research proposal for the thesis will be reviewed as soon as feasible after the completion of the course work. This review will focus on the viability of the research proposed.

(ii) Progress in the course will be reviewed within twelve months after the first review. As a result of either review, the Committee may cancel enrolment or take such other action as is considers appropriate. Thereafter, the progress of the candidate will be reviewed annually.

Thesis

6. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the investigation.

(2) The candidate shall give in writing to the Registrar two months' notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases work done jointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) Four copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(5) It shall be understood that the University retains the four copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or any other copying medium.

Examination

7. (1) There shall be no fewer than three examiners of the thesis, at least two of whom shall be external to the University, who shall be appointed by the Committee.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that:

(a) the thesis be noted as satisfactory; *or*

(b) the thesis be noted as satisfactory subject to specified minor corrections being made to the satisfaction of the head of school; *or*

(c) the thesis requires further work on questions posed in the report. Should performance in this further work be to the satisfaction of the Committee, the thesis would be noted as satisfactory; *or*

(d) the thesis be noted as unsatisfactory, but the candidate be permitted to resubmit the thesis in a revised form after a further period of study and/or research. The revised thesis should be subject to reexamination: *or*

(e) the thesis be noted as unsatisfactory. The thesis does not demonstrate that resubmission would be likely to achieve a satisfactory result.

(3) If the performance at the further work recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to re-present the same thesis and submit to further examination as determined by the Committee within a period specified by it but not exceeding one year.

(4) The Committee shall, after consideration of the examiners' reports and any further reports on the thesis it sees fit to obtain and the results of any further examination and of the prescribed course of study, recommend whether or not the candidate be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

8. A candidate shall pay fees as may be determined from time to time by the Council.

Master of Arts by Research

Master of Education by Research

Master of Educational Administration by Research

Master of Music by Research

Master of Music Education by Research

Master of Social Science by Research

1. The degree of Master of Arts (Education/Educational Administration/ Music/Music Education/Social Science) by Research may be awarded by the Council on the recommendation of the Research Committee of the Faculty of Arts and Social Sciences (herein after referred to as the Committee) to a candidate who has satisfactorily completed a program of advanced study.

Qualifications

2. (1) A candidate for the degree shall:

(a) have been awarded an appropriate degree of Bachelor with Honours from the University of New South Wales at a standard not below Honours Class 2 or a qualification considered equivalent from another university or tertiary institution;

or

(b) have been awarded an appropriate award of Graduate Certificate at an average of Distinction from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution;

or

(c) have had at least two years professional experience of a kind acceptable to the Committee AND have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution,

AND

(i) satisfy the Committee that the qualification is at a level and of a character indicating research potential;

or

(ii) submit other evidence satisfying the Committee of their research potential.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant, the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least two calendar months before the commencement of the session in which enrolment is to begin.

(2) To qualify for the award of the degree a candidate shall:

(a) undertake such formal courses and pass such assessment as prescribed;

(b) obtain 24 units of credit in approved coursework; and

(c) 24 units of credit for a thesis proposal;

(d) 48 units of credit through the submission of a thesis or project report demonstrating the capacity to conduct, under supervision, an original investigation on an approved topic;

(e) the research thesis or project report shall be completed in no fewer than two and no more than four sessions for a full-time candidate, or no fewer than four and no more than eight sessions in the case of a part-time candidate.

(3) No candidate shall be awarded the degree until the lapse of a minumum of three academic sessions from the date of enrolment in the case of a full-time candidate or six sessions in the case of a part-time candidate.

Examination

4.There shall be not fewer than two examiners of the thesis or project report, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

Fees

5. A candidate shall pay such fees as may be determined from time to time by the Council.

Master of Social Work (MSW) by Research

1.The degree of Master of Social Work by research may be awarded by the Council on the recommendation of the Research Committee of the Faculty of Arts and Social Sciences (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation.

Qualifications

2. (1) A candidate for the degree shall:

(a) have been awarded the degree of Bachelor of Social Work from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee; and

(b) have had at least two years' professional experience of a kind acceptable to the Committee;

or

(a) have been awarded an appropriate degree at a level acceptable to the Committee;

(b) have had at least two years' work experience in the human services of a kind acceptable to the Committee.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least two calendar months before the commencement of the session in which enrolment is to begin.

(2) In every case, before permitting a candidate to enrol, the Head of the School of Social Work shall be satisfied that adequate supervision and facilities are available.

(3) An approved candidate shall be enrolled in one of the following categories:

(a) full-time attendance at the University;

(b) part-time attendance at the University;

(c) external – not in regular attendance at the University and using research facilities external to the University.

(4) A candidate shall be required to undertake an original investigation on an approved topic and undertake such formal subjects and pass such assessment as prescribed. The candidate is also required to undergo such assessment and perform such other work as is prescribed by the Committee.

(5) The work shall be carried out under the direction of a supervisor appointed from the full-time academic members of the University staff.

(6) The progress of a candidate shall be reviewed annually by the Committee following a report by the candidate, the supervisor and the head of the school and as a result of such review the Committee may cancel enrolment or take such other action as it considers appropriate.

(7) No candidate shall be awarded the degree until the lapse of a minimum of three academic sessions from the date of enrolment in the case of a full-time candidate or six sessions in the case of a part-time or external candidate.

(8) A full-time candidate for the degree shall present for examination not later than four academic sessions from the date of enrolment. A part-time or external candidate for the degree shall present for examination not later than eight academic sessions from the date of enrolment. In special cases an extension of these times may be granted by the Committee.

Thesis

4. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the investigation.

(2) The candidate shall give in writing to the Registrar two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(6) It shall be understood that the University retains the three copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

5. (1) There shall be not fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that:

(a) the candidate be awarded the degree without further examination; *or*

(b) the candidate be awarded the degree without further examination subject to minor corrections as listed being made to the satisfaction of the head of the school; *or*

(c) the candidate be awarded the degree subject to a further examination on questions posed in the report, performance in this further examination being to the satisfaction of the Committee; *or*

(d) the candidate be not awarded the degree but be permitted to resubmit the thesis in a revised form after a further period of study and/or research; *or*

(e) the candidate be not awarded the degree and be not permitted to resubmit the thesis.

(3) If the performance at the further examination recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to re-present the same thesis and submit to further examination as determined by the Committee within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports, the results in the prescribed course of study, and the results of any further examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the Council.

Graduate Diploma in Arts by Research (GradDipArts)

1. The Graduate Diploma in Arts by Research may be awarded by the Council on the recommendation of the Research Committee of the Faculty of Arts and Social Sciences (hereinafter referred to as the Committee) to a candidate who has satisfactorily completed a program of advanced study that includes the submission of a research report embodying the results of an original investigation and the completion of prescribed coursework.

Qualifications

2. (1) A candidate for the Graduate Diploma shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a standard judged by the Committee to be equivalent to that required for entry into the undergraduate honours year in a course offered by the Faculty of Arts and Social Sciences.

(2) an applicant who submits evidence of such other academic and professional attainment, as may be approved by the Committee, may be permitted to enrol for the Diploma.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the diploma shall be made on the prescribed form which shall be lodged with the Registrar at least two calendar months before the commencement of the session in which enrolment is to begin.

(2) In every case before making the offer of a place, the Committee shall be satisfied that initial agreement has been reached between the School, or teaching unit authorised to enrol research students, and the applicant on the topic area, supervision arrangements, provision of adequate facilities and any coursework to be prescribed and that these are in accordance with the provisions of the guidelines for promoting postgraduate study within the University.

(3) The normal duration of the program is two academic sessions from the date of enrolment in the case of a full-time candidate or four sessions in the case of a part-time candidate. In special circumstances a variation of these times may be approved by the Head of School/Unit.

(4) A candidate shall be enrolled as an internal student, ie. undertake the research at a campus or research facility with which the University is associated except that the Committee may permit the candidate to spend a period in the field, within another institution or elsewhere away from the University provided that the work can be supervised in a manner satisfactory to the Committee. In such circumstances the Committee shall be satisfied that the location and period of time away from the University are necessary for the research program.

Research Report

4. On completing the course of study a candidate shall submit to the School/Unit a research report embodying the results of the original investigation and which shall present an account of the candidate's own research.

Coursework

5. The School/Unit shall specify, at the time of the candidate's acceptance into the program, any courses to be undertaken and the level of achievement required in each of the courses. It is normally required that the candidate complete two 8 units of credit courses at the level of achievement specified.

6. Applicants with appropriate backgrounds at undergraduate or postgraduate coursework levels may be granted advanced standing for all or part of the coursework. No advanced standing may be granted for the thesis component of the course. Advanced standing will not be granted for work completed more than six years before the date of admission of the applicant.

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.

The Faculty offers both postgraduate coursework and research degrees. Details are contained in this Handbook.

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

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Faculty Information and Assistance

Some People Who Can Help You

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 (Postgraduate Studies), Head of School, or any of the staff responsible for the postgraduate coursework and research programs offered in the Faculty, go to the Postgraduate Studies and Research Office on Level 2.

The Faculty of Built Environment Website

The Faculty of the Built Environment's website **www.fbe.unsw.edu.au** 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.

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.

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

New Students

New students enrolling in graduate programs will be sent enrolment procedure information from the University Admissions Office. This will include information on enrolment procedures and fees, enrolment timetables by faculty and program, enrolment in miscellaneous courses and late enrolment.

Re-enrolling Students

All students re-enrolling in the Faculty will enrol via the *NewSouth Student Online*. Instructions can be found on the FBE website.

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 consists of textbooks and recommended reading, background information to programs, serials and standards (these are 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-6.00pm Monday to Thursday, 8.30am-4.00pm on Friday. Out of session, the Resource Centre is open from 8.30am-4.00pm Monday to Friday, closed all January, weekends and public holidays.

Faculty Research Laboratories

The Faculty controls research laboratories located on Kensington campus, at the UNSW Research Station, King Street, Randwick and the Little Bay Campus. The laboratories have facilities equipped for research on environment and climate, materials, model testing, services, lighting and acoustics. Extensive testing and research equipment and workshop facilities are available, including a structural modelling facility and a structural testing bay. Research work and testing programs carried out in the laboratories include:

- condensation behaviour of double glazed windows;
- transfer of heat and moisture through wall elements;
- penetration of moisture into and through concrete;
- development of methods of extending the use of solar energy in domestic architecture;
- study of noise transmission in buildings;
- investigation of traffic noise measurement, analysis and prediction;
- the effectiveness of artificial luminous environments.

The Australian Centre for Construction Innovation with its main office in the Red Centre and laboratories at Randwick, offers additional services to the building industry.

The Faculty has a field testing and research facility at its Little Bay Campus (1408 Anzac Parade). This facility is accredited for the testing of thermal performance of building components, energy evaluation, renewable energy integration in buildings and other energy – environmental testing and research facilities. State of the art hot box, double hot box and solar calorimeters are part of the facilities. In addition, spectrophotometric studios on materials including degradation studies are also undertaken. Industry specific professional development programs are also being conducted through this facility. Other energy and environmental activities of the Centre for a Sustainable Built Environment (formerly SOLARCH) can be accessed through this facility as well.

Rules for Progression

Progression in programs offered in FBE is generally dependent on the successful completion of prerequisites and/or corequisites for courses as listed in the schedules of courses for each program.

Where the academic record of students is not of a satisfactory standard, the Program Director may recommend a restricted program.

Program and Course Information

Higher Degrees – Research

Following the award of a first degree in Architecture, Building, Industrial Design, Landscape Architecture, Planning or other relevant program of the University of New South Wales or other approved university, graduates may apply to register for study leading to the award of the degree of:

1. Doctor of Philosophy
2. Master of Architecture
3. Master of Science

4. Master of Building
5. Master of Landscape Architecture
6. Master of Town Planning
7. Master of the Built Environment

For details concerning these degrees see Conditions for the Award of Higher Degrees later in this Handbook or write to the Associate Dean Research.

Higher Degrees – Coursework

In addition to the facilities available for the pursuit of higher degrees by research, formal programs are offered as follows:

1. Master of Architecture
2. Master of the Built Environment (Sustainable Development)
3. Master of Construction Management
4. Master of Construction Management (Singapore)
5. Master of Industrial Design
6. Master of Real Estate
7. Master of Science (Industrial Design)
8. Master of Urban Development and Design
9. Graduate Diploma in Built Environment (Sustainable Development)
10. Graduate Certificate in Built Environment (Sustainable Development)
11. Graduate Diploma in Town Planning

Duration

Most programs are over one year full-time or two years part-time study and may require evening and/or daytime attendance at the Kensington campus of the University (refer to course descriptions for details). The Master of Urban Development and Design is programmed over one calendar year including a summer term. The Master of Real Estate is normally completed over three academic sessions.

Research Degrees

The Faculty of the Built Environment offers excellent facilities for research and welcomes inquiries from students who wish to pursue programs for research as detailed below. Prospective students should consult the Postgraduate Student Coordinator to discuss their research interests prior to making a formal application.

Research students are encouraged to join one of the Faculty's five research groups which provide a collegial environment for staff and students with similar research interests in the following areas:

- Design Theory
- Construction Management and Economics
- History and Theory
- Technology and Environment
- Urban and Regional Studies

The Faculty is home to the following research centres and units which provide opportunities for research students to participate in a focused research endeavour:

- Centre for a Sustainable Built Environment (formerly SOLARCH)
- Australian Housing and Urban Research Institute (AHURI)

Postgraduate Student Director: Catherine De Lorenzo

1120 Doctor of Philosophy

PhD

This is a research degree requiring an original and significant contribution to knowledge in an approved course. Supervision is available for topics relevant to the discipline areas of the faculty (architecture, building construction management, industrial design, interior architecture, landscape architecture, human and environment interface geography, urban design, and urban planning). Cross-disciplinary research is encouraged and collaborative supervision across these disciplines and with other disciplines within the University is available.

2200 Master of Architecture

MArch

This degree is available to full-time, part-time and external candidates. It requires the submission of a thesis embodying the results of an original investigation or design.

2206 Master of Science

MSc

This degree is available to full-time, part-time and external candidates. It requires the submission of a thesis embodying the results of an original investigation or design.

2210 Master of Building

MBuild

This degree is available to full-time, part-time and external candidates. It requires the submission of a thesis embodying the results of an original investigation.

2220 Master of Landscape Architecture

MLArch

This degree is available to full-time, part-time and external candidates. It requires the submission of a thesis embodying the results of an original investigation or design.

2230 Master of Town Planning

MTP

This degree is available to full-time, part-time and external candidates. It requires the submission of a thesis embodying the results of an original investigation.

2240 Master of the Built Environment

MBEnv

This degree is available to full-time, part-time and external candidates. It requires the submission of a thesis embodying the results of an original investigation or design.

Coursework Degrees

The Faculty of the Built Environment welcomes enquiries from students who wish to pursue graduate coursework programs as detailed below. Prospective students should consult the Associate Dean (Postgraduate Studies) to discuss their interests prior to making a formal application.

8125 Master of Construction Management

MConstMgt

Program Director: A/Professor Thomas E Uher

Construction Management embraces the principles of project management and applies them across different phases of the project development cycle to achieve successful project outcomes.

This one year full-time or part-time full fee program has been designed to provide opportunities for advanced study in construction project management and building economics. The program aims at improving proficiency of qualified practitioners in the construction industry to meet present and future challenges.

Admission Requirements and Fees

1. Applicants must hold degrees acceptable to UNSW in either building, civil engineering, architecture, quantity surveying or equivalent and must have appropriate industrial experience.

2. Applicants may proceed directly into the program, or be required to complete prerequisite or corequisite programs of reading or study, with assessed assignments.

3. Applicants from non English speaking countries must supply a certified statement of results in the IELTS Test or another equivalent recognised test.

4. This is a full fee paying program. Contact the office of the Associate Dean (Postgraduate Studies) or the Program Director for details.

Program Structure

The Master of Construction Management program is a formal one year full-time or a two year part-time full fee degree program. Entry into the program is possible in either session. To qualify for a degree, candidates are required to complete 6 compulsory and 2 elective courses to accumulate a total of 48 units of credit.

Program Outline

Compulsory Courses		UOC
CONS0007	Principles and Practice of Management	6
CONS0002	Human Resources Management	6
CONS0005	Computers in Construction Management	6
CONS0009	Construction Planning and Control	6
CONS0010	Contracts Management and Law	6
CONS0014	Project Management	6

Elective Courses

CONS0012	Quantitative Methods in Management	6
CONS0006	Property Management	6
CONS0008	International Construction Practice	6
CONS0011	Cost Planning and Analysis	6
CONS0013	Construction Management Applications	6
CONS0001	Project Finance	6
CONS0003	Project Quality Management	6

Note: Not all elective courses are available in any one year. Students may select one elective course from outside the Faculty subject to approval from the Program Director.

8126 Master of Construction Management (Singapore)

This is an identical program to 8125 and is offered in Singapore using a distance learning mode of delivery.

8129 Master of Real Estate

Master of Real Estate MRE
Program Director: Associate Professor Richard Cardew

Master of Real Estate MRE (Facilities Management)
Program Director: Clive Warren

About the Programs

Each year the nation commits more than half of its capital outlays to land development, building and infrastructure. The real estate industry is rapidly moving from essentially responding to client requirements for structures to providing business solutions and sustainable communities. This makes real estate a key sector of the economy. The real estate programs offered at UNSW are designed to meet the needs of those who wish to work at the cutting edge of these changes, and assemble a suite of courses that stretch their imaginations and capabilities.

In a collaborative arrangement between FBE, peak industry associations and other faculties, UNSW offers a Master of Real Estate to meet these objectives. The program should appeal to people seeking careers in development, investment and management of property and infrastructure and the professions that serve this industry. It also provides valuable education to those seeking a broader base to careers in architecture and landscape architecture, construction, engineering, urban planning and law.

In response to the rapid changes in the field of real estate, a specialisation in facilities management is offered within this real estate program, the Master of Real Estate in Facilities Management (Plan GSBEBS8129). Facilities management is not only growing rapidly but also responding to corporations' need to view their real estate as vital to their core business objectives. This requires a strategic approach to asset management that integrates financial, information, human resource and technical perspectives.

Admission Requirements

Admission is available to students with a first degree or equivalent in any relevant field together with evidence of a capacity to achieve credit level or better grades consistently. Professional experience is desirable and is also considered in selecting applicants.

Eligible applicants may be required to complete a program of preparatory or concurrent study laid down by the Associate Dean (Postgraduate Studies) on the recommendation of the Program Director.

All applicants are expected to have certain learning skills relevant to this program before they begin (or complete their first session) and be conversant in English. Students may be required to undertake these courses in the first session if weaknesses become evident.

Assumed Knowledge

Students should be able to:

- Produce assignments that obey bibliographic conventions, meet appropriate communication standards and are internally verifiable.
- Conduct statistical analysis in commonly used software and produce graphics.
- Interpret descriptive statistics.
- Conduct electronic searches of peer reviewed literature.

Advanced Standing

Applicants who have completed a four year program of undergraduate study or equivalent may be granted advanced standing for up to four courses in a Masters degree provided that previous study contains subject matter studied to third year or higher level which is similar in content to that in the Masters degree. The number of courses for which advanced standing is given will depend on the composition of the program undertaken by the student in their previous degree or degrees.

As part of the provisions described above, students who have completed an accredited postgraduate award offered by the Property Council of Australia may also be granted advanced standing:

The maximum units of credit (UOC) that may be granted as advanced standing is 24.

Program structure

To qualify for the Master of Real Estate and the Master of Real Estate (Facilities Management) programs students will be required to complete a program of study totalling 72 UOC as adjusted by advanced standing provisions. Since most courses are of 6 UOC, students must usually complete 12 courses. Each course involves about 120 hours of work on the part of a student. Modes of delivery vary with some courses available by distance education. Most require attendance at classes in either block or week-by-week mode. The variety of delivery forms provides flexibility and opportunity to undertake study outside the usual sessions. In conventional mode the degree requires three full-time sessions of study, however, the variety of modes of delivery enables some pathways through these programs to be completed within twelve months. This is only possible for students beginning their studies in the first session of the academic year.

The programs require students to complete courses that have been allocated to subject groups plus two electives. The subject groups are given in the schedule below.

The Master of Real Estate requires students to complete:

- All five courses from the core subject group.
- Five courses from at least three of the remaining seven subject groups, and
- Two electives.

The electives may be taken from the subject groups in the schedule below or from other UNSW postgraduate courses provided they are relevant and have the approval of the Program Director.

The Master of Real Estate in Facilities Management requires students to complete:

- All five courses from the core subject group
- Three courses from the Facilities Management and Corporate Real Estate group
- One course from the Finance group
- One course from one of the remaining groups
- Two electives

Subject Group 1 – Core Group		**UOC**
REST0002	Information Technology and Data Analysis in Real Estate	6
ECON5103	Business Economics	6
REST0010	Modern Property	6
REST0011	Generating and Executing Ideas	6
REST0012	Working With People	6
Subject Group 2 – Development, Design and Construction		
REST0006	Real Estate Development	6
UDES0006	Case Studies in Urban Development and Design	6
CONS0003	Project Quality Management	6
Subject Group 3 – Finance and Valuation		
REST0001	Real Estate Investment Analysis	6
REST0004	Real Estate Finance	6
REST0005	Real Estate Valuation	6
FINS5513	Security Valuation and Portfolio Selection	6
FINS5533	Real Estate Finance and Investment	6
FINS5552	Hazard Risk Analysis	6
Subject Group 4 – Market and Marketing		
REST0003	Real Estate Market Forecasting	6
MARK5902	Elements of Marketing	6
GBAT9106	Information Systems Management*	6
Subject Group 5 – Facilities and Corporate Property Management		
REST0007	Facilities Management	6
REST0008	Corporate Real Estate	6
REST0013	Strategic Management of Information Technology in Facilities Management	6
CONS0014	Project Management	6
IROB5908	Strategic Human Resource Management	6

Subject Group 6 – Property Rights and the Regulatory Environment

REST0014	Property Rights and Valuation	6
BENV7720	Land and Environment Law	6

Subject Group 7 – Urban Development and Governance

BENV7714	The Economics of Cities	6
BENV7717	Metropolitan Policy	6

Subject Group 8 – Sustainability

SUSD0003	Energy and the Built Environment	6
GBAT9103	Environmental Management*	6

Electives

12 units of credit of relevant courses taken from the above subject groups or from other UNSW postgraduate courses provided they have the approval of the Program Director.

**Enrolment in courses offered by the Master of Technology program requires students to have 4 years work experience.*

Sequence

The sequence of courses is governed by prerequisites.

Courses with enrolment numbers below the Faculty determined threshold may not be offered. Some courses may be offered only once over two years.

Fees

This is a full fee paying program for both local and international students. Contact the office of the Associate Dean – Postgraduate Studies for details.

8131 Master of Urban Development and Design MUDD

Program Director: Dr Bruce Judd

About the Program

A one calendar year (three sessions) full-time or two calendar year (five sessions) part-time multidisciplinary coursework program for a wide range of graduates from both design and non design based disciplines with both **Session 1** and **Session 2** intake. An advanced study program examines the crucial relationship between urban development and design from an international perspective, but with particular reference to the rapidly developing Asia-Pacific region. The intensive one calendar year program involves two academic sessions of study plus a summer term and includes a compulsory field project based in a major South-East Asian city. Graduates of the program from a planning related background are eligible for membership of the Planning Institute of Australia (PIA). Students from a non-planning related background may elect to take an additional 24 UOC of approved planning courses to become eligible for PIA membership.

Admission Requirements

Admission to the program is available to a wide range of graduates in both design and non-design based disciplines. The minimum requirement is a four year undergraduate degree in fields such as architecture, landscape architecture, urban planning, urban studies, real estate economics, property development, or another appropriate discipline. In exceptional cases, students may be admitted on the basis of professional experience. Applicants who do not meet these requirements may be permitted to gain admission via a qualifying program.

Fees

This is a full fee paying program for both local and international students. The South-East Asian field project costs are in addition to fees. Contact the office of the Associate Dean (Postgraduate Studies) for details.

Program Structure

The content of the program is progressive, stressing theoretical knowledge of economic, social, environmental and physical design determinants at the beginning, and moving into more applied skills and applications toward the end of the year. The nature of contribution to studio based design projects will be determined according to academic and professional background.

To qualify for the Master of Urban Development degree, students are required to complete ten core and two elective courses to accumulate a total of 72 UOC.

The compulsory core includes five lecture/seminar based courses, three project based studio courses, and a case study course. The typical pattern for core and elective courses will be a two hour lecture/seminar format over 12 weeks, i.e. a total of 24 hours per session. The remaining two weeks per session will normally be reserved for visiting lecturers and other special activities.

Students are encouraged to select electives from those listed below which have been specifically selected for the program. However students may be permitted, with the approval of the Program Director, to select electives from other programs offered within the Faculty or other faculties of the University.

The Summer Term will include case studies of major urban projects, the SE Asian field project, and the preparation of an exhibition and publication of the year's work.

Students from a non-planning related background may elect to take an additional 24 UOC study program (as indicated below) of approved planning courses to become eligible for PIA membership.

Program of Study for Full-time Candidates

Core Course		**UOC**
Session 1		
UDES0004	History of Urban Development	3
UDES0007	Urban and Environmental Law	3
UDES0008	Real Estate Development	3
UDES0001	Urban Design Studio	9
	Elective Course	6
	Total	**24**
Session 2		
UDES0005	Critical Urban Theory	3
UDES0009	Urban Landscape	3
UDES0002	Urban Design Studio	12
	Elective Course	6
	Total	**24**
Summer Term		
UDES0006	Case Studies in Urban Development and Design	6
UDES0003	Urban Design Studio (including SE Asian field project)	12
UDES0010	Communication in Urban Design	6
	Total	**24**

Recommended Program of Study for Part-time Candidates

Core Course

Year 1, Session 1		
UDES0004	History of Urban Development	3
UDES0007	Urban and Environmental Law	3
UDES0008	Real Estate Development	3
	Total	**9**
Year 1, Session 2		
UDES0005	Critical Urban Theory	3
UDES0009	Urban Landscape	3
	Elective Course	6
	Total	**12**
Year 2, Session 1		
UDES0001	Urban Design Studio	9
	Elective Course	6
	Total	**15**
Year 2, Session 2		
UDES0002	Urban Design Studio	12
	Total	**12**
Year 2, Summer Term		
UDES0006	Case Studies in Urban Development and Design	6
UDES0003	Urban Design Studio (including SE Asian field project)	12
UDES0010	Communication in Urban Design	6
	Total	**24**
Total Units of Credit for Program		**72**

Recommended Elective Courses

ARCH7308	Architecture and the City	6
ARCH7308	Architectural Design Aesthetics	6
ARCH7309	Architectural Writing and Criticism	6
BENV7142	CAD and Visualisation	6
BENV7190	People and Urban Space	6

BENV7191	Urban Heritage Conservation	6
BENV7721	Planning and Land Policy	6
CONS0003	Project Quality Management	6
CONS0007	Principles and Practice of Management	6
CONS0014	Project Management	6
SUSD0001	Sustainable Development and the Urban Environment	6
SUSD0002	Resources, Materials and Sustainability	6
SUSD0003	Energy and the Built Environment	6
SUSD0004	Human Factors, Sustainability and Habitability	6

Note: Most elective courses are offered in only one session per year. Some courses may not be offered every year. Additional electives may also be offered in a particular session. Students are advised to contact the Program Director prior to enrolment for information about the availability of elective courses in a particular session.

Additional PIA Accreditation Study Program

UDES0011	Planning Project	12
	Electives (approved Planning courses)	12
	Total	**24**

8132 Master of the Built Environment (Sustainable Development)

MBEnv(SustDev)

5132 Graduate Diploma in Built Environment (Sustainable Development)

GradDipBEnv(SustDev)

7332 Graduate Certificate in Built Environment (Sustainable Development)

Summer Session GradCertBEnv(SustDev)

Program Director: Steve King

About the Programs

Buildings and urban environments represent a major source of human impact on natural ecosystems and sustainable development has now become a major concern of urban policy and development. There is an increased demand for built environment and related professionals to develop knowledge and skills appropriate to sustainable development, and an expansion of specialised career opportunities in both the public and private sector.

The programs are advanced interdisciplinary coursework programs which provide opportunities for graduates from a wide range of backgrounds (eg. architecture, landscape architecture, urban planning, building, property development, civil engineering) to improve their knowledge and skills in the application of the principles of sustainable development to the planning, design, construction and management of buildings and the urban environment. While approached from an international perspective, the program places special emphasis on the rapidly developing South-East Asian region.

The programs are available to suitably qualified local and international students and provide opportunities for full-time or a part-time study.

Please note that the Graduate Certificate is not available to international students as it can only be undertaken on a part-time basis.

Admission Requirements

MBEnv(SustDev): A minimum four year Bachelor degree or equivalent in an appropriate discipline. Where an applicant's qualifications are not considered adequate, admission may be permitted to the Graduate Diploma or Graduate Certificate with the possibility of upgrading to the Masters program, subject to satisfactory performance.

GradDipBEnv(SustDev) and GradCertBEnv(SustDev): A Bachelor degree or equivalent in an appropriate discipline.

In exceptional circumstances other academic qualifications may also be considered.

Fees

These are full fee paying programs for both local and international students.

Program Structure

The Masters program is comprised of four core courses, two electives and a graduate project for a minimum of 48 UOC required to complete the program. The Graduate Diploma is comprised of four core courses and two electives for a minimum of 36 UOC. The Graduate Certificate is comprised of four core courses for a total of 24 UOC.

Pattern of Study for Completion Over Two Sessions

Courses	Units of Credit	MBEnv	Grad Dip	Grad Cert
Session 1				
SUSD0001 Sustainable Development and the Urban Environment	6	•	•	•
SUSD0002 Resources, Materials and Sustainability	6	•	•	•
Elective Course (see list below)	6*	•	•	
Elective Course (see list below)	6	•		
Session 2				
SUSD0003 Energy and the Built Environment	6	•	•	•
SUSD0004 Human Factors, Sustainability and Habitability	6	•	•	•
SUSD0005 Graduate Project	12	•		
Elective Course (see list below)	6		•	
Total UOC (minimum)		**48***	**36***	**24**

**Minimum units of credit – subject to variation depending on selection of elective course.*

• These are the required courses for each program

Recommended Pattern of Study for Completion over Four Sessions

Courses	Units of Credit	MBEnv	Grad Dip	Grad Cert
Session 1, Year 1				
SUSD0001 Sustainable Development and the Urban Environment	6	•	•	•
Session 2, Year 1				
SUSD0003 Energy and the Built Environment	6	•	•	•
SUSD0004 Human Factors, Sustainability and Habitability	6	•	•	•
Elective Course (see list below)	6*	•		
Session 1, Year 2				
SUSD0002 Resources, Materials and Sustainability	6	•	•	•
Elective Course (see list below)	6*	•	•	
Session 2, Year 2				
SUSD0005 Graduate Project	12	•		
Elective Course (see list below)	6*		•	
Total UOC (minimum)		**48***	**36***	**24**

**Minimum units of credit – subject to variation depending on selection of elective course.*

• These are the required courses for each program

Recommended Electives		UOC
ARCH7206	CAD Management and Information Technology	6
ARCH7322	People and Urban Space	6
CONS0002	Human Resources Management	6
CONS0003	Project Quality Management	6
CONS0007	Principles and Practice of Management	6
CONS0014	Project Management	6
UDES0004	History of Urban Development	6
UDES0007	Urban and Environmental Law	3
UDES0005	Critical Urban Theory	3
SCTS5312	Technology and Power in the Asia Pacific	12*
SCTS5316	Environmental and Technological Risk Controversies	12*
GEOH9011	Environmental Impact Assessment	6
GEOH9018	Transport Application of GIS	6
GEOH1701	Environmental Systems and Analysis	6
GEOH9015	Population, Health and the Environment	6
CVEN9405	Urban Transport Planning Practice	6
CVEN9855	Water and Wastewater Analysis and Quality Requirements	6
CVEN9881	Hazardous Waste Management	6

**Electives of 12 or more units of credit are regarded as equivalent to two 6 units of credit courses. Other electives may also be available.*

Note: Some electives may not be offered every year.

Additional fees will apply for courses with more than the minimum required units of credit.

Advanced Standing

Where applicants have undertaken external courses equivalent to core courses, advanced standing may be permitted up to the following:

GradCert: 6 UOC
GradDip: 12 UOC
MBEnv: 12 UOC

Upgrading and Articulation

Upgrading from GradCertBEnv(SustDev) to GradDipBEnv(SustDev) or MBEnv(SustDev), or from GradDipBEnv(SustDev) to MBEnv(SustDev) may be permitted where a program is completed but the degree has not been awarded. Students upgrading to the MBEnv(SustDev) will be required to complete a minimum of 12 additional units of credit of coursework. When upgrading, additional credit for advanced standing will not be permitted.

Where a GradDipBEnv or GradCertBEnv has been awarded, the maximum credit permitted toward a degree at a higher level will be as follows:

GradCert: 12 UOC towards GradDip or MBEnv
GradDip: 12 UOC towards MBEnv

For core or elective courses previously completed in a GradDipBEnv or GradCertBEnv, additional electives of at least equivalent units of credit value are required to be completed.

8142 Master of Architecture

MArch

with plans of study in:

Architectural Design (Arch Design) (plan ARCHBS8142)
Architectural Design (History and Theory) (plan ARCHES8142)
Architectural Computing (plan ARCHAS8142)

Program Director: Dr Paul-Alan Johnson

About the Program

This program provides for graduate study and research in design related and computing aspects of the discipline of architecture. Three plans of study are offered to prospective candidates: Architectural Design, Architectural Design (History & Theory) and Architectural Computing. The School may, from time to time, adjust the specialist programs that are available, subject to both demand and available staff resources.

These plans of study are primarily designed for graduates in architecture and other relevant disciplines who wish to advance their knowledge in these specialised areas as either practitioners, consultants or academics. They are also suitable for specialist members of multidisciplinary teams in industry or architectural practice. This is a post-professional degree and is not currently accredited for architectural registration.

The degree is awarded as Master of Architecture with a statement on the testamur identifying the area of specialisation undertaken by the candidate.

Admission Requirements

Registration is offered to candidates who have been awarded an appropriate degree of Bachelor of minimum 4 years duration from UNSW or qualification considered equivalent from another university or tertiary institution at a level acceptable to the Research Committee of the Faculty of the Built Environment (hereafter referred to as the Committee). Where considered appropriate (including insufficient background in the proposed area of specialisation), candidates may be required to undertake a qualifying program as determined by the Committee.

Applicants to the MArch (Arch Des) must meet further admission requirements and those for the MArch (Arch Comp) are expected to have some specified computing knowledge prior to entry into the program. See details under each degree below.

Notwithstanding any other provisions of these conditions, the Committee may require an applicant to demonstrate fitness for registration by carrying out such work and sitting for such examinations, as the Committee may determine.

Program Structure

Students undertaking the MArch program are required to nominate their plan of study before commencement. They must then complete a set of prescribed core courses in that area of study, supplemented by elective courses to bring their total units of credit (UOC) to 48 for the degree.

The degree may be commenced in either session of the academic year subject to the availability of places in the program as well as appropriate courses being offered at that time. It is normally undertaken over two full-time sessions or four part-time sessions. In general, candidates are required to complete as many core courses as possible before undertaking their elective options.

Notwithstanding any of the above, whether courses are offered in any one academic session will depend on student numbers. Students must therefore plan their programs in consultation with the Program Director or Coordinators.

English Language Requirements

International applicants whose first language is not English, or who have not undertaken a previous degree where English was the primary language of instruction, are required by the University to provide proof of their competence in English by presenting acceptable results in the TOEFL or IELTS Test, or another equivalent test acceptable to UNSW.

Fees

This is a full fee paying program for both local and international students. Contact the office of the Associate Dean Postgraduate Studies for details. An extra fee may be payable for the Architectural Design Charette and will be advised well in advance of commencement.

Master of Architecture (Architectural Design)

Admission to the MArch (Arch Des)

Over and above the normal admission requirements for the Master of Architecture program outlined above, applicants for the MArch (Arch Des) wishing to undertake the Design Track (plan ARCHBS8142) are normally required to have a Bachelor of Architecture, or equivalent degree in architecture, leading to professional registration.

However, applicants with equivalent education, background, or experience in allied fields will be considered for admission to the MArch (Arch Des) in the History/Theory Track (plan ARCHES8142).

Applicants for the Design Track must show that their average performance in design studio and design related undergraduate courses matches or surpasses UNSW credit grade. Such applicants are also expected to have completed at least one year of work experience in an architectural or building design office since graduation. Applicants must also submit a portfolio of their undergraduate work and their work since graduation supported with letters from employers describing the role of the applicant in the work shown in their portfolio.

Applicants with either a design or non-design background wishing to enrol in the History/Theory Track must submit an outline of their background and present their reasons for wishing to undertake this track.

MArch (Arch Des) Program Structure

Students in the MArch (Arch Des) program must undertake core courses totalling 36 UOC and electives totalling 12 UOC, in one of the two tracks listed below. In special cases, students may take another combination of courses towards their core with the agreement of the Program Director.

The MArch (Arch Des) program requires the completion of two studio-based Architectural Design Projects totalling 24 UOC. Note that, except for these higher value Project courses all other core courses are of 6 UOC and elective course are either of 3 or 6 UOC.

Candidates wishing to undertake the MArch (Arch Des) program on a part-time basis must note that the studio-based design courses (Architectural Design Project 1 & 2) are session-specific courses and must be completed in the session in which they are scheduled.

MArch (Arch Des) Program Outline

Design Track

Students with an architecture or design related professional degree pursuing the Design Track must take the following combination of courses:

Core:

Listed Design Application courses, totalling 24 UOC.
Listed Design related courses, totalling 12 UOC.

Elective:

Listed Elective courses, or Design Application, or Design related courses not taken as Core, totalling 12 UOC, or with the approval of the Program Director other courses totalling up to 12 UOC within the Faculty or the University.

Design Application		**UOC**	**HPW**
ARCH7103	Architectural Design Project 1	12	8
ARCH7104	Architectural Design Project 2	12	8
ARCH7105	Architectural Design Charette*	12	8

Design related courses

ARCH7304	Architecture and the City	6	2
ARCH7305	Theories in History	6	2
ARCH7306	Theory and Architectural Practice	6	2
ARCH7307	Architectural Design Strategies	6	2
ARCH7308	Architectural Design Aesthetics	6	2
ARCH7309	Architectural Writing and Criticism	6	2

Elective courses

BENV7140	Multimedia on the Web	6	3
BENV7141	Multimedia in Design Presentation	6	3
BENV7142	CAD and Visualisation	6	3
BENV7143	Advanced Visualisation	6	3
BENV7190	People and Urban Space	6	2
SAHT9143	Design History and Theory 1	6	2
SUSD0001	Sustainable Development and the Urban Environment	6	3
SUSD0002	Resources, Materials and Sustainability	6	3
SUSD0003	Energy and the Built Environment	6	3
SUSD0004	Human Factors, Sustainability and Habitability	6	3
UDES0004	History of Urban Development	3	2
UDES0009	Urban Landscape	3	2
GEOH9011	Environmental Impact Assessment	6	4

**The Architectural Design Charette depends on the availability of an international architect/designer/theorist. It is offered only in the Summer (November January) session, and only when advised by the Program Director.*

History/Theory Track

Students pursuing the History/Theory Track must take the following combination of courses, with the exception that students with an architecture or design related professional degree may take one further course totalling 12 UOC from the listed Design Application courses, as Core towards their Design related courses total:

Core:

Architectural Research Project, totalling 12 UOC.
Listed Design related courses, totalling 24 UOC.

Elective:

Listed Elective courses, or Design related courses not taken as Core, totalling 12 UOC, or with the approval of the Program Director other courses totalling up to 12 UOC within the Faculty or the University.

Design Application		**UOC**	**HPW**
ARCH7103	Architectural Design Project 1	12	8
ARCH7104	Architectural Design Project 2	12	8
ARCH7105	Architectural Design Charette*	12	8
ARCH7004	Architectural Research Project	12	8

Design Related Courses

ARCH7304	Architecture and the City	6	2
ARCH7305	Theories in History	6	2
ARCH7306	Theory and Architectural Practice	6	2
ARCH7308	Architectural Design Aesthetics	6	2
ARCH7309	Architectural Writing and Criticism	6	2

Elective Courses

ARCH7307	Architectural Design Strategies	6	2
BENV7190	People and Urban Space	6	2
SAHT9143	Design History and Theory 1	6	2
SAHT9144	Design History and Theory 2	6	2
SDES9201	Design Seminar 1	6	2
SUSD0001	Sustainable Development and the Urban Environment	6	3
SUSD0002	Resources, Materials and Sustainability	6	3
SUSD0003	Energy and the Built Environment	6	3
SUSD0004	Human Factors, Sustainability and Habitability	6	3
UDES0004	History of Urban Development	3	2
UDES0009	Urban Landscape	3	2
GEOH9011	Environmental Impact Assessment	6	4

**The Architectural Design Charette depends on the availability of an international architect/designer/theorist. It is offered only in the Summer (November January) session, and only when advised by the Program Director.*

Master of Architecture (Architectural Computing)

Admission to MArch (Arch Comp)

Over and above the normal admission requirements for the Master of Architecture degree outlined above, applicants for the MArch (Arch Comp) are assumed to have a working knowledge and experience with the principal computing tools used in architectural design practice, specifically CAD and 3D modelling and visualisation. Where students do not have those skills upon entry to the program, they are strongly recommended to take an additional non-award course, such as 'BENV7142 CAD and Visualisation', in order to acquire that base knowledge.

MArch (Arch Comp) Program Structure

Students in the MArch (Arch Comp) program must undertake core courses totalling 36 UOC and electives totalling 12 UOC. All students must complete a Graduate Research Project as part of the core, but are able to select the remaining core courses (4 courses at 6 UOC each) from the prescribed list of postgraduate computing courses shown below. Elective courses (2 courses at 6 UOC) may be selected from the same list, or from any graduate course offered in the Faculty (except for 'BENV7142 CAD and Visualisation' which embodies assumed knowledge for this program and is only available as a non award course), or with the permission of the Program Director, from any postgraduate course offered by the University of New South Wales or appropriate course offered by another institution.

Required Academic Program		**UOC**
ARCH7003	Graduate Research project	12
Plus 4 core courses selected from the following list:		
ARCH7204	Design Computing Theory	6
ARCH7205	Computer Graphics Programming	6
ARCH7206	CAD Management and Information Technology	6
BENV7140	Multimedia on the Web	6
BENV7141	Multimedia in Design Presentation	6
BENV7143	Advanced Visualization	6
BENV7147	Info Management Systems for Design Professionals	6
BENV7148	Object Based CAD Modelling	6

Recommended Electives		**UOC**
CONS0005	Computers in Construction Management	6
REST0013	Strategic Management of IT in FM	6
REST0002	Information Technology & Data Analysis in Real Estate	6
GEOS9016	Principles of Geographic Information Systems	6
GEOS9017	Advanced Geographic Information Systems	6
SUSD0003	Energy and the Built Environment	6
SUSD0004	Human Factors, Sustainability and Habitability	6

Note: Most courses are offered in only one session each year. Some courses may not be offered every year. Students are advised to contact the Course Director prior to enrolment for information about the availability of courses in a particular session.

8145 Master of Industrial Design

MID

Program Director: Dr Oya Demirbilek

The Master of Industrial Design program seeks to extend the knowledge of the industrial designer by emphasising the research of the consumer needs and management of the industrial design and product development process. The program introduces the principles of sourcing information and provides a basis for subsequent research of consumer needs, and other aspects of product development such as materials and manufacturing technologies. Industrial design history is revisited helping students to develop an appreciation of the historical influences upon the design process. The industrial design course provides students with an opportunity to pursue advanced product design work under the direction of talented designers. Students have the opportunity to develop further expertise in courses such as marketing and ergonomics. The major project emphasises research, particularly of consumer needs, manufacturing and financial analysis.

The MID program is intended for holders of four year industrial design degrees who wish to specialise and develop expertise in particular areas of industrial design. In addition to the common core of coursework, MID students are also required to submit a major graduate project, a design theory report and have a greater choice of electives related to their field of specialisation.

8146 Master of Science (Industrial Design)

Master of Science (Industrial Design) MSc(IndDes)

Program Director: Dr Oya Demirbilek

About the Program

The Master of Science (Industrial Design) program introduces design thinking and knowledge to graduates of architecture, interior architecture,

or a selection of engineering fields, or to graduates from non-design areas, such as marketing, or management, having an interest in design. Initially the student studies 'Basic Design', 'Industrial Design A', and 'Perspective Drawing and Rendering'. These courses develop an appreciation of visual thinking, product presentation and the industrial design process. At the same time, the history of industrial design is clarified and students start to grasp the various influences upon the design process. Studies in business are provided by the Faculty of Commerce, in courses such as elements of marketing and consumer analysis. 'Principles of Ergonomics' introduces the student to human factors associated with the design process. 'Industrial Design B' challenges the student with advanced project work and consolidates understanding of the industrial design process. Finally a major project links the student's prior learning and showcases their design knowledge and capabilities.

The MSc(IndDes) program is intended for graduates from design related fields, such as architecture, interior architecture, a selection of engineering programs, or for graduates from non-design areas, such as marketing, or management who have satisfactorily completed preparatory studies. The program is designed to adapt and apply students' existing design knowledge and experience to the methodology and practice of industrial design. The project work is less specialised and covers a broad range of industrial design problems. Students are required to submit a major graduate project. There are additional compulsory courses in this program, with a more restricted range of electives, closely related to industrial design.

Admission Requirements for MID and MSc(IndDes)

Admission is open to applicants who have completed an appropriate degree of at least four years' full-time duration, or its equivalent. For the MID program, admission is restricted to applicants who have completed a degree with a major in industrial design of at least four years full-time duration or its equivalent.

In certain cases, particularly for applicants from non-design undergraduate programs, it is necessary to complete a qualifying program of preparatory units in industrial design, as prescribed by the Research Committee of the Faculty. These units are selected from appropriate undergraduate programs. The Committee's decision is influenced by the academic and professional experience of each applicant.

Program Structure

The minimum duration of both programs is two sessions of full-time study or four sessions of part-time study. The availability of the full-time and part-time programs of study depends upon student demand and the University's resources at that time.

The MID and the MSc(IndDes) programs comprise 48 units of credit. Full-time study normally requires an attendance of approximately 18 hours per week, while part-time study normally requires approximately 9 hours per week for the duration of the program. The project work for both part and full-time programs is run simultaneously and is staffed according to the requirements of each project.

Most of the work is undertaken within the Faculty, but industrial visits and experience form an important component of the program. The program is arranged so that eminent visitors as well as guest lecturers and designers may participate.

To avoid duplication of classes for full-time and part-time students, courses are timetabled wherever possible on afternoons and evenings. In addition to timetabled commitments, the studios and laboratories are available during normal University hours for industrial design project work. Occasionally students are required to attend professional and industrial visits and lectures at other institutions.

Program Outlines

MID

Core Courses		**UOC**
IDES5131	Industrial Design	6
IDES4371	Design Management	3
IDES1121	History of Industrial Design	3
IDES6081	Graduate Project (MID)	12
	Total	**24**

Elective Courses

BENV7140	Multimedia on the Web	6
BENV7141	Multimedia in Design Presentation	6
BENV7142	CAD and Visualisation	6
IDES3271	Form Theory	3
IDES5051	Plastics Materials and Processes	3
IDES5152	Manufacturing Technology	3
MARK5902	Elements of Marketing	6
MARK5901	Issues in Consumer Analysis	6
MARK5913	Marketing Management	6
SESC9421	Applied Ergonomics	6
SESC9441	Ergonomics and New Technology	6
IDES5153	Computer Graphic Applications	6
IDES5154	Computer Aided Design	6

MSc(IndDes)

Core Courses

IDES1021	Basic Design	6
IDES5091	Perspective Drawing and Rendering	6
IDES5141	Industrial Design A	6
IDES6161	Industrial Design B	6
IDES6181	Graduate Project	12
	Total	**36**

Elective Courses

BENV7140	Multimedia on the Web	6
BENV7141	Multimedia in Design Presentation	6
BENV7142	CAD and Visualisation	6
IDES1121	History of Industrial Design	3
IDES3271	Form Theory	3
IDES4371	Design Management	3
IDES5051	Plastics Materials and Processes	3
IDES5152	Manufacturing Technology	3
MARK5902	Elements of Marketing	6
MARK5901	Issues in Consumer Analysis	6
MARK5913	Marketing Management	6
SESC9411	Principles of Ergonomics	6
SESC9471	Industrial Ergonomics	6
SESC9421	Applied Ergonomics	6
SESC9441	Ergonomics and New Technology	6
IDES5153	Computer Graphic Applications	6
IDES5154	Computer Aided Design	6

Approved Electives

Approved electives may be taken from programs offered in other academic units of the University of New South Wales, subject to the approval of the Program Director.

MID electives may be chosen to increase specialist knowledge relevant to the student's theory studies, project report or planned career activities.

MSc(IndDes) electives are taken in approved courses directly related to the development of the student's industrial design knowledge and skill.

Depending upon program requirements, the availability of staff and Faculty resources, it may be possible to substitute some existing graduate or undergraduate programs in other faculties for certain courses of the program. This development would be subject to the approval of the Research Committee of FBE and the Program Director. Where the units of credit of courses is increased by substitution of courses from other academic units, the requirement for the stated number of credits in elective courses is correspondingly reduced.

5205 Graduate Diploma in Town Planning

GradDip

This program is designed as a qualifying program in order to provide training for graduates who wish to pursue a higher research degree (PhD or Masters by research). The content of the Graduate Diploma is tailored to meet the objectives of individual students. It is normally taken as a one year full-time program (or two years part-time) and includes a core of postgraduate coursework, together with an additional study program to meet the needs of particular students.

Performance in the course is considered when applications for entry into higher degree programs are reviewed.

Admission Requirements

An applicant for the Graduate Diploma shall have a degree of a minimum length of three years full-time from an approved institution or have such other qualifications as may be approved by the Research Committee of FBE.

Program Structure

The program includes three compulsory core courses. The remaining content is designed to provide a foundation for postgraduate research in the field and may include additional coursework and/or programs of independent study.

Core course

BENV7001 Postgraduate Research Design and Methodology
BENV7002 Quantitative Methods for Built Environment Research
BENV7705 Research Seminar 1
BENV7706 Research Seminar 2

Individual programs are defined in consultation with the academic staff of the School and are subject to approval by the Associate Dean (Postgraduate Studies). Application for exemption from BENV7002 may be considered by the Head of School for students with appropriate prior experience with statistical techniques and data analysis.

Conditions for the Award of Degrees

For the rules, regulations and conditions of postgraduate coursework programs (Masters, Graduate Diplomas and Graduate Certificates) turn to the relevant program descriptions in this section. The conditions for postgraduate degrees by research follow.

Doctor of Philosophy (PhD)

Refer to 'Conditions for the Award of Degrees' in the Faculty of Arts & Social Sciences section of this Handbook.

Master of Architecture by Research (MArch), Master of Building (MBuilding), Master of the Built Environment (MBEnv), Master of Landscape Architecture (MLArch), Master of Science and Master of Town Planning (MTP)

1. The degree of Master of Architecture or Master of Building or Master of the Built Environment or Master of Landscape Architecture or Master of Town Planning by research may be awarded by the Council on the recommendation of the Research Committee of the Faculty of the Built Environment (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation or design.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor of four full-time year's duration (or the part-time equivalent) from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee.

(2) In exceptional cases an applicant who submits evidence of such academic and/or professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) When the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant, before being permitted to enrol, to undergo such examination or carry out such work as the Committee may prescribe.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least one calendar month before the commencement of the session in which enrolment is to begin.

(2) In every case, before permitting a candidate to enrol, the director of the program in which the candidate intends to enrol shall be satisfied that adequate supervision and facilities are available.

(3) An approved candidate shall be enrolled in one of the following categories:

(a) full-time attendance at the University;

(b) part-time attendance at the University;

(c) external – not in regular attendance at the University and using research facilities external to the University.

(4) A candidate shall be required to undertake an original investigation or design on an approved topic. The candidate may also be required to undergo such examination and perform such other work as may be prescribed by the Committee.

(5) The work shall be carried out under the direction of a supervisor appointed from the full-time members of the University staff.

(6) The progress of a candidate shall be reviewed annually by the Committee following a report by the candidate, the supervisor and the head of the school in which the candidate is enrolled and as a result of such review the Committee may cancel enrolment or take such other action as it considers appropriate.

(7) No candidate shall be granted the degree until the lapse of three academic sessions in the case of a full-time candidate or four academic sessions in the case of a part-time or external candidate from the date of enrolment. In the case of a candidate who has been awarded the degree of Bachelor with Honours or who has had previous research experience the Committee may approve remission of up to one session for a full-time candidate and two sessions for a part-time or external candidate.

(8) A full-time candidate for the degree shall present for examination not later than six academic sessions from the date of enrolment. A part-time or external candidate for the degree shall present for examination not later than ten academic sessions from the date of enrolment. In special cases an extension of these times may be granted by the Committee.

Thesis

4. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the original investigation or design.

(2) The candidate shall give in writing two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases, work done conjointly with other persons may be accepted provided the committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree theses.

(6) It shall be understood that the University retains the three copies of the thesis submitted for examination is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

5. (1) There shall be not fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this in not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the merits of the thesis and shall recommend to the Committee that:

(a) the candidate be awarded the degree without further examination; or

(b) the candidate be awarded the degree without further examination subject to minor corrections as listed being made to the satisfaction of the head of the school; or

(c) the candidate be awarded the degree subject to a further examination on questions posed in the report, performance in this further examination being to the satisfaction of the Committee; or

(d) the candidate be not awarded the degree but be permitted to resubmit the thesis in a revised form after a further period of study and/or research; or

(e) the candidate be not awarded the degree and be not permitted to resubmit the thesis.

(3) If the performance at the further examination recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to represent the same thesis and submit to a further oral, practical or written examination within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the reports of any oral or written or practical examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the Council.

A Message from the Dean

The College of Fine Arts (COFA) 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 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 research that links COFA and other UNSW teaching and research expertise is also possible, 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

Faculty of the College of Fine Arts

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Faculty Information and Assistance

Research and scholarship in the disciplines of art and design is organised and administered through five schools. 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
Web address: **www.cofa.unsw.edu.au**

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
Telephone (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 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 available in the Virtual Handbook via the Student Gateway at **www.student.unsw.edu.au**

Units of Credit

The University has introduced a university-wide units of credit (UOC) system for all courses offered to 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.

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; and
- where absences in excess of 3 classes occur, students may be given a fail grade (UF).

Computing Information

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 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 check **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 **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 Exhibition/Performance Spaces: 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 counselling appointments and before/after hours appointments can be negotiated.

The Counselling Service website contains an introduction to the service and useful resources for students and staff: **www.counselling.unsw.edu.au**

Indebtedness to the University

A student becomes indebted to the University by non-payment of any fee or charge and by non-return of any College property. A student who is indebted to the University and who fails to make a satisfactory settlement of the indebtedness upon receipt of due notice will be penalised.

Students who fail to pay charges and late charges levied by the University will not be permitted to attend classes, undertake assessments or be granted any course grades.

Students who fail to return material borrowed from the Clement Semmler Library by the due date, may be refused further borrowing privileges at the discretion of the College Librarian or delegate.

Students who fail to return on time materials borrowed from College Resource units may be refused further borrowing privileges, at the discretion of the Dean or delegate.

Students unable to return Library or other Resource items borrowed from the College are required to pay the cost of their replacement. The minimum charge per item will be determined by the College.

Students who fail to return any materials borrowed from the College, or who fail to satisfy any financial obligation to the University may incur one or more of the following penalties as determined by the Dean:

(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

9301 Master of Art (by Coursework)

MArt

This program is postgraduate in level and requires either full-time attendance of one year (two sessions) or part-time attendance of two years (four sessions).

The program is offered for students who wish to further their artistic interests under expert guidance. Students are encouraged to see their art in the context of contemporary developments and to examine various aesthetic propositions. Students are encouraged to develop a professional approach to their own creative endeavours at all times and the program aims to assist in the transition from student to practising artist in the community.

Program Structure

Full-Time Study – two sessions – one year	**UOC**
Electives x 2	12
Studio Classes x 2	12
Total credits per session	24

(Minimum unsupervised studio practice 16 hours per week)

Part-Time Study – four sessions – two years	
Elective	6
Studio Class	6
Total credits per session	12

(Minimum unsupervised studio practice 8 hours per week)

Program Requirements

Students will be required to undertake a sequence of four courses in their major discipline, and four elective courses.

As this program is considered to be intensive and rigorous in involvement, students are expected to maintain their unsupervised studio practice during mid-session and inter-session periods, although not necessarily on campus.

Students will present a documentation volume as a substantial written and appropriately illustrated, annotated record of their working processes and areas of concern. This volume will be assessed on a satisfactory/unsatisfactory basis.

Major Courses

SART9701/9704	Painting 1/Painting 4
SART9705/9708	Drawing 1/Drawing 4
SART9709/9712	Printmaking1/Printmaking 4
SOMA9713/9716	Photomedia 1/Photomedia 4
SOMA9717/9720	Time-Based Art 1/Time-Based Art 4
SART9721/9724	Sculpture/Performance/Installation 1, Sculpture/Performance/Installation 4

Conditions for the Award of Master of Art (by Coursework)

1. The degree of Master of Art by coursework may be awarded by the Council to a candidate who has satisfactorily completed a program of advanced study.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Standing Committee of the College of Fine Arts (hereinafter referred to as the Committee).

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Faculty Manager by the advertised closing date which will be at least two calendar months before the commencement of the session in which enrolment is to begin.

(2) A candidate for the degree shall be required to undertake such formal courses and pass such assessment or conditions as prescribed.

(3) The progress of a candidate shall be reviewed each session by the Committee and, as a result of its review, the Committee may cancel enrolment or take such other action as it considers appropriate.

(4) Candidates will not normally be awarded the degree until the lapse of two academic sessions from the date of enrolment in the case of a full-time candidate or four sessions in the case of a part-time candidate. The maximum period of candidature shall be five academic sessions from the date of enrolment for a full-time candidate and seven academic sessions for a part-time candidate.

Fees

4. A candidate shall pay such fees as may be determined from time to time by the Council.

7307 Graduate Certificate in Art (by Coursework)

GradCert

The College of Fine Arts offers a range of opportunities for graduates wishing to extend their professional qualifications and those wishing to broaden or change directions in their professional endeavours.

The Graduate Certificate in Art is available to candidates who wish to gain new directions, different from the major study of their undergraduate degree and for students admitted under rule 2.2 of Conditions for the Award of Master of Art.

Candidates must successfully complete four courses totalling 24 units of credit to graduate with the Graduate Certificate. Alternatively students who have not taken out the award and who were admitted under qualifications rule 2.1 may upgrade to the Graduate Diploma in Art or candidates admitted under the qualifications rule 2.2, who have gained a credit grade average may upgrade to the Graduate Diploma in Art. The Graduate Certificate can be completed in one academic session. The maximum period of candidature is three academic sessions. In special circumstances an extension may be granted.

Program Structure

Full-Time Study – one session – 1/2 a year	**UOC**
Prescribed Studio Core Courses x 2	12
Electives x 2	12
Total units of credit	24

Program Requirements

1. Students must complete a minimum of 24 units of credit, comprised of 12 units of credit of core studio courses and 6 units of credit of a studio elective and 6 units of credit of an open elective.

2. Students must complete 12 units of credit of the prescribed Core Courses and 12 units of credit of electives.

Plan Details

Drawing

A major study plan in Drawing within the Graduate Certificate in Art program must include:

Two of the following postgraduate studio courses:

SART9727	Drawing
SART9733	Life Drawing
SART9740	Anatomy for Artists
SART9741	Composition and Design
SART9758	Special Projects – Studio

- Plus two electives, including one other studio course.

Painting

A major study plan within the Graduate Certificate in Art program in the Painting area is as follows:

Two of the following postgraduate studio courses:

SART9727	Drawing
SART9733	Life Drawing
SART9740	Anatomy for Artists
SART9741	Composition and Design
SART9744	Painting/Drawing Field Studies
SART9734	Painting from Life
SART9743	Digital Imaging and Painting
SART9742	Colour
SART9728	Painting
SART9734	Painting from Life
SART9728	Painting
SART9758	Special Projects – Studio

- Plus two electives, including one other studio course.

Printmaking

A major study plan within the Graduate Certificate in Art program in the Printmaking area is as follows:

Two of the following postgraduate studio courses:

SART9729	Etching
SART9735	Advanced Etching
SART9749	Printmaking
SART9748	Screen Printing
SART9747	Artists' Books
SART9745	Custom Printing
SART9746	Advanced Custom Printing
SART9742	Paper Technology
SART9758	Special Projects – Studio

- Plus two electives, including one other studio course.

Sculpture, Performance and Installation

A major study plan within the Graduate Certificate in Art program in the Sculpture area is as follows:

Two of the following postgraduate studio courses:

SART9750	Installation
SART9732	Sculpture
SART9738	Advanced Sculpture
SART9753	Electronics Technology
SART9751	Advanced Electronics
SART9754	Metal Casting
SART9756	Ceramic Shell Casting
SART9757	Sculpture Field Studies
SART9758	Special Projects – Studio

- Plus two electives, including one other studio course.

Photomedia

A major study plan within the Graduate Certificate in Art program in the Photomedia area is as follows:

Two of the following postgraduate studio courses:

SOMA9730 Introduction to Analogue Photography
SOMA9731 Introduction to Digital Imaging
SOMA9736 Analogue Photomedia Elective
SOMA9737 Digital Illustration and Text

- Plus two electives, including one other studio course.

Time Based Art

A major study plan within the Graduate Certificate in Art program in the Time Based Art area is as follows:

Two of the following postgraduate studio courses:

SOMA9725 Introductory Interactive Multimedia
SOMA9726 Introductory Animation
SOMA9739 Advanced Interactive Multimedia
SOMA9743 Advanced Animation
SOMA9742 Introduction to Sound
SOMA9744 Advanced Sound
SOMA9705 Lighting

- Plus two electives, including one other studio course.

5307 Graduate Diploma in Art (by Coursework)

GradDip

The College of Fine Arts offers a range of opportunities for graduates wishing to extend their professional qualifications and those wishing to broaden or change directions in their professional endeavours.

The Graduate Diploma in Art aims to provide specialisation in selected fields.

The Graduate Diploma is available to candidates who wish to gain new directions, or those wishing to build on the major study of their undergraduate degree, and for students admitted under rule 2.2 of Conditions for the Award of Master of Art.

Candidates must successfully complete eight courses, totalling 48 units of credit to graduate with the Graduate Diploma. Alternatively students who have not taken out the award and who were admitted under qualifications rule 2.1 may upgrade to the Master of Art (coursework) or candidates admitted under the qualifications rule 2.2, who have gained a Credit grade average may upgrade to the Master of Art (coursework). The Graduate Diploma can be completed in two academic sessions. The maximum period of candidature is six academic sessions. In special circumstances an extension may be granted.

Program Structure

Full-Time Study – two sessions – one year	**UOC**
Prescribed Studio Core Courses x 1	6
Studio Courses x 3	18
Core Theory x 1	6
Electives x 3	18
Total units of credit	48
Total units of credit per session	24

Program Requirements

1. Students must complete a minimum of 48 units of credit of postgraduate courses for the award of the degree, comprised of: one studio and one theory core (12 units of credit), three core options (18 units of credit), one studio elective (6 units of credit) and 12 units of credit of open electives.

2. At least 24 units of credit of core courses shall be from a disciplinary Plan defined by the Standing Committee of the College of Fine Arts. (see below)

Note: Students may be granted exemptions/substitutions on the basis of prior studies.

Plan Details

Drawing

A major study plan in Drawing within the Graduate Diploma in Art program must include:

SART9705 Drawing 1

Plus three of the following postgraduate studio courses:

SART9727 Drawing
SART9733 Life Drawing
SART9740 Anatomy for Artists
SART9741 Composition and Design
SART9744 Painting/Drawing Field Studies
SART9734 Painting from Life
SART9743 Digital Imaging and Painting
SART9742 Colour
SART9728 Painting
SART9758 Special Projects – Studio

- Plus one core theory normally either SAHT9141 The Graduate Lecture or SAED9002 Practices in Research in Art, Design and Education.
- Plus three electives, including at least one studio elective.

Painting

A major study plan in Painting within the Graduate Diploma in Art program must include:

SART9701 Painting 1

Plus three of the following postgraduate studio courses:

SART9727 Drawing
SART9733 Life Drawing
SART9740 Anatomy for Artists
SART9741 Composition and Design
SART9744 Painting/Drawing Field Studies
SART9734 Painting from Life
SART9743 Digital Imaging and Painting
SART9742 Colour
SART9728 Painting
SART9734 Painting from Life
SART9728 Painting
SART9758 Special Projects – Studio

- Plus one core theory normally either SAHT9141 The Graduate Lecture or SAED9002 Practices in Research in Art, Design and Education.
- Plus three electives, including at least one studio elective.

Printmaking

A major study plan in Printmaking within the Graduate Diploma in Art program must include:

SART9709 Printmaking 1

Plus three of the following postgraduate studio courses:

SART9729 Etching
SART9735 Advanced Etching
SART9749 Printmaking
SART9748 Screen Printing
SART9747 Artists' Books
SART9745 Custom Printing
SART9746 Advanced Custom Printing
SART9742 Paper Technology
SART9758 Special Projects – Studio

- Plus one core theory normally either SAHT9141 The Graduate Lecture or SAED9002 Practices in Research in Art, Design and Education.
- Plus three electives, including at least one studio elective.

Sculpture, Performance and Installation

A major study plan in the area of Sculpture within the Graduate Diploma in Art must include:

SART9721 Sculpture, Performance and Installation 1

Plus three of the following postgraduate studio courses:

SART9750 Installation
SART9732 Sculpture
SART9738 Advanced Sculpture
SART9753 Electronics Technology
SART9751 Advanced Electronics
SART9754 Metal Casting
SART9756 Ceramic Shell Casting
SART9757 Sculpture Field Studies
SART9758 Special Projects – Studio

- Plus one core theory normally either SAHT9141 The Graduate Lecture or SAED9002 Practices in Research in Art, Design and Education.
- Plus three electives, including at least one studio elective.

Photomedia

A major study plan in Photomedia within the Graduate Diploma in Art must include:

SOMA9713 Photomedia 1

Plus three of the following postgraduate studio courses:

SOMA9730 Introduction to Analogue Photography
SOMA9731 Introduction to Digital Imaging
SOMA9736 Analogue Photomedia Elective
SOMA9737 Digital Illustration and Text
SOMA9705 Lighting
SOMA9741 Writing for Digital Media

- Plus one core theory normally either SAHT9141 The Graduate Lecture or SAED9002 Practices in Research in Art, Design and Education.
- Plus three electives, including at least one studio elective.

Time Based Art

A major study plan in Time Based Art within the Graduate Diploma in Art must include:

SART9717 Time Based Art 1

Plus three of the following postgraduate studio courses:

SOMA9725 Introductory Interactive Multimedia
SOMA9726 Introductory Animation
SOMA9739 Advanced Interactive Multimedia
SOMA9743 Advanced Animation
SOMA9742 Introduction to Sound
SOMA9744 Advanced Sound
SOMA9705 Lighting
SOMA9740 Narrative and Gameplay
SOMA9741 Writing for Digital Media

- Plus one core theory normally either SAHT9141 The Graduate Lecture or SAED9002 Practices in Research in Art, Design and Education.
- Plus three electives, including at least one studio elective.

9302 Master of Art Administration (by Coursework)

MArtAdmin

The Master of Art Administration combines wide ranging aspects of the visual arts in relation to management, marketing and finance as well as curatorial practices, writing and documentation, legal and theoretical studies. The degree recognises the significant changes that are taking place in the cultural sphere and prepares students for future employment in areas both inside and outside the traditional gallery/museum context. Practical, analytical and theoretical skills are developed in a program that emphasises vocational training within a wider cultural and critical framework.

It is intended that students graduating from this course will be equipped with the skills necessary to function in managerial, administrative, curatorial, art writing and other professional capacities within the visual arts industry.

The program consists of lectures, seminars and hands-on activities, a 10,000 word research paper and an industry placement of no less than 180 hours. Each subject normally requires attendance at a 3 hour lecture plus related research and assignment work.

Program Structure

The Master of Art Administration comprises core courses, core options, open electives and an internship:

Core Courses

Students take six core courses, totalling 36 units of credit, including SAHT9115 Internship.

Core Options

Students take no less than three, and no more than six, courses from those offered as core options.

Open Electives

Students may take up to three courses from those offered as postgraduate level electives by UNSW, but may take none. Students who wish to undertake electives from other faculties must consult with the Head of School.

The total number of courses taken as core options and open electives is six, totalling 36 units of credit.

Internship

Students undertake an internship, usually in their last semester of study.

Full-time study

Three sessions, totalling 72 units of credit. Students would normally undertake 24 units of credit per session, with core courses completed before the commencement of the third session.

Part-time study

Six sessions, totalling 72 units of credit. Students would normally undertake 12 units of credit per session, with core courses completed before the commencement of the fifth session.

Courses

Core Courses

SAHT9111 Management and Organisation: System, Service and Survival
SAHT9112 Writing for Different Cultures and Audiences
SAHT9113 Cultural Property, Ethics and the Law
SAHT9115 Internship
SAHT9116 Research Paper
SAHT9126 Organisational Psychology

Core Options

SAHT9114 Exhibition Management and Curatorial Studies
SAHT9121 Exhibition and Gallery Design Development
SAHT9122 Education and Public Programs
SAHT9123 Marketing and Promotion
SAHT9124 Arts and Cultural Policy
SAHT9125 The Australian Art Market
SAHT9127 Conservation and Collections Management
SAHT9128 History of Exhibitions of Australian Art
SAHT9129 The Development of Art Criticism in Australia
SAHT9130 Art Galleries and Collections in Australia
SAHT9131 Visual and Museum Cultures of the Asia-Pacific Region
SAHT9132 Festivals and Biennales
SAHT9693 Museum Development: Fundraising and Philanthropy

Open Electives

For course descriptions for all postgraduate electives, please refer to the back of this Handbook.

Students may take up to three courses from those offered as postgraduate level electives by UNSW, but may take none. Students who wish to undertake electives from other faculties must consult with the Head of School.

Conditions for the Award of Master of Art Administration

1. The degree of Master of Art Administration by coursework may be awarded by the Council to a candidate who has satisfactorily completed a program of advanced study.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Standing Committee of the College of Fine Arts [hereinafter referred to as the Committee].

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Faculty Manager by the advertised closing date which will be at least two calendar months before the commencement of the session in which enrolment is to begin.

(2) A candidate for the degree shall be required to undertake such formal courses and pass such assessment or conditions as prescribed.

(3) The progress of a candidate shall be reviewed each session by the Committee and as a result of its review the Committee may cancel enrolment or take such other action, as it considers appropriate.

(4) No candidate shall be awarded the degree until the lapse of three academic sessions from the date of enrolment in the case of a full-time candidate or six sessions in the case of a part-time candidate. The maximum period of candidature shall be six academic sessions from the date of enrolment for a full-time candidate and eight academic sessions for a part-time candidate.

Fees

4. A candidate shall pay such fees as may be determined from time to time by the Council.

7302 Graduate Certificate in Art Administration (by Coursework)

GradCertArtAdmin

The College of Fine Arts offers a range of opportunities for graduates wishing to extend their professional qualifications and those wishing to broaden or change directions in their professional endeavours.

The Graduate Certificate in Art Administration is available to candidates who wish to go in a direction different to the major study of their undergraduate degree and for students admitted under rule 2.2 of Conditions for the Award.

Candidates must successfully complete four courses totalling 24 units of credit to graduate with the Graduate Certificate.

Alternatively, students who have not taken out the award may upgrade to the Graduate Certificate in Art Administration if:

- admitted under qualifications rule 2.1 *or*
- admitted under qualifications rule 2.2 *and* have gained a credit average.

The Graduate Certificate can be completed in one academic session. The maximum period of candidature is three academic sessions. In special circumstances an extension may be granted.

Program Requirements

1. Students must complete a minimum of 24 units of credit of postgraduate courses for the award of the Graduate Certificate.

2. Students must complete 12 units of credit of the prescribed core courses and 12 units of credit of electives

Program Structure

Courses

Core Courses

SAHT9111	Management and Organisation: System, Service and Survival
SAHT9112	Writing for Different Cultures and Audiences
SAHT9113	Cultural Property, Ethics and the Law
SAHT9126	Organisational Psychology

Core Options

SAHT9121	Exhibition and Gallery Design Development
SAHT9122	Education and Public Programs
SAHT9123	Marketing and Promotion
SAHT9124	Arts and Cultural Policy
SAHT9125	The Australian Art Market
SAHT9127	Conservation and Collections Management
SAHT9128	History of Exhibitions of Australian Art
SAHT9129	The Development of Art Criticism In Australia
SAHT9130	Art Galleries and Collections in Australia
SAHT9131	Visual and Museum Cultures of the Asia-Pacific Region
SAHT9132	Festivals and Biennales
SAHT9693	Museum Development: Fundraising And Philanthropy

Open Electives

Students may take up to two courses from those offered as postgraduate level electives by UNSW. Students who wish to undertake electives from other faculties must consult with the nominated staff contact.

5302 Graduate Diploma in Art Administration (by Coursework)

GradDipArtAdmin

This program allows students to exit the Master of Art Administration after two sessions full-time or four sessions part-time and the completion of 4 core courses [listed below] and four core options [total of 48 units of credit].

The College of Fine Arts offers a range of opportunities for graduates wishing to extend their professional qualifications and those wishing to broaden or change direction in their professional endeavours.

The Graduate Diploma in Art Administration is an introduction to the field of study and is available to candidates who wish to gain new directions, different to major study of their undergraduate degree and for students admitted under rule 2.2 of Conditions for the Award.

Candidates must successfully complete eight courses totalling 48 units of credit to graduate with the Graduate Diploma. Alternatively, students who have not taken out the award may upgrade to the Master of Art Administration (Coursework) if:

- admitted under qualifications rule 2.1 *or*
- admitted under qualifications rule 2.2 *and* have gained a credit average.

The Graduate Diploma can be completed in two academic sessions. The maximum period of candidature is six academic sessions. In special circumstances an extension may be granted.

Program Requirements

1. Students must complete a minimum of 48 units of credit of postgraduate courses for the award of the Graduate Diploma.

2. Students must complete 24 units of credit of the prescribed core courses and 24 units of credit of electives, made up of at least 12 units of credit of core options.

Program Structure

Courses

Core Courses

SAHT9111	Management and Organisation: System, Service and Survival
SAHT9112	Writing for Different Cultures and Audiences
SAHT9113	Cultural Property, Ethics and the Law
SAHT9126	Organisational Pyschology

Core Options

SAHT9114	Exhibition Management and Curatorial Studies
SAHT9121	Exhibition and Gallery Design Development
SAHT9122	Education and Public Programs
SAHT9123	Marketing and Promotion
SAHT9124	Arts and Cultural Policy
SAHT9125	The Australian Art Market
SAHT9127	Conservation and Collections Management
SAHT9128	History of Exhibitions of Australian Art
SAHT9129	The Development of Art Criticism in Australia
SAHT9130	Art Galleries and Collections in Australia
SAHT9131	Visual and Museum Cultures of the Asia-Pacific Region
SAHT9132	Festivals and Biennales
SAHT9693	Museum Development: Fundraising and Philanthropy

9303 Master of Art and Design Education (by Coursework)

MArtDesEd

The program provides professional development courses in art and design education. Students investigate visual arts and design interests through courses interpreting curriculum change and innovation, building research practice and leadership in the profession.

Students will be able to:

- make sense of new syllabus concepts, in particular practices, frames, the conceptual framework and case studies
- develop practical approaches to the analysis and processes of assessment and reporting requirements
- take up studio courses and develop bodies of work in drawing, design, digital and electronic media, painting & photography through individually negotiated projects
- learn to write about art through seminars, workshops and critical forums with leading critics, historians and curators
- gain skills using the Internet, web and other electronic databases.

This program is taught by art and design educators who are the architects of recent syllabus change, along with practicing artists, designers, art historians and theorists. Courses emphasise individual contact with faculty staff and the opportunity to discuss the most recent developments in art, design and education with senior academics who are widely published, have exhibited internationally and are recognised as eminent within their fields.

A wide choice of electives combined with flexible modes of delivery provide opportunities for individuals to tailor a program of study to match their changing preferences, professional interests, and personal needs. Typically classes attract primary, secondary and tertiary educators and others with an interest in visual arts education in a range of settings. Various scholarships are available to support student participation in the Master of Art and Design Education and are detailed on the Scholarships website **www.scholarships.unsw.edu.au**

On completing the program, students achieve a recognised postgraduate credential and increased confidence to practically manage change and implement new syllabuses and curriculums.

Students may exit with a Graduate Certificate in Art and Design Education (7304) after the completion of three courses, one core, one core option and one elective, studied full-time or part-time, and selected from the Master of Art and Design Education program.

Program Structure

1. The Master of Art and Design Education comprises a core, core options and electives.

2. Students typically complete four core courses, two core options and two electives.

3. All courses are 6 units of credit.

4. The program may be completed as one year of full-time study, over two sessions, with four courses each session.

5. Part-time study, of two years over four sessions entails two courses per session.

6. Students may exit with a Graduate Certificate in Art and Design Education (7304) after the completion of three courses, one core, one core option and one elective.

Courses

Curriculum and Policy

Core

SAED9001	Education Studies
SAED9003	Issues in Design Education
SAED9004	Curriculum and Art, Design and Education
SAED9009	Applying the Conceptual Framework in the Art Museum
SAED9020	Art and Design History in Art Education
SAED9029	Bodies of Work and the Practice of Art Making

Research and Theory

Core Options

SAED9002	Practices of Research in Art, Design and Education
SAED9006	Theoretical Frameworks in Art, Design and Education

Electives

SAED9008	Introduction to Art Therapy
SAED9018	Research Project in Elective Studies 1
SAED9019	Research Project in Elective Studies 2
SAED9021	Introduction to Frameworks of Research in Art and Design Education
SAED9022	Research Seminar in Art Education

Conditions for the Award of Master of Art and Design Education

1. The degree of Master of Art and Design Education by coursework may be awarded by the Council to a candidate who has satisfactorily completed a program of advanced study.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Standing Committee of the College of Fine Arts [hereinafter referred to as the Committee].

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Faculty Manager by the advertised closing date which will be at least two calendar months before the commencement of the session in which enrolment is to begin.

(2) A candidate for the degree shall be required to undertake such formal courses and pass such assessment or conditions as prescribed.

(3) The progress of a candidate shall be reviewed each session by the Committee and, as a result of its review; the Committee may cancel enrolment or take such other action as it considers appropriate.

(4) No candidate shall be awarded the degree until the lapse of two academic sessions from the date of enrolment in the case of a full-time candidate or four sessions in the case of a part-time candidate. The maximum period of candidature shall be five academic sessions from the date of enrolment for a full-time candidate and seven academic sessions for a part-time candidate.

Fees

4. A candidate shall pay such fees as may be determined from time to time by the Council.

9304 Master of Design (by Coursework)

MDes

The Master of Design program is aimed at providing candidates with the opportunity to extend and develop their theoretical, professional and practical knowledge in a range of design applications. It offers design professionals fresh perspectives on their practice, toward achieving a more flexible and integrated work process as well as the opportunity to experiment with new or unfamiliar technologies. This combination of design theory and technical exploration informs the designer's future contribution to an emerging international design culture. The Master of Design program is offered at the UNSW COFA campus and in Singapore through the Cornerstone Training Centre.

Program Structure

- Students must undertake all core courses unless they have advanced standing.
- Students must complete a minimum of 72 units of credit of postgraduate courses for the award of the Master of Design by coursework (see table outlining core options and electives on following page).
- Students are able to choose one of the 8 core options and must complete one full sequence with the exception of advanced standing.
- Students are able to choose electives from any postgraduate electives offered in the faculty as well as from the core options available in the MDes as long as the units of credit are equivalent to those outlined in the table below.

Courses

Core Courses

SDES9201	Design Seminar 1
SDES9202	Design Seminar 2
SDES9203	Design Seminar 3
SDES9204	Design Process Workshop
SAED9002	Practices of Research in Art Design and Education

Core Options

Candidates may choose from three main strands in the core options:

- Design Studio/Graphics or Environments or Integrated or Ceramics or Textiles or Jewellery
- Design History and Theory/Culture
- Design Management Practice/Design Management Project

SAHT9143	Design History and Theory 1
SAHT9144	Design History and Theory 2
SAHT9145	Design History and Theory Project
SDES9206	Design Studio: Graphics/Media 1
SDES9207	Design Studio: Graphics/Media 2
SDES9208	Design Studio: Environments 1
SDES9209	Design Studio: Environments 2
SDES9210	Design Studio: Integrated Design Studies 1
SDES9211	Design Studio: Integrated Design Studies 2
SDES9212	Design Studio Project
SDES9216	Design Management and Practice 1
SDES9217	Design Management and Practice 2
SDES9218	Design Management Project
SDES9740	Design Studio: Ceramics 1
SDES9741	Design Studio: Ceramics 2
SDES9742	Design Studio: Jewellery 1
SDES9743	Design Studio: Jewellery 2
SDES9744	Design Studio: Textiles 1
SDES9745	Design Studio: Textiles 2

Electives

The elective opportunity is designed to allow candidates to increase their knowledge and skill in areas relevant to the major focus of their Design Studies or Design Studio. The choice of the electives must be approved by the Head of Design Studies. The candidate is permitted to

undertake electives to the total of 24 units of credit which may be selected from courses offered at an appropriate masters level by the Schools of Art, Art Education and/or Design Studies, and/or other faculties of the University.

Conditions for the Award of Master of Design (by Coursework)

1. The degree of Master of Design by coursework may be awarded by the Council to a candidate who has satisfactorily completed a program of advanced study.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Standing Committee of the College of Fine Arts [hereinafter referred to as the Committee].

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Faculty Manager by the advertised closing date which will be at least two calendar months before the commencement of the session in which enrolment is to begin.

(2) A candidate for the degree shall be required to undertake such formal courses and pass such assessment or conditions as prescribed.

(3) The progress of a candidate shall be reviewed each session by the Committee and as a result of its review the Committee may cancel enrolment or take such other action as it considers appropriate.

(4) No candidate shall be awarded the degree until the lapse of three academic sessions from the date of enrolment in the case of a full-time candidate or six sessions in the case of a part-time candidate. The maximum period of candidature shall be seven academic sessions from the date of enrolment for a full-time candidate and eight academic sessions for a part-time candidate.

Fees

4. A candidate shall pay such fees as may be determined from time to time by the Council.

Elective Courses for Postgraduate Coursework 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 your Head of School 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 three year period. Course descriptions of those electives being offered in 2004 will be found at the back of this Handbook.

Art Administration

SAHT9111 Management and Organisation: Systems, Service and Survival
SAHT9112 Writing for Different Cultures and Audiences
SAHT9113 Cultural Property, Ethics and the Law
SAHT9114 Exhibition Management and Curatorial Studies
SAHT9121 Exhibition and Gallery Design Development
SAHT9122 Education and Public Programs
SAHT9123 Marketing and Promotion
SAHT9124 Arts and Cultural Policy
SAHT9125 The Australian Art Market
SAHT9126 Human Resources Management
SAHT9127 Conservation and Collections Management
SAHT9128 History of Exhibitions of Australian Art
SAHT9129 The Development of Art Criticism in Australia
SAHT9130 Art Galleries and Collections in Australia
SAHT9131 Visual and Museum Cultures of the Asia-Pacific Region
SAHT9132 Festivals and Biennales
SAHT9693 Museum Development: Fundraising and Philanthropy

Art and Design History and Theory

SAHT9133 Pornography, Art and Politics
SAHT9134 Memory and Self
SAHT9135 Theories of Subjectivity and the Body
SAHT9136 The Art and Culture of Everyday Life
SAHT9137 Art and Cultural Difference
SAHT9138 Art After Postmodernism
SAHT9139 Art, Technology and New Media
SAHT9141 Current Issues in Art
SAHT9143 Design History and Theory 1
SAHT9144 Design History and Theory 2
SAHT9145 Design History and Theory Project

Special Project

SAHT9690 Special Project

Art and Design Education

Curriculum and Policy

SAED9001 Education Studies
SAED9003 Issues in Design Education
SAED9004 Curriculum and Art, Design and Education
SAED9009 Applying the Conceptual Framework in the Art Museum
SAED9020 Art and Design History in Art Education
SAED9029 Bodies of Work and the Practice of Art Making

Research and Theory

SAED9002 Practices of Research in Art, Design and Education
SAED9006 Theoretical Frameworks in Art, Design and Education
SAED9008 Introduction to Art Therapy
SAED9018 Research Project in Elective Studies 1
SAED9019 Research Project in Elective Studies 2
SAED9021 Introduction to Frameworks of Research in Art and Design Education
SAED9022 Research Seminar in Art Education

Visual Arts

SOMA9725 Introduction to Multimedia Computing
SOMA9726 Introduction to Animation
SART9727 Introduction to Drawing
SART9728 Introduction to Painting
SART9729 Introduction to Etching
SOMA9730 Introduction to Analogue Photomedia
SOMA9731 Introduction to Digital Imaging
SART9732 Introduction to Sculpture
SART9733 Drawing Elective
SART9734 Painting Elective
SART9735 Etching Elective
SOMA9736 Analogue Photomedia Elective
SOMA9737 Digital Illustration & Text Elective
SART9738 Sculpture Elective
SOMA9739 Multimedia Computing Elective

Masters Programs (by Research)

The Masters Programs by Research offered by the College provide the opportunity for students of proven ability to undertake advanced work in the visual arts, design, art and design education, art theory and arts administration.

These programs may be studio based and/or may involve theoretical enquiry. They are individually oriented and cannot be undertaken by coursework. All five programs involve two years full-time or four years part-time study.

2245 Master of Fine Arts

2255 Master of Art Education (Hons)

2264 Master of Arts Administration (Hons)

2265 Master of Art Theory

2266 Master of Design (Hons)

CORE COURSES						CORE OPTIONS			CORE OPTIONS			CORE OPTIONS			ELECTIVES			UOC
Course Number		UOC	Course Number		UOC	Course Number		UOC	Course Number		UOC	Course Number		UOC	Course Number		UOC	Per full-time session
SDES 9201	Design Seminar 1 2HPW	6	SDES 9204	Design Process Workshop 2HPW	6	SDES 9210 9208 9206 9740 9742 9744	Design Studio Integrated Design Studies 1 *or* Environments 1 *or* Graphics/Media 1 *or* Ceramics 1 *or* Jewellery 1 *or* Textiles 1 2HPW	OR 6	SDES 9216	Design Management and Practice 1 2HPW	OR 6	SAHT 9143	Design History/Theory 1 2HPW	6		Elective	6	24
SDES 9202	Design Seminar 2 2HPW	6	SAED 9002	Practices of Research in Art, Design and Education 3HPW	6	SDES 9211 9209 9207 9741 9743 9745	Design Studio Integrated Design Studies 2 *or* Environments 2 *or* Graphics/Media 2 *or* Ceramics 2 *or* Jewellery 2 *or* Textiles 2 2HPW	6	SDES 9217	Design Management and Practice 2 2HPW	6	SAHT 9144	Design History/Theory 2 2HPW	6		Elective	6	24
SDES 9203	Design Seminar 3 2HPW	6				SDES 9212	Design Studio Project 2HPW	6	SDES 9218	Design Management and Practice Project 2HPW	6	SAHT 9145	Design History/Theory Project 2HPW	6	Electives		12	24
30								18			18			18			24	72

- Students must undertake all core courses unless they have advanced standing.
- Students are able to choose one of the 8 core options and must complete one full sequence with the exception of advanced standing.
- Students are able to choose electives from any postgraduate electives offered in the faculty as well as from the core options available in the MDes as long as the units of credit are equivalent to those outlined above.

9304 Master of Design (by Coursework)

2245 Master of Fine Arts (by Research)

MFA

The Master of Fine Arts program enables students of proven ability to engage in the sustained investigation at an advanced level of an area of interest or concern in their visual arts practice. This inquiry takes the form of a supervised research project and leads to the exhibitions, performance, publication or screening of artwork/s that are complete, coherent and appropriate to the stated inquiry.

The significance of the research outcomes may be the contribution of new knowledge to the fine arts, the innovation of a distinctive methodology or approach in visual arts practice, poetics or the new application of technologies in visual arts practice. The products of the inquiry should be the creation of high quality studio based work accompanied by a written component containing documentation of the project and its development.

MFA studies are available in the discipline areas of Digital Imaging, Drawing, Film, Installation, Multimedia Computing, Painting, Performance, Photomedia, Printmaking, Sculpture, Sound, Video, Ceramics, Jewellery & Textiles. Studies in a combination of discipline areas are possible. Students work under the guidance of a qualified supervisor who is usually a member of the Faculty's full-time lecturing staff. Regular seminars are held at which MFA candidates are required to give a presentation of their research at least once during their program.

Some individual on-campus studio space is available to MFA students; all general college facilities and equipment may be accessed. Research students are encouraged to take an active part in college life.

Conditions for the Award of Master of Fine Arts

1. (1) The degree of Master of Fine Arts by research may be awarded by the Council on the recommendation of the Standing Committee of the College of Fine Arts [hereinafter referred to as the Committee] to a candidate who has demonstrated ability to undertake research by the submission of the results of an original investigation.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor with Honours from the University of New South Wales or a qualification considered equivalent, from this, another university or tertiary institution at a level acceptable to the Committee.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Faculty Manager at the prescribed time before the commencement of the session in which the enrolment is to begin.

(2) In every case before making the offer of a place the Committee shall be satisfied that initial agreement has been reached between the appropriate school and the applicant on the topic area, supervision arrangements, provision of adequate facilities and any coursework to be prescribed and that these are in accordance with the provisions of the guidelines for promoting postgraduate study within the University.

(3) The candidate shall be enrolled as either a full-time or part-time student.

(4) A full-time candidate will present the advanced work for examination no earlier than two years and no later than three years from the date of enrolment and a part-time candidate will present the advanced work for examination no earlier than four years and no later than six years from the date of enrolment except with the approval of the Committee.

(5) The candidate may undertake the research as an internal student, i.e. at the College, or as an external student not in attendance at the College except for periods as may be prescribed by the Committee.

(6) The research candidate will normally carry out the research at the College except that the Committee may permit a candidate to spend a period in the field, within another institution or elsewhere away from the College provided that the work can be supervised in a manner satisfactory to the Committee. In such instances the Committee shall be satisfied that the location and period of time away from the College are necessary to the research program.

(7) The research shall be supervised by a supervisor or supervisors who are members of the academic staff of the appropriate school or under other appropriate supervision arrangements approved by the Committee. Normally an external candidate within another organisation or institution will have a co-supervisor at that institution.

Progression

4. (1) The progress of the candidate shall be considered by the Committee each session following report from the appropriate school in accordance with the procedures established within the School and previously noted by the Committee.

(2) A candidate for the degree shall be required to submit to such assessment or conditions as prescribed.

Advanced Work**

5. (1) On completing the program of study a candidate shall present for examination:

(a) an exhibition or appropriate presentation of work; and

(b) a catalogue or relevant supportive material such as a script; and

(c) a written component containing comprehensive documentation of all stages of the studio study in three bound copies, each containing as far as practicable a visual record of the work presented for examination.

(2) The candidate shall give in writing to the Faculty Manager two months notice of intention to present for examination.

(3) The advanced work shall present on account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied on the candidate's part in the joint research.

(4) Three copies of the documentation of the advanced work shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(5) It shall be understood that the College retains the three copies of the documentation of the advanced work submitted for examination and is free to allow the documentation to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the College may issue the thesis in whole or in part, in photostat or microfilm or other copy medium.

Examination

6. (1) There shall be no fewer than two examiners of the advanced work, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the advanced work and shall recommend to the Committee that:

(a) The advanced work merits the award of the degree;

(b) The advanced work merits the award of the degree, subject to minor corrections, as listed, being made to the satisfaction of the Head of School;

(c) The advanced work requires further work on matters detailed in the examiner's report. Should performance in this further work be to the satisfaction of the Committee, the advanced work would merit the award of the degree;

(d) The advanced work does not merit the award of the degree in its present form and further work as described in the examiner's report is required. The revised advanced work should be subject to re-examination;

(e) The advanced work does not merit the award of the degree and does not demonstrate that re-submission would be likely to achieve that merit.

(3) If the performance in the further work recommended under 6.2(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to re-present the same advanced work and submit to further examination as determined by the Committee within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the results of any further examination, recommend whether or not

the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate be permitted to resubmit the advanced work after a further period of study and/or research.

Fees

7. A candidate shall pay such fees as may be determined from time to time by the Council.

*** or equivalent work as determined by the Standing Committee.*

2255 Master of Art Education (Honours)

MArtEd(Hons)

The Master of Art Education (Honours) provides students of proven ability with an opportunity to undertake advanced work in a selected art education orientation, for example: curriculum theory and practice; theoretical frameworks in art and art education including research and development of broad relevance to the field; critical and historical methods in art and education; cognitive theory; the social roles, ideologies and philosophies of the museum as an educational institution; explorations of the integration of art and therapy in theory and practice.

Participants in the research degree undertake an original investigation with academic supervision. The program is offered full-time for two years and part-time for four years as a minimum for the award of the degree.

Conditions for the Award of Master of Art Education (Honours)

1. The degree of Master of Art Education (Honours) may be awarded by the Council on the recommendation of the Standing Committee of the College of Fine Arts [hereinafter referred to as the Committee] to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor with Honours from the University of New South Wales or a qualification considered equivalent, from this, another university or tertiary institution at a level acceptable to the Committee.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Faculty Manager at the prescribed time before the commencement of the session in which the enrolment is to begin.

(2) In every case before making the offer of a place the Committee shall be satisfied that initial agreement has been reached between the School of Art Education and the applicant on the topic area, supervision arrangements, provision of adequate facilities and any coursework to be prescribed and that these are in accordance with the provisions of the guidelines for promoting postgraduate study within the University.

(3) The candidate shall be enrolled as either a full-time or part-time student.

(4) A full-time candidate will present the thesis for examination no earlier than two years and no later than three years from the date of enrolment and a part-time candidate will present the thesis for examination no earlier than four years and no later than six years from the date of enrolment except with the approval of the Committee.

(5) The candidate may undertake the research as an internal student, i.e. at the College, or as an external student not in attendance at the College except for periods as may be prescribed by the Committee.

(6) The research candidate will normally carry out the research at the College except that the Committee may permit a candidate to spend a period in the field, within another institution or elsewhere away from the College provided that the work can be supervised in a manner satisfactory to the Committee. In such instances the Committee shall be satisfied that the location and period of time away from the College are necessary to the research program.

(7) The research shall be supervised by a supervisor or supervisors who are members of the academic staff of the School or under other appropriate supervision arrangements approved by the Committee. Normally an external candidate within another organisation or institution will have a co-supervisor at that institution.

Progression

4. (1) The progress of the candidate shall be considered by the Committee each session following a report from the School in accordance with the procedures established within the School and previously noted by the Committee.

(2) A candidate for the degree shall be required to submit to such assessment or conditions as prescribed.

Thesis**

5. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the investigation.

(2) The candidate shall give in writing to the Faculty Manager two months notice of intention to submit a thesis.

(3) The thesis shall present on account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied on the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) It shall be understood that the College retains the three copies of the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the College may issue the thesis in whole or in part, in photostat or microfilm or other copy medium.

Examination

6. (1) There shall be no fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that:

(a) The thesis merits the award of the degree;

(b) The thesis merits the award of the degree, subject to minor corrections, as listed, being made to the satisfaction of the Head of School;

(c) The thesis requires further work on matters detailed in the examiner's report. Should performance in this further work be to the satisfaction of the Committee, the thesis would merit the award of the degree;

(d) The thesis does not merit the award of the degree in its present form and further work as described in the examiner's report is required. The revised thesis should be subject to re-examination;

(e) The thesis does not merit the award of the degree and does not demonstrate that re-submission would be likely to achieve that merit.

(3) If the performance in the further work recommended under 6.2(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to re-present the same thesis and submit to further examination as determined by the Committee within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the results of any further examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate be permitted to re-submit the thesis after a further period of study and/or research.

Fees

7. A candidate shall pay such fees as may be determined from time to time by the Council.

*** or equivalent work as determined by the Standing Committee.*

2264 Master of Arts Administration (Honours)

MArtsAdmin(Hons)

Students enrolled in the Master of Arts Administration (Honours) complete 24 units of coursework (normally taken as 4 courses of 6 units), and undertake a program of independent, supervised research to produce a thesis (72 units and may take the form of a written thesis or an art administration project, together with supporting written documentation). The length of the thesis may vary but will not normally exceed 30,000 words. Each research student is allocated a supervisor with knowledge

of the field. In addition, at least one co-supervisor is appointed. Students are expected to meet regularly with the supervisor. Contact with other staff and postgraduate students is maintained through participation in the postgraduate seminar program.

Coursework courses offered by the College of Fine Arts are listed in this Handbook: see section on coursework Masters degrees. Students will discuss the courses to be taken with the program coordinator and the supervisor. Approval for the coursework courses, the thesis topic and supervisory arrangements is given by the Standing Committee.

Conditions for the Award of Master of Arts Administration (Honours)

1. The degree of Master of Arts Administration (Honours) may be awarded by the Council on the recommendation of the Standing Committee of the College of Fine Arts [hereinafter referred to as the Committee] to a candidate who has passed the coursework component of the program, and demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor with Honours from the University of New South Wales or a qualification considered equivalent, from this, another university or tertiary institution at a level acceptable to the Committee.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

(4) A candidate who has completed courses in the Master of Art Administration from the University of New South Wales, or other appropriate postgraduate courses, may qualify for advanced standing and be granted exemptions of up to 24 units in the coursework component of the degree.

Enrolment

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Faculty Manager at the prescribed time before the commencement of the session in which the enrolment is to begin.

(2) In every case, before making the offer of a place, the Committee shall be satisfied that initial agreement has been reached between the School of Art History and Theory and the applicant on the coursework component, the topic area, the proposed format of the thesis, supervision arrangements, and provision of adequate facilities and that these are in accordance with the provisions of the guidelines for promoting postgraduate study within the University.

(3) The candidate shall be enrolled as either a full-time or part-time student.

(4) Candidates will undertake 24 units of postgraduate coursework, normally taken as 4 courses of 6 units, and 72 units of research thesis. Coursework will normally be undertaken concurrently with the thesis. A full-time candidate will present the thesis for examination no earlier than two years and no later than three years from the date of enrolment; and a part-time candidate will present the thesis for examination no earlier than four years and no later than six years from the date of enrolment, except with the approval of the Committee.

(5) The candidate may undertake the research for the thesis as an internal student, i.e. at the College, or as an external student not in attendance at the College except for periods as may be prescribed by the Committee.

(6) The internal candidate will normally carry out the research at the College except that the Committee may permit a candidate to spend a period in the field, within another institution or elsewhere away from the College provided that the work can be supervised in a manner satisfactory to the Committee. In such instances the Committee shall be satisfied that the location and period of time away from the College are necessary to the research program.

(7) The research shall be supervised by a supervisor or supervisors who are members of the academic staff of the School or under other appropriate supervision arrangements approved by the Committee. Normally an external candidate within another organisation or institution will have a co-supervisor at that institution.

(8) Selection of courses in the coursework component will be made in consultation with the supervisor and program coordinator, and approved by the Program Authority.

Progression

4. (1) The progress of the candidate shall be considered by the Committee each session following report from the School in accordance with the procedures established within the School and previously noted by the Committee.

(2) A candidate for the degree shall be required to submit to such assessment or conditions as prescribed.

(3) A candidate, who has completed the coursework component (normally by achieving passes or better in 4 courses of 6 units each), and who has passed the thesis, as set out in 6. Examination (below), will qualify for the award of the degree.

Thesis**

5. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the investigation.

(2) The candidate shall give in writing to the Faculty Manager two months notice of intention to submit the thesis.

(3) The written thesis (including documentation of project-based thesis) shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied on the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Three copies of the written thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(6) It shall be understood that the College retains the three copies of the written thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the College may issue the thesis in whole or in part, in photostat or microfilm or other copy medium.

Examination

6. (1) There shall be no fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that:

(a) The thesis merits the award of the degree;

(b) The thesis merits the award of the degree, subject to minor corrections, as listed, being made to the satisfaction of the Head of School;

(c) The thesis requires further work on matters detailed in the examiner's report. Should performance in this further work be to the satisfaction of the Committee, the thesis would merit the award of the degree;

(d) The thesis does not merit the award of the degree in its present form and further work as described in the examiner's report is required. The revised thesis should be subject to re-examination;

(e) The thesis does not merit the award of the degree and does not demonstrate that re-submission would be likely to achieve that merit;

(3) If the performance in the further work recommended under 6.2(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to re-present the same thesis and submit to further examination as determined by the Committee within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the results of any further examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate be permitted to resubmit the thesis after a further period of study and/or research.

Fees

7. A candidate shall pay such fees as may be determined from time to time by the Council.

*** or equivalent work as determined by the Standing Committee.*

2265 Master of Art Theory

MArtTh

Students enrolled in the Master of Art Theory undertake a program of independent, supervised research and produce a written thesis. This research degree in Art History and Theory offers training in research methodologies, their critical evaluation and application. The length of the thesis may vary but would normally exceed 50,000 words. In certain cases art work may be submitted in support of the written thesis, where it is appropriate to make an argument through a visual or time-based form. Each research student is allocated a supervisor with knowledge of the field. In addition, at least one co-supervisor is appointed. Students are expected to meet regularly with the supervisor. Contact with other staff and postgraduate students is maintained through participation in the postgraduate seminar program.

Conditions for the Award of Master of Art Theory

1. The degree of Master of Art Theory by may be awarded by the Council on the recommendation of the Standing Committee of the College of Fine Arts [hereinafter referred to as the Committee] to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation. The degree shall be awarded with the grade of Honours Class 1 or with the grade Honours Class 2.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor with Honours from the University of New South Wales or a qualification considered equivalent, from this, another university or tertiary institution at a level acceptable to the Committee.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Faculty Manager at the prescribed time before the commencement of the session in which the enrolment is to begin.

(2) In every case, before making the offer of a place, the Committee shall be satisfied that initial agreement has been reached between the School of Art History and Theory and the applicant on the topic area, supervision arrangements, provision of adequate facilities and any coursework to be prescribed and that these are in accordance with the provisions of the guidelines for promoting postgraduate study within the University.

(3) The candidate shall be enrolled as either a full-time or part-time student.

(4) A full-time candidate will present the thesis for examination no earlier than two years and no later than three years from the date of enrolment and a part-time candidate will present the thesis for examination no earlier than four years and no later than six years from the date of enrolment, except with the approval of the Committee.

(5) The candidate may undertake the research as an internal student i.e. at the College or as an external student not in attendance at the College except for periods as may be prescribed by the Committee.

(6) The research candidate will normally carry out the research at the College except that the Committee may permit a candidate to spend a period in the field, within another institution or elsewhere away from the College provided that the work can be supervised in a manner satisfactory to the Committee. In such instances the Committee shall be satisfied that the location and period of time away from the College are necessary to the research program.

(7) The research shall be supervised by a supervisor or supervisors who are members of the academic staff of the School or under other appropriate supervision arrangements approved by the Committee. Normally an external candidate within another organisation or institution will have a co-supervisor at that institution.

Progression

4. (1) The progress of the candidate shall be considered by the Committee each session following report from the School in accordance with the procedures established within the School and previously noted by the Committee.

(2) A candidate for the degree shall be required to submit to such assessment or conditions as prescribed.

Thesis**

5. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the investigation.

(2) The candidate shall give in writing to the Faculty Manager two months notice of intention to submit the thesis.

(3) The thesis shall present on account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied on the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(6) It shall be understood that the College retains the three copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the College may issue the thesis in whole or in part, in photostat or microfilm or other copy medium.

Examination

6. (1) There shall be no fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that:

(a) The thesis merits the award of the degree;

(b) The thesis merits the award of the degree, subject to minor corrections, as listed, being made to the satisfaction of the Head of School;

(c) The thesis requires further work on matters detailed in the examiner's report. Should performance in this further work be to the satisfaction of the Committee, the thesis would merit the award of the degree;

(d) The thesis does not merit the award of the degree in its present form and further work as described in the examiner's report is required. The revised thesis should be subject to re-examination;

(e) The thesis does not merit the award of the degree and does not demonstrate that re-submission would be likely to achieve that merit.

(3) If the performance in the further work recommended under 6.2(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to re-present the same thesis and submit to further examination as determined by the Committee within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the results of any further examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate be permitted to resubmit the thesis after a further period of study and/or research.

Fees

7. A candidate shall pay such fees as may be determined from time to time by the Council.

*** or equivalent work as determined by the Standing Committee.*

2266 Master of Design (Honours)

MDes(Hons)

The Master of Design (Honours) is a two year full-time, or four year part-time, program in design research where candidates nominate a research thesis/project focusing on Graphics/Media Design, Environments/Spatial Design, Applied/Object Design, Integrated Design, Design Management, or Design History/Theory. The degree is aimed at providing candidates with an opportunity to demonstrate mastery in their approved area of research in design through investigation of the theoretical underpinnings

of design process, practice and/or product. The program requires research resulting in a written thesis and/or studio project.

The program is individually oriented and cannot be undertaken by coursework.

The objectives of the program are:

- to provide the opportunity for designers of proven ability to undertake advanced work in design, thereby extending their creative and research capacity from the base established in undergraduate and graduate studies;
- to foster a climate which encourages speculation, experiment and soundly based working procedures;
- to promote critical reflection on the relationship between designers, their work and society;
- to encourage candidates to take advantage of the supportive climate of the College whilst at the same time developing those capacities required in assuming their place within the wider community as practitioners.

Studies are available in the following areas for the Master of Design (Honours):

- Graphic/Media Design including photographic and computer imaging in both still and animated formats;
- Environments Design including interiors, exhibition, theatre and garden projects;
- Applied/Object Design including industrial design, product design, jewellery design, ceramics design and textiles design;
- Integrated Design with reference to the cross disciplinary nature of studio practice and/or theory;
- Design Management/Practice with reference to the integration of design management strategies toward the development of the Australian design culture;
- Design History/Theory with reference to the application of historical and theoretical methodologies to design process and product.

Candidates are largely self-directed under the guidance of a qualified supervisor, co-supervisor or a panel of supervisors.

Conditions for the Award of Master of Design (Honours)

1. The degree of Master of Design (Honours) may be awarded by the Council on the recommendation of the Standing Committee of the College of Fine Arts [hereinafter referred to as the Committee] to a candidate who has demonstrated ability to undertake research by the submission of the results of an original investigation.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor with Honours from the University of New South Wales or a qualification considered equivalent, from this, another university or tertiary institution at a level acceptable to the Committee.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Faculty Manager at the prescribed time before the commencement of the session in which the enrolment is to begin.

(2) In every case, before making the offer of a place, the Committee shall be satisfied that initial agreement has been reached between the School of Design Studies and the applicant on the topic area, supervision arrangements, provision of adequate facilities and any coursework to be prescribed and that these are in accordance with the provisions of the guidelines for promoting postgraduate study within the University.

(3) The candidate shall be enrolled as either a full-time or part-time student.

(4) A full-time candidate will present the thesis for examination no earlier than two years and no later than three years from the date of enrolment and a part-time candidate will present the thesis for examination no earlier than four years and no later than six years from the date of enrolment except with the approval of the Committee.

(5) The candidate may undertake the research as an internal student, i.e. at the College, or as an external student not in attendance at the College except for periods as may be prescribed by the Committee.

(6) The research candidate will normally carry out the research at the College except that the Committee may permit a candidate to spend a period in the field, within another institution or elsewhere away from the College provided that the work can be supervised in a manner satisfactory to the Committee. In such instances the Committee shall be satisfied that the location and period of time away from the College are necessary to the research program.

(7) The research shall be supervised by a supervisor or supervisors who are members of the academic staff of the School or under other appropriate supervision arrangements approved by the Committee. Normally an external candidate within another organisation or institution will have a co-supervisor at that institution.

Progression

4. (1) The progress of the candidate shall be considered by the Committee each session following report from the School in accordance with the procedures established within the School and previously noted by the Committee.

(2) A candidate for the degree shall be required to submit to such assessment or conditions as prescribed.

Advanced Work**

5. (1) On completing the program of study a candidate shall present for examination:

(a) a thesis/project embodying the results of the investigation;

(b) an exhibition or appropriate presentation of work embodying the results of the investigation. This mode of presentation will include appropriate, comprehensive documentation of the project hypothesis and all stages of the studio study.

(2) The candidate shall give in writing to the Faculty Manager two months notice of intention to present for examination.

(3) The advanced work shall present on account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied on the candidate's part in the joint research.

(4) Three copies of the documentation of the advanced work shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(5) It shall be understood that the College retains the three copies of the documentation of the advanced work submitted for examination and is free to allow the documentation to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the College may issue the thesis in whole or in part, in photostat or microfilm or other copy medium.

Examination

6. (1) There shall be no fewer than two examiners of the advanced work, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the advanced work and shall recommend to the Committee that:

(a) The thesis or project merits the award of the degree;

(b) The thesis or project merits the award of the degree, subject to minor corrections as listed being made to the satisfaction of the Head of School;

(c) The thesis or project requires further work on matters detailed in the examiner's report. Should performance in this further work be to the satisfaction of the Committee, the thesis or project would merit the award of the degree;

(d) The thesis or project does not merit the award of the degree in its present form and further work as described in the examiner's report is required. The revised thesis or project should be subject to re-examination;

(e) The thesis or project does not merit the award of the degree and does not demonstrate that re-submission would be likely to achieve that merit.

(3) If the performance in the further work recommended under 6.2(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to re-present the same thesis or project and submit

to further examination as determined by the Committee within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the results of any further examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate be permitted to resubmit the thesis or project after a further period of study and/or research.

Fees

7. A candidate shall pay such fees as may be determined from time to time by the Council.

*** or equivalent work as determined by the Standing Committee.*

Doctor of Philosophy

PhD

The doctoral programs offered by the College of Fine Arts provide students of proven ability the opportunity to undertake advanced work in the visual arts, design, art education and art theory.

Through critical and disciplined methods of enquiry, candidates are expected to make a distinct and significant contribution to knowledge in their chosen field.

1285 Art Education

1286 Art Theory

1287 Fine Arts

1288 Design

Conditions for the Award

1. The degree of Doctor of Philosophy may be awarded by the Council on the recommendation of the Standing Committee of the College of Fine Arts [hereinafter referred to as the Committee] to a candidate who has made an original and significant contribution to knowledge.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor with Honours from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment as a candidate for the degree.

Enrolment

3. (1) An application to enrol as a candidate for the degree shall be lodged with the Faculty Manager one month prior to the date at which enrolment is to begin.

(2) In every case before making the offer of a place the Committee shall be satisfied that initial agreement has been reached between the school* and the applicant on the topic area, supervision arrangements, provision of adequate facilities and any coursework to be prescribed and that these are in accordance with the provisions of the guidelines for promoting postgraduate study within the University.

(3) The candidate shall be enrolled either as a full-time or a part-time student.

(4) A full-time candidate will present the thesis for examination no earlier than three years and no later than five years from the date of enrolment and a part-time candidate will present the thesis for examination no earlier than four years and no later than six years from the date of enrolment, except with the approval of the Committee.

(5) The candidate may undertake the research as an internal student i.e. at a campus, teaching hospital, or other research facility with which the University is associated, or as an external student not in attendance at the University except for periods as may be prescribed by the Committee.

(6) The candidate will normally carry out the research on a campus or at a teaching or research facility of the University except that the Committee may permit a candidate to spend a period in the field, within another institution or elsewhere away from the University provided that the work can be supervised in a manner satisfactory to the Committee. In such instances the Committee shall be satisfied that the location and period of time away from the University are necessary to the research program.

(7) The research shall be supervised by a supervisor and where possible a co-supervisor who are members of the academic staff of the School, or under other appropriate supervision arrangements approved by the Committee. An external candidate within another organisation or institution will have a co-supervisor at that institution.

Progression

4. (1) The progress of the candidate shall be considered by the Committee following report from the School in accordance with the procedures established within the School and previously noted by the Committee.

(2) The research proposal will be reviewed as soon as feasible after enrolment. For a full-time student this will normally be during the first year of study, or immediately following a period of prescribed coursework. This review will focus on the viability of the research proposal.

(3) Progress in the program will be reviewed within twelve months of the first review. As a result of either review the Committee may cancel enrolment or take such other action as it considers appropriate. Thereafter, the progress of the candidate will be reviewed annually.

Thesis

5. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the investigation.

(2) The candidate shall give in writing to the Faculty Manager two months notice of intention to submit the thesis.

(3) The thesis shall comply with the following requirements:

(a) it must be an original and significant contribution to knowledge of the subject;

(b) the greater proportion of the work described must have been completed subsequent to enrolment for the degree;

(c) it must be written in English except that a candidate in the Faculty of Arts may be required by the Committee to write a thesis in an appropriate foreign language;

(d) it must reach a satisfactory standard of expression and presentation;

(e) it must consist of an account of the candidate's own research but in special cases work done conjointly with other persons may be accepted provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may not submit as the main content of the thesis any work or material which has previously been submitted for a university degree or other similar award but may submit any work previously published whether or not such work is related to the thesis.

(5) Four copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(6) It shall be understood that the University retains the four copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

6. (1) There shall be not fewer than three examiners of the thesis, appointed by the Academic Board on the recommendation of the Committee, at least two of whom shall be external to the University.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that:

(a) the thesis merits the award of the degree;

(b) the thesis merits the award of the degree subject to minor corrections, as listed, being made to the satisfaction of the Head of School;

(c) the thesis requires further work on matters detailed in the examiner's report. Should performance in this further work be to the satisfaction of the Higher Degree Committee, the thesis would merit the award of the degree;

(d) the thesis does not merit the award of the degree in its present form and further work as described in the examiner's report is required. The revised thesis should be subject to re-examination;

(e) the thesis does not merit the award of the degree and does not demonstrate that resubmission would be likely to achieve that merit.

(3) If the performance in the further work recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may

permit the candidate to submit the thesis for re-examination as determined by the Committee within a period determined by it, but not exceeding eighteen months.

(4) After consideration of the examiners' reports and the results of any further examination of the thesis, the Committee may require the candidate to submit to written or oral examination before recommending whether or not the candidate be awarded the degree. If it is decided that the candidate be not awarded the degree, the Committee shall determine whether or not the candidate be permitted to resubmit the thesis after a further period of study and/or research.

Fees

7. A candidate shall pay such fees as may be determined from time to time by the Council.

** School is used here and elsewhere in these conditions to mean any teaching unit authorised to enrol research students and includes a department where that department is not within a school; a centre given approval by the Academic Board to enrol students and an interdisciplinary unit within a faculty and under the control of the Dean of the Faculty. Enrolment is permitted in more than one such teaching unit.*

A Message from the Dean

Welcome to the Faculty of Commerce and Economics at the University of New South Wales – one of Australia's leading universities.

After fifty years of dynamic growth, UNSW has a reputation for excellence, sustained innovation, scholarship, research and practical application; and the Faculty of Commerce and Economics plays an important role in maintaining this reputation.

The Faculty attracts high-achieving students from across the region, with strength, depth and quality across 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 organizations, professions and communities in which they aspire to leadership roles.

The Faculty values its close relationships with industry and the professions, ensuring a high demand for our graduates, many of whom are now leaders in industry, government, politics and academia.

The Faculty is committed to supporting its students throughout their learning experience. We have a wide range of support services, including an 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

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 3189, fax (02) 9313 7767. 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. Master of Commerce students may contact the MCom Director, David Turner on (02) 9385 7265 or email d.turner@unsw.edu.au

For specific information and advice about academic course content, contact the appropriate schools/teaching units.

Please also refer to the faculty website for further information at: **www.fce.unsw.edu.au**

Academic Advisor

The Academic Advisor for the faculty is Ms Judith Watson, G17, John Goodsell Building, ph (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 that University's Academic Standing rules
- AusAID scholarship holders
- Postgraduate coursework students who need advice on the selection or suitability of programs or courses
- 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**

Computer Information

The Faculty of Commerce and Economics 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.

Course Descriptions

Descriptions of the 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**

Course Timetables

Postgraduate course timetables are available to re-enrolling students via the Faculty website before the end of the current year of study.

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 and exam preparation.
- Resources and handouts – Available both in print and on-line, 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**, or drop in at Room 2039, level 2, South Wing, Quadrangle Building or phone: (02) 9385 5584.

Enrolment Procedures

Applicants interested in studying in the Faculty of Commerce and Economics should contact the Faculty of Commerce and Economics Student Centre or the Student Recruitment Office on (02) 9385 1844.

New students are informed of enrolment procedures after they have received an offer.

All re-enrolling students are emailed information regarding enrolment appointments to enable them to enrol on-line using *NewSouth Student Online*.

Examinations

Additional information on examinations and assessment, including rules and restrictions, can be found in the beginning of this Handbook.

For courses under the control of the various schools in the Faculty of Commerce and Economics, 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

Students enrolled in a Master of Commerce by course work may undertake the following programs: Accounting, Professional Accounting or Strategic Value.

The range of courses available caters for students who have had no prior exposure to accounting, those who have had limited prior training and those with extensive experience in the field. Those wishing to study accounting at advanced levels can take courses providing greater depth

to their existing accounting knowledge or add international, public sector or research perspectives.

The Accounting disciplinary stream includes courses related to the use of financial information by owners, shareholders, creditors, managers and governments to achieve their objectives. The different areas covered include: financial accounting (preparation of legally required financial statements, analysis and interpretation of financial statements, complex financial transactions and instruments, differences in reporting entities including multinational enterprises and international reporting diversity), managerial accounting in the context of world class management practice (design and operation of accounting information systems, planning and control, budgeting, benchmarking, strategy formulation and performance evaluation), and auditing (evaluating internal control systems, adding credibility to reported information and improving the corporate governance process).

The Professional Accounting program essentially enables local or international students who have no or limited prior training in accounting in an Australian and international context to gain professional recognition from CPA Australia and the Institute of Chartered Accountants in Australia.

The Strategic Value Management program focuses on strategic resource management in the context of achieving stakeholder value. A wide range of accounting and management courses are available to students in this stream, including Business Risk Management, Business Performance Management and e-Commerce: Strategy and Processes.

Actuarial Studies

Head: Professor Michael Sherris
Administrative Assistant: Bindya Subba

Actuarial studies involves 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 actuarial studies program provides students who meet the required standards with the opportunity to apply for exemption from some or all of the Part I and II examinations of the Institute of Actuaries of Australia (IA Aust) and entry into the actuarial profession.

Graduates in mathematics, engineering and science disciplines, who are interested in applying their mathematical skills in a rewarding career in the financial services industry, should consider an actuarial career as an option. Graduates from Commerce and Economics disciplines with a strong mathematical background, such as would be obtained from studying econometrics, mathematical economics or mathematical finance, should also consider an actuarial career.

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 practice as consulting actuaries. About a third of the fully qualified actuaries in Australia work or practice in life insurance, another third work or practice in superannuation, and the rest are in general insurance, finance, funds management, education and other areas of practice. 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, the completion of, or exemption from, subjects in Parts I, II and III of the professional syllabus of the IA Aust is required.

Part II is made up of the Actuarial Control Cycle subjects. Part III consists of two subjects completed by distance education through the IA Aust 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.

Student who enrol in the MCom without any professional recognition from the IA Aust for their undergraduate studies will normally need to include the following courses in the common core:

- ACCT5930 Financial Accounting (in place of ACCT5901 Accounting: A User Perspective) and
- FINS5511 Corporate Finance

For professional recognition purposes, students completing the actuarial specialisation may:

- Complete ECON5103 for professional exemption of Subject 107 of the IAAust. If exemption has been granted from ECON5103 then students will need to complete ECON5154 Microeconomics Analysis 1 and ECON5174 Macroeconomics Analysis 1
- Substitute ACTL5101 Probability and Statistics for Actuaries for ECON5203 Statistics for Business as a core course, if exemption from ECON5203 has not been granted.

Any courses substituted for a core course will not count as electives.

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 manage 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 the Asia-Pacific are other important issues in finance.

The growth of interest in the financial sector has been accredited to greater public awareness of the financial market as an investment opportunity. The risks are also more appreciated, so strategies to manage the risks are increasingly important. 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 postgraduate programs offered by the School will provide the necessary skills and knowledge for those who wish to enter this growing and complex market, with the prospect of advancing 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 graduate level the School offers MCom specialisations in **Taxation** and in **Business Law**.

School of Economics

Head of School: Professor Denzil Fiebig
Administrative Officers: Nadine Caisley and Catriona Reid

The School of Economics comprises approximately 45 full-time academic staff engaged in teaching and research across a wide range of sub-disciplines within economics including econometrics, financial economics and business strategy.

The School is involved in the teaching of the postgraduate course work degrees, the Master of Commerce (MCom), and two research degrees, the Master of Commerce (Honours) and the Doctor of Philosophy.

The MCom is a faculty-wide degree in which students can take a number of courses in Economics, or can choose to specialise in either Business Economics and Statistics or Environmental Economics. The Business Economics and Statistics discipline provides students with a broad understanding of the commercial environment, business decision making and practical ability to analyse business and economic data. Environmental Economics provides students with a rigorous and comprehensive knowledge of contemporary theory and practice in natural resource and environmental economics.

In addition, the School of Economics has a strong and growing commitment to graduate studies with research emphasis. Research in the School is of a high calibre by both national and international standards. The School ranks among the top three within Australia on a variety of research performance criteria and members of the School play an important role in the academic and economic policy debate within Australia and internationally.

The MCom (Hons) is a research degree consisting of advanced coursework plus a thesis. Students can specialise in either Economics or Econometrics.

The PhD in Economics is designed to equip students with advanced research training in economics. Students are provided with a strong grounding in theoretical and applied economic analysis and econometrics through both coursework and research supervision. In addition to any prescribed coursework, candidates for the PhD in Economics must submit a thesis which is an original and significant contribution to the discipline.

School of Industrial Relations and Organisational Behaviour

Head of School: Associate Professor Lucy Taska
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 postgraduate programs, the School offers coursework and research study in two disciplinary streams: Human Resource Management and Organisation and Management Studies.

The program 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 program in Organisation and Management Studies focuses on how best to coordinate the structure and resources of a work enterprise in order to effectively attain designated organisational goals. Particular attention is given to the nature, determinants and management implications of individual, group and collective behaviours within organisations. Drawing on theories from organisational behaviour, sociology, psychology, management, cultural and gender studies and the social sciences in general, this program provides an in-depth understanding of human relations and organisational dynamics and their associated interaction. This knowledge is also applied to practical issues of employee management and to the development of appropriate organisational design. There is increasing demand for more professionally oriented managers and for consultancy expertise in the areas of organisational redesign and change in both private and public sectors. The School's programs have been designed to address this demand.

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. Major employers of Information Systems graduates include government departments, banks, finance organisations, oil companies, insurance companies, large manufacturing enterprises, retail companies, service industries, computer marketing organisations, universities and other research organisations.

Information Management is concerned with the socially challenging issues involved in documenting organisational and social activity through evidence in the form of records, as well as sources of records in all their variety and complexity. Academically, this process is studied in the context of individual and institutional needs for information, changing information technologies, and an overarching framework of evolving social roles and responsibilities. Professionally, this process is institutionalised as the responsibility of technical and management personnel in libraries and related "information" agencies. The advent of digitised data and telecommunication networks has led the School to place increasing emphasis on anticipating and responding to rapid change in the information environment, understanding and using a range of information storage and retrieval technologies.

Information Management may be pursued through the Information Systems and Management Disciplinary Stream in the Master of Commerce program. The School has a vigorous research program with

opportunities for study at the Masters and Doctoral level as well as in interdisciplinary areas. Professional accreditation has been given to graduates of our programs by the Australian Library and Information Association (ALIA). Our graduates are employed both in Australia and in the region in the rapidly developing information environment that includes libraries and the wider information industry.

School of International Business

Acting Head of School: Dr Chung-Sok Sun
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, 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 also include global strategy, country risk, business negotiations, cultural difference, and performance measurement and evaluation.

A specialisation in International Business is offered in the MCom program.

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. The Market Research Society of Australia has given professional accreditation to graduates of our programs. Also, there are 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.

Postgraduate Programs: Specialist programs in Marketing exist for those who wish to extend and deepen their knowledge of marketing, or who seek to broaden their business horizons after studying a non-marketing program as an undergraduate.

Graduates wanting to acquire knowledge of Marketing are encouraged to enroll in the Marketing Specialisation of the MCom degree. For those with appropriate knowledge and experience there is an opportunity to achieve an Advanced Specialisation in Marketing, also within the framework of the MCom degree. These programs feature new courses in the areas of e-marketing, knowledge management, and international entrepreneurship, building on existing strengths in international management, services and business-to-business marketing, marketing in Asia, marketing communications, new product development and customer analysis.

A special program within the MCom exists for those wishing to study Marketing in combination with Tourism and Hospitality Management. The program covers all core areas of tourism and hospitality management, and takes advantage of strong links with industry and government. Industrial training is available as an additional and optional component of the program.

The School offers a customised program in conjunction with industry. The Media Sales certificate program prepares students for careers in media sales, media buying and marketing communications.

A small number of places are available each year for students wishing to undertake postgraduate research in Marketing or Tourism. The PhD program requires students to complete at least four research courses in the School of Marketing and submit a major research thesis.

Contact the School for program brochures or consult the website: **www.marketing.unsw.edu.au**

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. It 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 Offered by the Faculty of Commerce and Economics

The degree programs offered by this Faculty are recognised by professional organisations in accordance with the details set out below:

CPA Australia

CPA Australia has accepted this University as an approved tertiary institution for the purpose of its membership qualifications.

Graduates who complete the MCom program in Professional Accounting may be eligible for associate membership of CPA Australia. Although the program is accredited, CPA Australia assesses every applicant for membership requirements, which include a rule that each applicant must hold a degree which is considered comparable by the National Office of Overseas Skills Recognition (NOOSR) to an Australian Bachelor's degree. If requested, CPA Australia will provide an assessment of an overseas qualification.

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 Chartered Accountants in Australia

The Master of Commerce in Professional Accounting is accredited by the Institute. Students are advised to contact the Institute in writing for current requirements: **www.icaa.org.au**

Recognition of PY, CA and CPA Program

The successful completion of:

(a) the Professional Year (PY) or CA Program of the Institute of Chartered Accountants in Australia, or

(b) the CPA Program of CPA Australia,

is deemed the equivalent of two UNSW advanced accounting courses in the Master of Commerce (Program ACCTDS8404) provided that four accounting courses at an advanced level from the accounting disciplinary stream (Program ACCTAS8404) are taken for an advanced accounting specialisation in the Master of Commerce.

The Institute of Actuaries of Australia

The following courses offered in the Master of Commerce cover the syllabus of the Part I and Part II examinations of the Institute of Actuaries of Australia:

UNSW Courses	Professional Subjects
ACTL5101 Probability and Statistics for Actuaries	Subject 101 Statistical Modelling
ACTL5102 Financial Mathematics for Actuaries	Subject 102 Financial Mathematics
ACTL5103 Stochastic Modelling for Actuaries	Subject 103 Stochastic Modelling
ACTL5104 Actuarial Statistics	Subject 104 Survival Models
ACTL5105 Life Insurance and Superannuation Models	Subject 105 Actuarial Mathematics 1
ACTL5106 Insurance Risk Models	Subject 106 Actuarial Mathematics 2
ECON5154 Microeconomic Analysis 1 and ECON5174 Macroeconomic Analysis 1 or ECON5103 Business Economics	Subject 107 Economics
FINS5511 Corporate Finance and ACCT5930 Financial Accounting	Subject 108 Finance and Financial Reporting
ACTL5109 Financial Economics for Insurance and Superannuation	Subject 109 Financial Economics
ACTL5100 Actuarial Theory and Practice A	Part II
ACTL5200 Actuarial Theory and Practice B	Part II

Students wishing to apply for exemption from the Part I or II professional examinations must achieve above average performance in the relevant courses.

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. Qualification as an Associate of the Institute of Actuaries of Australia (AIAA) is attained on completion of the courses in Parts I and II. The syllabus of the Part I courses is covered in the undergraduate Bachelor of Commerce program as set out above.

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 specialisation 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 practice 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.

Chartered Secretaries Australia (CSA)

This 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, 70,000 member strong, Institute of Chartered Secretaries and Administrators to which most CSA members also belong.

The 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 contact Dr John Nelson, National Education Manager, CSA, 70 Castlereagh Street, Sydney, telephone (02) 9223 5744, email info@CSAust.com, website: **www.CSAust.com**

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, BEc or MCom degree programs.

Applications for registration, exemption or admission should be made direct to Institute: **www.securities.edu.au**

The Australian Institute of Banking and Finance (AIBF)

The educational requirements for Senior Associateship will be satisfied if:

Graduates awarded a Master of Commerce degree have included in their studies LEGT5561 Legal Aspects of Finance, MARK5900 Elements of Marketing and IROB5901 Organisational Behaviour;

and 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**

The Australian Library and Information Association (ALIA)

The Master of Commerce in Information Management program is presently accredited by ALIA. It is proposed that students who complete this program be eligible for associate membership of ALIA, provided they have included the following courses in their studies:

IMGT5110 Information Retrieval Systems
IMGT5120 Organisation of Knowledge
IMGT5410 Knowledge and Society
IMGT5420 Information Sources: Access, Assessment and Acquisition
INFS5988 Business Information Systems
IROB5700 Management, Work and Organisation (or equivalent)

Market Research Society of Australia (MRSA)

Postgraduate 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 Market Research Society of Australia (MRSA) is widely recognised by government and industry as a measure of competence in market research.

To qualify for the Diploma, postgraduate students must complete and pass the following courses:

MARK5900 Elements of Marketing
MARK5930 Consumer Analysis

Then the following should be completed (those with exemptions may proceed straight to the following courses):

MARK5932 Applied Marketing Research
MARK5951 Marketing Decision Analysis

Plus two from:

MARK5952 New Product/Service Development
MARK5955 Advances in Consumer Analysis
MARK5956 Managing Market Relationships
MARK5957 Business-to-Business Marketing

Students who have successfully completed the required courses at UNSW must complete the application form which is available from the School of Marketing Office, UNSW, Sydney NSW 2052 or contact the Market Research Society of Australia Ltd, telephone (02) 9571 5966, fax (02) 9571 5944, email msra@msra.com.au, website: **www.msra.com.au** Further information is available from the Professional Associations section in the Marketing website: **www.marketing.unsw.edu.au**

Program and Course Information

Doctor of Philosophy (PhD)

The PhD is designed to equip students with advanced research training in their chosen discipline and to promote research which makes an original and significant contribution to the discipline.

Length of the Program

The period of enrolment for full-time students is normally six sessions (three years) and eight sessions (four years) for part-time students. Full-time students must present their thesis for examination no later then ten sessions (five years) from the date of enrolment. For part-time students the period is twelve sessions (six years).

Formal Coursework

PhD students may be required to undertake some formal coursework, designed to support the development of their research work.

Master of Commerce (Honours)

A program of study is generally pursued by full-time students over four sessions and by part-time students over six or seven sessions.

The detailed program requirements are set out below. In each case certain courses are designated core courses. Full-time students will normally include the core courses among the courses studied in the first four sessions. The choice of electives is subject to the approval of the Head of School in which the candidate is enrolled and of the Head of School offering the elective chosen.

Accounting – 2570 Master of Commerce (Honours)

1. All students shall study the following core courses:

ACCT5909 Current Developments in Auditing Research
ACCT5951 Current Developments in Accounting Research – Financial
ACCT5952 Current Developments in Accounting Research – Managerial
ACCT5997 Seminar in Research Methodology

2. In addition to completing the courses listed in 1, students shall enrol in ACCT5994 and submit a thesis on an approved topic. Normally the thesis should not exceed 50,000 words.

Actuarial Studies – 2582 Master of Commerce (Honours)

1. All students shall study the following core courses:

ACTL5003 Research Topics in Actuarial Studies
ACTL5100 Actuarial Theory and Practice A
ACTL5200 Actuarial Theory and Practice B

2. In addition to completing the courses listed in 1, students shall enrol in ACTL5000 or ACTL5001 and submit a thesis on an approved topic. Normally the thesis should not exceed 50,000 words.

Banking and Finance – 2574 Master of Commerce (Honours)

1. All students shall study the following core courses:

FINS5575 Research Methods in Finance 1
FINS5576 Advanced Topics in Asset Pricing
FINS5579 Research Methods in Finance 2

and *one* of:

FINS5574 Foundations of Financial Decision Making
FINS5577 Advanced Topics in Corporate Finance
FINS5578 Recent Developments in Banking Research
FINS5591 Special Topics in Finance

2. In addition to completing the courses listed in 1, students shall enrol in the thesis component, either FINS5594 for full-time or FINS6001 for part-time students, and submit a thesis on an approved topic. Normally the thesis should not exceed 50,000 words.

Business Law and Taxation – 2579 Master of Commerce (Honours)

1. All students shall study the following core courses:

LEGT5998 Research Seminar in Commercial Law

and *one* of:

LEGT5522 Special Topic in Business Law
LEGT5523 Special Topic in Taxation

And any two of the School's postgraduate courses approved by the Head of School.

2. In addition to completing the courses listed in 1, students shall enrol in LEGT6001 and submit a thesis on an approved topic. Normally the thesis should not exceed 50,000 words.

Econometrics – 2572 Master of Commerce (Honours)

1. All students shall study *four* courses from the following:

ECON5201 Comparative Forecasting Techniques
ECON5251 Applied Econometrics
ECON5252 Advanced Econometric Theory
ECON5254 Econometric Theory
ECON5255 Econometric Model Building

2. In addition to completing the courses listed in 1, students shall enrol in ECON5298 Econometrics Research Seminar and ECON5297 Thesis (full-time) or ECON6201 Thesis (part-time) and submit a thesis on an approved topic. Normally the thesis should not exceed 50,000 words.

Economics – 2571 Master of Commerce (Honours)

1. All students shall study the following core courses:

ECON5154 Microeconomic Analysis 1
ECON5174 Macroeconomic Analysis 1

2. In addition, students must choose *two* of the following courses:

ECON5153 International Macroeconomics
ECON5155 Microeconomic Analysis 2
ECON5156 International Trade
ECON5158 Economics of Labour Markets
ECON5159 Industrial Organisation
ECON5176 Business Cycles and Growth
ECON5184 Macroeconomic Analysis 2
ECON5207 Elements of Econometrics
ECON5251 Applied Econometrics

Note: Other graduate courses in the School of Economics may be substituted for those listed in 2, with the permission of the Head of School.

3. In addition to completing the courses listed in 1 and 2, students shall enrol in ECON5198 Economics Research Seminar, ECON5199 Thesis (full-time) or ECON6101 Thesis (part-time) and submit a thesis on an approved topic. Normally the thesis should not exceed 50,000 words.

Human Resource Management – 2578 Master of Commerce (Honours)

1. All students shall study the following core courses:

IROB5920 Managing Equity, Diversity and Disability (*selective training)
IROB5941 Special Topic in Human Resource Studies
IROB5943 Advanced Seminar in Human Resource Studies A
IROB5944 Advanced Seminar in Human Resource Studies B

2. In addition to completing the courses listed in 1, students shall enrol in IROB5953 and submit a thesis on an approved topic. Normally the thesis should not exceed 50,000 words.

Employment Relations – 2576 Master of Commerce (Honours)

1. All students shall study the following core courses:

IROB5731 Special Topic in Australian Industrial Relations
IROB5732 Special Topic in International and Comparative Industrial Relations
IROB5733 Advanced Seminar in Australian Relations
IROB5734 Advanced Seminar in International and Comparative Industrial Relations

2. In addition to completing the courses listed in 1, students shall enrol in IROB5751 and submit a thesis on an approved topic. Normally the thesis should not exceed 50,000 words.

Organisational Behaviour – 2577 Master of Commerce (Honours)

1. All students shall study the following core courses:

IROB5800 Management, Technology and Innovation
IROB5904 Organisational Transformation at the Speed of E
IROB5901 Organisational Behaviour
IROB5932 Advanced Seminar in Organisational Behaviour

2. In addition to completing the courses listed in 1, students shall enrol in IROB5951 and submit a thesis on an approved topic. Normally the thesis should not exceed 50,000 words.

Information Systems and Management – 2575 Master of Commerce (Honours)

1. All students shall study the following core courses:

INFS5986 Research Topics in Information Systems 1
INFS5987 Research Topics in Information Systems 2

and two courses to be approved by the Head of School of Information Systems, Technology and Management, from advanced graduate courses offered by the School of Information Systems, Technology and Management.

2. In addition to completing the courses listed in 1, students shall enrol in INFS5994 full-time or INFS6001 part-time (Information Systems) and submit a thesis on an approved topic. Normally the thesis should not exceed 50,000 words.

Marketing – 2580 Master of Commerce (Honours)

1. All students shall study the following core courses:

MARK8995 Business Research Methods in Marketing
MARK8996 Research Seminar in Marketing
MARK8997 Advanced Quantitative Methods in Marketing
MARK8998 Contemporary Research Methods in Marketing

2. In addition to completing the courses listed in 1, students shall enrol in MARK8994 and submit a thesis on an approved topic. Normally the thesis should not exceed 50,000 words.

Information Studies – 2980 Master of Information Studies (by Research)

1. All students shall study the following courses:

INFS5986 Research Topics in Information Systems 1
INFS5987 Research Topics in Information Systems 2

2. In addition to completing the courses listed in 1, students shall enrol in INFS5994 full-time or INFS6001 part-time and submit a thesis on an approved topic.

The conditions governing the award of the degree of Master of Information Studies by Research are set out under 'Conditions for the Award of Degrees' later in this Handbook.

Master of Commerce (by Coursework)

Objectives

1. To provide international perspectives on commerce and management in the twenty-first century.

2. To provide depth of perspective through at least one of the commerce disciplines.

3. To provide opportunities for specialisation or concentration of studies in one or more of the commerce disciplines.

4. To provide opportunities for multidisciplinary studies focused on particular professional fields, industries or management specialisations.

5. To provide opportunities for students to design their own study programs within the framework of the degree.

Requirements

1. A student must complete a minimum of *twelve* courses for the award of the degree, unless exempted from a course or courses.

2. *Four* of these courses shall be drawn from a common core of graduate courses which as a group provide perspective on commerce as a social phenomenon. The common core is constituted as follows:

ACCT5901 Accounting: A User Perspective
ECON5103 Business Economics
ECON5203 Statistics for Business

and *one* of:

FINS5511 Corporate Finance
IBUS5601 Global Business and Multinational Enterprise
IBUS5681 Business Communication
IMGT5120 Organisation of Knowledge
INFS5988 Business Information Systems
IROB5700 Management, Work and Organisation
LEGT5511 Legal Foundations of Business
MARK5900 Elements of Marketing

Notes: Students may substitute ACCT5930 Financial Accounting for ACCT5901 Accounting: A User Perspective. The course ACCT5930 will be useful for students specialising in Accounting, Actuarial Studies, Banking, Finance, Funds Management, International Finance and Risk and Insurance.

Courses taken to meet core requirements cannot be counted towards a disciplinary stream or specialisation.

3. *Four* of the courses shall consist of an integrated sequence of studies from a disciplinary stream defined by the Standing Committee of Faculty. Where a student takes an integrated sequence of studies from two disciplinary streams this shall be recognised on the academic transcript as a double concentration.

4. *Four* other courses may be taken as elective studies from postgraduate courses offered or approved by the Faculty. Elective studies may be used to extend disciplinary studies taken to meet the requirement in 3 above and may be drawn from no more than two disciplinary streams.

5. Students may receive up to *four* exemptions from core courses on the basis of prior studies.

6. Students shall commence their disciplinary studies at a prescribed point with guidance; and they may be proscribed from taking courses which duplicate prior studies.

7. Students with *at least six* courses in a disciplinary stream shall have their specialisation noted on their academic transcript; students with at *least six advanced courses* in a disciplinary stream shall have their *advanced* specialisation noted on their transcript.

8. Approved disciplinary streams are listed hereafter. In addition, the Standing Committee of Faculty may approve postgraduate courses offered by other faculties within the University.

9. The Standing Committee of Faculty may approve special or customised programs, to give effect to distinctive teaching strategies or meet the needs of particular cohorts of students.

Approved Master of Commerce Programs

Courses for item 3 of the course requirements must be chosen from the disciplinary streams listed below. The remaining courses may be chosen from disciplinary streams or other courses offered or approved by the faculty.

Program Code 8404

Plan

ACCTAS8404 Accounting
ACCTDS8404 Professional Accounting
ACCTHS8404 Strategic Value Management
ACTLCS8404 Actuarial Studies
ECONGS8404 Business Economics and Statistics
ECONJS8404 Environmental Economics
FINSAS8404 Finance
FINSDS8404 Banking
FINSES8404 Funds Management
FINSFS8404 International Finance
FINSGS8404 Risk Management and Insurance
IMGTFS8404 Information Management
IBUSAS8404 International Business
COMMBS8404 e-Business Management
INFSES8404 Information Systems and Management
IROBCS8404 Human Resource Management
IROBIS8404 Employment Relations
LEGTAS8404 Business Law
LEGTDS8404 Advanced Taxation
LEGTCS8404 Taxation
MARKAS8404 Marketing
IROBHS8404 Organisation and Management Studies
TAHMCS8404 Tourism, Hospitality Management and Marketing

Customised Programs

Program Code 8403

ACCTES8403 International Professional Accounting – Guangzhou*

**Offered at Guangzhou University, Guangzhou, People's Republic of China*

Program Code 8405

ACCTES8405 International Professional Accounting – Beijing*

**Offered at Beijing University, Beijing, People's Republic of China*

Program Code 8408

FINSES8408 Finance – Beijing*

**Offered at Beijing University, Beijing, People's Republic of China*

Graduate Programs in Business and Technology

Executive Director: Natalie Kidd

Graduate Programs in Business and Technology (GPBT) is a joint initiative between the Faculty of Engineering and the Faculty of Commerce and Economics. It is administratively located within the Faculty of Commerce and Economics.

GPBT currently offers the Master of Business and Technology (MBT), the Graduate Diploma in Business and Technology (GradDip) and the Graduate Certificate in Business and Technology (GradCert).

The MBT, GradDip, and GradCert are business qualifications with a technological orientation and are offered by distance education and face to face.

Program Outlines

8616 Master of Business and Technology

The MBT is a business program which addresses technology as core to business. Courses in the MBT program aim at providing technical and non-technical people with world-class business education and training. The MBT program was developed with the support of industry and the program continues a commitment to quality and relevance in tertiary education to the private and public sectors.

The program provides opportunities for students to develop the skills, knowledge and attitudes necessary to meet the challenges of the business world. Individual courses are designed around core management demands and blend mainstream business requirements with the challenges of evolving technologies.

The MBT program is primarily delivered by distance mode, however some courses can be studied on campus. The program is designed to be taken part-time, with a focus on applying course concepts back to the participant's workplace. This flexible delivery assists students juggle the demands of work and family commitments. Course materials required for the completion of the program are provided and are supported by web based classes. Textbooks are purchased separately.

Admittance to the program is based upon an undergraduate degree plus a minimum of four years relevant work experience. Some positions are available for candidates without an undergraduate degree, if they possess the minimum work experience. The courses in the program are full-fee paying.

To qualify for the Master of Business and Technology (MBT), a candidate must successfully complete a minimum of 72 units of credit (normally 12 courses of 6 units of credit each). The program can be completed in six sessions, however students have up to 6 years to complete the degree. In special circumstances an extension may be granted.

Courses		**UOC**
ACCT5912	Accounting: A User Perspective	6
ACCT5981	Strategic Resource Management	6
ACCT5982	Managing Agile Organisations	6
ACCT5983	Managing Strategic Change	6
ACCT5985	The Innovative Organisation	6
ECON5109	Business Economics	6
FINS5560	Fundamentals of Corporate Finance	6
GBAT9101	Project Management	6
GBAT9102	Management of Manufacturing Systems	6
GBAT9103	Environmental Management	6
GBAT9104	Management of Innovation and Technical Change	6
GBAT9105	Risk Management	6
GBAT9106	Information Systems Management	6
GBAT9107	Asset Management	6
GBAT9109	Energy Management	6
GBAT9111	Organisation for Quality Improvement	6
GBAT9112	Managing Occupational Health and Safety	6
GBAT9113	Strategic Management of Business and Technology	6
GBAT9114	Marketing for Technical Managers	6
GBAT9115	Information Technology for Managers	6
LEGT9101	Business Law and Technology	6
IROB5690	Strategic People Management	6
GBAT9116	Advanced Information Technologies for Managers	6
GBAT9117	e-Business: Strategy and Management	6
GBAT9118	Managing Risk in the Public Sector	6

or other courses as may be approved by the faculty.

Courses of study leading to the award of a Master of Business and Technology provide candidates with opportunities to extend their career paths into management. A candidate in appropriate cases may be granted advanced standing for similar courses already completed but not used for another award, and may be permitted to count courses from other programs up to a limit not exceeding one third of the MBT program. Each course is based on open learning principles and a 6 unit of credit rating is expected to involve the candidate in a total work load equivalent to some 8–10 hours per week of study for a 14 week session, including exams.

5457 Graduate Diploma in Business and Technology

Candidates must complete a minimum program totalling 48 units of credit (normally 8 courses at 6 units of credit each) taken from MBT courses or such other courses as may be approved by the Faculty. Those successfully completing all 48 units of credit may elect to graduate with the Graduate Diploma in Business and Technology or they may proceed to the Masters. The GradDip can normally be completed in a minimum of four academic sessions, however, the maximum period of candidature is six academic sessions. In special circumstances an extension may be granted.

7333 Graduate Certificate in Business and Technology

Graduate Certificate in Business and Technology (GradCert) is available to candidates who do not have tertiary qualifications, but do have at least four years of relevant experience.

Candidates must successfully complete four courses totalling 24 units of credit to graduate with the GradCert. Alternatively candidates with a minimum of a credit grade average, may upgrade to the Graduate Diploma in Business and Technology.

The GradCert can be completed in two academic sessions. The maximum period is four academic sessions. In special circumstances an extension may be granted.

8406 Master of Finance (by Coursework)

This program provides advanced education in all aspects of finance, including the underlying mathematical models and risk management issues. It is aimed at graduates who have been awarded an undergraduate degree with a strong finance or mathematics component and with results at a credit level or greater. Candidates will be expected to have had at least two years' work experience.

The major objective of the program is to extend the finance knowledge learnt at undergraduate level through exposure to the latest research, but with a strong emphasis on the applicability of the research and the related management issues involved with their implementation in institutions.

As well as the formal coursework there is the 'Learning Partnership' program where students will hear from and discuss with leading practitioners some major financial issues that have arisen and appropriate solutions.

The program involves a mix of academics and practitioners.

In 2004, the program will be offered by evening study only in the Sydney CBD. The degree will consist of eight courses (48 units of credit): four core courses and four elective courses. Specialisations will be available in the following areas:

Quantitative risk management

Mathematical finance

Applied finance

8007 Master of Technology Management

Director: David Kennedy

The Master of Technology Management degree is a multidisciplinary program comprising courses offered by three faculties – Science, Engineering and Commerce and Economics. It is administratively located within the Faculty of Commerce and Economics.

Candidates are required to complete 48 units of credit, including a core course 'IROB5800 Technology, Management and Innovation', and seven courses thereafter to complete the eight course program. These courses may be chosen from any postgraduate courses offered by the three faculties, subject to the candidate meeting all the relevant prerequisites. A maximum of four courses can be taken from any **one** faculty involved in the program. Please refer to the relevant faculty sections in this Handbook for course codes and to the back of the Handbook for course descriptions. More details are available at the website: **www.mtm.unsw.edu.au**

Customised Programs

Graduate Certificate in Media Sales (Customised)

Plan MARKDS7355

Students are required to complete the following 4 courses:

MARK5991 Introduction to the Media Sales Environment

MARK5992 Media Audience Research
MARK5993 Principles of Media Planning, Buying and Selling
MARK5994 Media Customer Relationship Development

The above courses are available only to students in this program.

Courses in each Disciplinary Stream for Master of Commerce (by Coursework)

Note: Students who take at least six of the following starred *courses in the discipline shall have their advanced specialisation noted on their transcript.

Accounting

Plan ACCTAS8404

*ACCT5902 Financial Reporting: Contemporary Issues and Significant Developments
*ACCT5905 International Financial Reporting and Analysis
ACCT5908 Auditing and Assurance Services
*ACCT5909 Current Developments in Auditing Research
*ACCT5910 Financial Statement Analysis
*ACCT5917 Strategic Management: Systems and Processes
*ACCT5918 Advanced Assurance and Auditing
*ACCT5919 Business Risk Management
*ACCT5920 Managing Intangible Resources
*ACCT5921 Business Performance Management
*ACCT5922 e-Business Strategy and Processes
ACCT5930 Financial Accounting
ACCT5931 Strategic Financial and Resource Management
*ACCT5932 Public Sector Accounting and Financial Reporting
*ACCT5934 Issues in Public Sector Financial Administration
*ACCT5949 Managing Agile Organisations
*ACCT5951 Current Developments in Accounting Research – Financial
*ACCT5952 Current Developments in Accounting Research – Managerial
*ACCT5955 Value-Based Management in a Global Economy
*ACCT5967 Special Topic in Accounting
ACCT5970 Accounting Concepts and Financial Reporting
*ACCT5988 Innovation and Value Networks
ACCT5996 Business Processes: Analysis and Improvement
*ACCT5997 Seminar in Research Methodology
*ACCT5998 Project Seminar
*ACCT5999 Project Report
*FINS5526 International Corporate Governance: Accounting and Finance Perspectives
INFS5978 Accounting Information Systems

Recognition of PY, CA and CPA Program

The successful completion of:

(a) the Professional Year (PY) or CA Program of the Institute of Chartered Accountants in Australia, *or*

(b) the CPA Australia Program, is deemed the equivalent of two UNSW advanced accounting courses in the Master of Commerce program provided that four accounting courses at an advanced level from the accounting disciplinary stream are taken for an advanced accounting specialisation in the Master of Commerce.

Actuarial Studies

Plan ACTLCS8404

ACTL5100 Actuarial Theory and Practice A
ACTL5200 Actuarial Theory and Practice B
ACTL5004 Project Report – Actuarial Studies
ACTL5101 Probability and Statistics for Actuaries
ACTL5102 Financial Mathematics for Actuaries
ACTL5103 Stochastic Modelling for Actuaries
ACTL5104 Actuarial Statistics
ACTL5105 Life Insurance and Superannuation Models
ACTL5106 Insurance Risk Models
ACTL5109 Financial Economics for Insurance Superannuation
ACTL5002 Superannuation and Retirement Benefits

Recommended options for MCom Actuarial Studies program: (Cannot be counted towards specialisation)

FINS5514 Capital Budgeting and Financial Decisions
FINS5535 Derivatives and Risk Management Techniques
FINS5536 Fixed Income Securities and Interest Rate Derivatives
MATH5965 Mathematics of Security Markets 1
MATH5816 Mathematics of Security Markets 2
MATH5835 Stochastic Processes

Business Economics and Statistics

Plan ECONGS8404

*ECON5104 International Economics
*ECON5108 Public Finance
ECON5114 Superannuation and Retirement Benefits
*ECON5115 Natural Resource Economics
*ECON5116 Environmental Economics
*ECON5121 Topics in Business Economics
*ECON5123 Economics of e-Business
*ECON5153 International Macroeconomics
*ECON5164 Economic Reasoning
*ECON5197 Project Report (Economics)
*ECON5201 Comparative Forecasting Techniques
*ECON5204 Mathematics for Business
*ECON5207 Elements of Econometrics
*ECON5233 Operations Research
*ECON5248 Business Forecasting
*ECON5251 Applied Econometrics
*ECON5284 Mathematical Economics
*ECON5299 Project Report (Business Statistics)

With permission of the Head of School, students may be allowed to substitute other postgraduate courses offered by the School for those listed here. Students should contact the School Office for further information.

Business Law

Plan LEGTAS8404

*LEGT5411 Legal Strategies for Knowledge Protection
*LEGT5421 e-Business and the Law
LEGT5511 Legal Foundations of Business
*LEGT5522 Special Topic in Business Law
*LEGT5531 Competition and Consumer Law
LEGT5541 Company Law
*LEGT5542 Corporate Governance
LEGT5551 Revenue Law
*LEGT5561 Legal Aspects of Finance
*LEGT5562 Business Law in a Global Economy
*LEGT5563 Technology, Information and the Law
*LEGT5564 Regulation of Government Agencies
*LEGT5571 Franchising
*LEGT5575 Corporate Fraud and Crime
*LEGT5581 Taxation Policy, Principles and Planning
LEGT5582 Taxation of Business Entities
*LEGT5583 International Business Taxation
*LEGT5586 Corporate Tax, Law and Strategy
LEGT5588 Goods and Services Tax
LEGT5589 Capital Gains Tax
*LEGT5999 Project Report

Finance

Plan FINSAS8404

FINS5510 Personal Financial Planning and Management
FINS5512 Financial Markets and Institutions
FINS5513 Investments and Portfolio Selection
FINS5514 Capital Budgeting and Financial Decisions
*FINS5515 Issues in Corporate Finance
*FINS5516 International Corporate Finance
*FINS5517 Applied Portfolio Management and Modelling
*FINS5522 Emerging Financial Markets
*FINS5523 Entrepreneurial Finance
*FINS5526 International Corporate Governance: Accounting & Finance Perspectives
*FINS5530 Financial Institution Management
*FINS5531 Risk and Insurance
*FINS5533 Real Estate Finance and Investment
*FINS5534 Strategic Management of Credit Risk and Loan Policy
*FINS5535 Derivatives and Risk Management Techniques
*FINS5536 Fixed Income Securities and Interest Rate Derivatives
*FINS5541 Advanced Investments and Funds Management
*FINS5542 Applied Funds Management

*FINS5550 International Banking Management
*FINS5551 International Insurance Management
FINS5566 Electronic Financial Trading
FINS5567 Banking and Financial Innovation
FINS5574 Foundations in Financial Decision Making
*FINS5575 Research Methods in Finance 1
*FINS5576 Advanced Topics in Asset Pricing
*FINS5577 Advanced Topics in Corporate Finance
*FINS5578 Recent Developments in Banking Research
*FINS5579 Research Methods in Finance 2
*FINS5591 Special Topic in Finance
*FINS5599 Project Report
*ACCT5910 Financial Statement Analysis

Course/s offered by the School of Banking and Finance which count towards the Professional Accounting program but not towards Finance specialisations:

FINS5511 Corporate Finance

Human Resource Management

Plan IROBCS8404

IROB5700 Management, Work and Organisation
IROB5701 Employment and Industrial Relations
IROB5910 Towards Corporate Sustainability: Effective Human Resources and Organisations
IROB5907 Management Consulting & Organisational Transformation
IROB5904 Organisational Transformation at the Speed of E
IROB5800 Management, Technology & Innovation
IROB5801 Strategic Management of Technology & Innovation
IROB5908 Strategic Human Resource Management
IROB5912 International Business Negotiations
*IROB5920 Managing Equity, Diversity and Disability (*selective offering)
*IROB5949 International Human Resource Management
*IROB5946 Managing Occupational Health and Safety
*IROB5947 Remuneration and Performance Management
*IROB5948 Human Resources Recruitment, Selection and Development
*IROB5702 International Employment Relations (*selective offering)
*IROB5705 Management of Training
*IROB5711 Employment and Industrial Law
*IROB5712 Negotiation, Bargaining and Advocacy
*IROB5941 Special topic in Human Resource Management

Information Systems and Management

Plan INFSES8404

*INFS5848 Information Systems Project Management
*INFS5885 Managing e-Business Technology
*INFS5905 Information Systems Auditing
*INFS5926 Advanced Data Management
*INFS5927 Knowledge Management Systems and Technology
*INFS5928 Software Engineering Management
*INFS5953 Information Systems Management
*INFS5957 Information and Decision Technology
*INFS5974 Advanced Database Implementation
*INFS5975 Advanced Software Implementation
*INFS5982 Advanced Data Communications
*INFS5983 Business Data Communications
*INFS5984 Information Systems Security
INFS5988 Business Information Systems
INFS5989 Information Systems Design
*INFS5991 Decision Support Systems
INFS5992 Data Management
*INFS5993 Special Topic in Information Systems, Technology and Management
*INFS5999 Project Report
IMGT5110 Information Retrieval Systems
IMGT5120 Organisation of Knowledge
IMGT5410 Knowledge and Society
IMGT5420 Information Sources: Access, Assessment and Acquisition
IMGT5430 Health Information Retrieval Systems and Management
*IMGT5445 Business and Government Information: Sources and Services
*IMGT5560 Information Management: Professional Attachment

International Business

Plan IBUSAS8404

*IBUS5601 Global Business and Multinational Enterprise
*IBUS5602 Cross-Cultural Management
*IBUS5603 Global Business Strategy and Management
*IBUS5604 Asia-Pacific Business and Management
*IBUS5608 Corporate Strategy in East Asia
*IBUS5609 Geopolitical Risk Management
IBUS5606 Chinese Business and Management
IBUS5607 International Entrepreneurship and New Venture Management
ACCT5905 International Financial Reporting and Analysis
ACCT5955 Value Based Management in a Global Economy
ECON5104 International Economics
ECON5156 International Trade
FINS5516 International Corporate Finance
FINS5522 Emerging Financial Markets
IROB5912 International Business Negotiations
IROB5949 International Human Resource Management
LEGT5562 Business Law in a Global Economy
LEGT5583 International Business Taxation
MARK5940 International Marketing
MARK5945 Marketing in Asia
**JAPN5100 Business Japanese A
**JAPN5102 Professional Japanese A
IBUS5691 Special Topic in International Business
IBUS5699 Project Report in International Business (12 UOC)

** Required courses for specialisation in International Business*

*** Other language courses may be taken with approval of PG Coursework Coordinator*

Organisation and Management Studies

Plan IROBHS8404

IROB5700 Management, Work and Organisation
IROB5801 Strategic Management of Technology & Innovation
IROB5901 Organisational Behaviour
*IROB5800 Management, Technology and Innovation
*IROB5904 Organisational Transformation at the Speed of E
*IROB5908 Strategic Human Resource Management
*IROB5909 Management Consulting and Organisational Transformation
*IROB5910 Towards Corporate Sustainability: Effective Human Resources and Organisations
*IROB5912 International Business Negotiations
*IROB5914 Employee Communication
*IROB5920 Managing Equity, Diversity and Disability
*IROB5931 Special Topic in Organisational Behaviour
*ACCT5917 Strategic Management: Systems and Processes
*ACCT5920 Managing Intangible Resources
*ACCT5921 Business Performance Management
*ACCT5949 Managing Agile Organisations

Marketing

Plan MARKAS8404

MARK5900 Elements of Marketing
MARK5930 Consumer Analysis
MARK5932 Applied Marketing Research
MARK5940 International Marketing
MARK5941 Services Marketing
MARK5942 Contemporary Knowledge-Based Marketing
MARK5945 Marketing in Asia
MARK5946 Marketing Communication
MARK5947 Interactive Electronic Marketing
*MARK5950 Marketing Strategy
*MARK5951 Marketing Decision Analysis
*MARK5952 New Product/Service Development
*MARK5955 Advances in Consumer Analysis
*MARK5956 Managing Marketing Relationships
*MARK5957 Business-to-Business Marketing
*MARK5958 Entrepreneurship in the Global Marketplace
*MARK5960 Project in Marketing Implementation

Strategic Value Management

Plan ACCTHS8404

*ACCT5917 Strategic Management: Systems and Processes
*ACCT5919 Business Risk Management
*ACCT5920 Managing Intangible Resources
*ACCT5921 Business Performance Management
*ACCT5922 e-Business Strategy and Processes
ACCT5931 Strategic Financial and Resource Management
*ACCT5949 Managing Agile Organisations
*ACCT5955 Value-Based Management In a Global Economy
*ACCT5988 Innovation and Value Networks
ACCT5996 Business Processes: Analysis and Improvement
*IBUS5601 Global Business and the Multinational Enterprise

Recognition of PY, CA and CPA Program

The successful completion of:

(a) the Professional Year (PY) or CA Program of the Institute of Chartered Accountants in Australia, *or*

(b) the CPA Australia Program, is deemed the equivalent of two UNSW advanced strategic value management courses in the Master of Commerce program provided that four accounting courses at an advanced level from the strategic value management disciplinary stream are taken for an advanced strategic value management specialisation in the Master of Commerce.

Taxation

Plan LEGTCS8404

LEGT5511 Legal Foundations of Business
*LEGT5523 Special Topic in Taxation
LEGT5531 Competition and Consumer Law
LEGT5541 Company Law
LEGT5542 Corporate Governance
LEGT5551 Revenue Law
LEGT5561 Legal Aspects of Finance
LEGT5562 Business Law in a Global Economy
LEGT5563 Technology, Information and the Law
LEGT5564 Regulation of Government Agencies
LEGT5571 Franchising
LEGT5575 Corporate Fraud and Crime
*LEGT5581 Taxation Policy, Principles and Planning
*LEGT5582 Taxation of Business Entities
*LEGT5583 International Business Taxation
*LEGT5586 Corporate Law, Tax and Strategy
*LEGT5588 Goods and Services Tax
*LEGT5589 Capital Gains Tax
*LEGT5999 Project Report

Special Programs

Professional Accounting

Plan ACCTDS8404

This is a fixed program of 12 prescribed courses. Students with an undergraduate major in Accounting from an Australian university may not normally enrol in Plan ACCTDS8404.

ACCT5908 Auditing and Assurance Services
ACCT5930 Financial Accounting
ACCT5931 Strategic Financial and Resource Management
ACCT5970 Accounting Concepts and Financial Reporting
ACCT5996 Business Processes: Analysis and Improvement
ECON5103 Business Economics
ECON5203 Statistics for Business
FINS5511 Corporate Finance
INFS5978 Accounting Information Systems
LEGT5511 Legal Foundations of Business
LEGT5541 Company Law
LEGT5551 Revenue Law

Banking

Plan FINSDS8404

In addition to the *four* common Master of Commerce core courses, students must complete:

FINS5512 Financial Markets and Institutions
FINS5513 Investments and Portfolio Selection
FINS5514 Capital Budgeting and Financial Decisions
FINS5530 Financial Institution Management
FINS5534 Strategic Management of Credit Risk and Loan Policy
FINS5550 International Banking Management
ACCT5910 Financial Statement Analysis

Plus one course from the following list:

FINS5517 Applied Portfolio Management and Modelling
FINS5522 Emerging Financial Markets
FINS5523 Entrepreneurial Finance
FINS5531 Risk and Insurance
FINS5533 Real Estate Finance and Investment
FINS5535 Derivatives and Risk Management Techniques
FINS5536 Fixed Income Securities and Interest Rate Derivatives
FINS5567 Banking and Financial Innovation
LEGT5561 Legal Aspects of Finance
IROB5901 Organisational Behaviour
MARK5900 Elements of Marketing

e-Business

Plan COMMBS8404

Students are required to complete the core courses ACCT5901, ECON5103, ECON5203 and INFS5988, and another eight courses including at least three courses from list A and three courses from List B:

List A

INFS5885 Managing e-Business Technology
INFS5926 Advanced Database Management
INFS5974 Advanced Database Implementation
INFS5983 Business Data Communication
INFS5984 Information Systems Security
INFS5992 Data Management

List B

ACCT5922 e-Business: Strategy and Processes
ECON5123 Economics of E-Business
FINS5566 Electronic Financial Trading
IROB5904 Organisational Transformation at the speed of E
LEGT5421 e-Business and the Law
MARK5947 Interactive Electronic Marketing

A maximum of two additional electives may be chosen from the list of courses offered elsewhere in the Master of Commerce degree.

Environmental Economics

Plan ECONJS8404

In addition to the *four* common Master of Commerce core courses, students must complete:

ECON5115 Natural Resource Economics
ECON5116 Environmental Economics
ECON5121 Topics in Business Economics
Module 1: Project Analysis
Module 2: The Economics of Climate Control
ECON5197 Project Report (counts as two courses)
ECON5248 Business Forecasting

Plus *two* courses chosen from the following list:

ECON5104 International Economics
ECON5108 Public Finance
ECON5123 Economics of e-Business
ECON5153 International Macroeconomics
ECON5164 Economic Reasoning
ECON5201 Comparative Forecasting Techniques
ECON5204 Mathematics for Business
ECON5207 Elements of Econometrics
ECON5233 Operations Research
ECON5251 Applied Econometrics
ECON5284 Mathematical Economics

or any other postgraduate course approved by the Head of the School of Economics.

Funds Management

Plan FINSES8404

In addition to the *four* common Master of Commerce core courses, students must complete:

FINS5512 Financial Markets and Institutions
FINS5513 Investments and Portfolio Selection
FINS5514 Capital Budgeting and Financial Decisions
FINS5517 Applied Portfolio Management and Modelling

FINS5535 Derivatives and Risk Management Techniques
FINS5541 Advanced Investment and Funds Management
FINS5542 Applied Funds Management

Plus *one* course from:

FINS5515 Issues in Corporate Finance
FINS5516 International Corporate Finance
FINS5522 Emerging Capital Markets
FINS5523 Entrepreneurial Finance
FINS5526 International Corporate Governance: Accounting & Finance Perspectives
FINS5530 Financial Institution Management
FINS5531 Risk and Insurance
FINS5533 Real Estate Finance and Investment
FINS5534 Strategic Management of Credit Risk and Loan Policy
FINS5536 Fixed Income Securities and Interest Rate Derivatives
FINS5550 International Banking Management
FINS5551 International Insurance Management
ACTL5002 Superannuation and Retirement Benefits

Or any other graduate course approved by the Head of School of Banking and Finance.

Information Management

Plan IMGTFS8404

This is a fixed program of nine prescribed courses and three electives approved by the Head of School of Information Systems, Technology and Management. This program meets the accreditation requirements of the Australian Library and Information Association (ALIA).

ACCT5901 Accounting: A User Perspective
ECON5103 Business Economics
ECON5203 Statistics for Business
INFS5988 Business Information Systems
IROB5700 Management, Work and Organisation (or equivalent)
IMGT5110 Information Retrieval Systems
IMGT5120 Organisation of Knowledge
IMGT5410 Knowledge and Society
IMGT5420 Information Sources: Access, Assessment and Acquisition
3 Electives

Note that IMGT5560 Information Management: Professional Attachment is one of the three electives highly recommended by ALIA for the Information Management program.

International Finance

Plan FINSFS8404

In addition to the *four* common Master of Commerce core courses, students must complete:

FINS5512 Financial Markets and Institutions
FINS5513 Investments and Portfolio Selection
FINS5514 Capital Budgeting and Financial Decisions
FINS5516 International Corporate Finance
FINS5522 Emerging Financial Markets
FINS5550 International Banking Management
FINS5551 International Insurance Management

Plus *one* course from:

FINS5515 Issues in Corporate Finance
FINS5517 Applied Portfolio Management and Modelling
FINS5523 Entrepreneurial Finance
FINS5526 International Corporate Governance: Accounting & Finance Perspectives
FINS5530 Financial Institution Management
FINS5531 Risk and Insurance
FINS5533 Real Estate Finance and Investment
FINS5534 Strategic Management of Credit Risk and Loan Policy
FINS5535 Derivatives and Risk Management Techniques
FINS5536 Fixed Income Securities and Interest Rate Derivatives
FINS5541 Advanced Investment and Funds Management
FINS5542 Applied Funds Management

Or any other graduate course approved by the Head of the School of Banking and Finance

Risk Management and Insurance

Plan FINSGS8404

In addition to the *four* common Master of Commerce core courses, students must complete the following six courses:

ACCT5919 Business Risk Management
FINS5512 Financial Markets & Institutions
FINS5513 Investments and Portfolio Selection
FINS5514 Capital Budgeting and Financial Decisions
FINS5531 Risk & Insurance
FINS5551 International Insurance Management

Plus any *two* from the following:

ACTL5002 Superannuation and Retirement Benefits
FINS5517 Applied Portfolio Management & Modelling
FINS5530 Financial Institution Management
FINS5535 Derivatives & Risk Management Techniques
FINS5536 Fixed Income Securities & Interest Rate Derivatives
FINS5541 Advanced Investment & Funds Management
FINS5542 Applied Funds Management

For those students who have prior knowledge equivalent to FINS5512, FINS5513 and ACCT5919, a replacement course should be chosen from the following courses for each such equivalence:

ACTL5002 Superannuation and Retirement Benefits
FINS5517 Applied Portfolio Management & Modelling
FINS5530 Financial Institution Management
FINS5535 Derivatives & Risk Management Techniques
FINS5536 Fixed Income Securities & Interest Rate Derivatives
FINS5541 Advanced Investment & Funds Management
FINS5542 Applied Funds Management

Tourism, Hospitality Management and Marketing

Plan TAHMCS8404

Program structure

Commerce Core

ACCT5901 Accounting: A User Perspective
ECON5103 Business Economics
ECON5203 Statistics for Business
MARK5900 Elements of Marketing

Marketing Stream

MARK5932 Applied Marketing Research
MARK5930 Consumer Analysis
Plus 2 Marketing Options

Tourism and Hospitality Stream

TAHM5001 Tourism Demand and Industry Structure
TAHM5002 Strategic Hospitality and Tourism Marketing
TAHM5003 Tourism Development and Delivery
TAHM5004 Hospitality Strategy and Asset Management

Conditions for the Award of Degrees

For the rules, regulations and conditions of postgraduate coursework programs (Masters, Graduate Diplomas and Graduate Certificates) turn to the relevant program description earlier in this faculty section. The conditions for postgraduate degrees by research follow.

Doctor of Philosophy (PhD)

Refer to 'Conditions for the Award of Degrees' under the Faculty of Arts & Social Sciences section of this Handbook.

Master of Commerce (Honours) (MCom(Hons))

1. The degree of Master of Commerce (Honours) may be awarded by the Council on the recommendation of the Standing Committee of the Faculty of Commerce and Economics (hereinafter referred to as the Committee) to a candidate who has satisfactorily completed a program of advanced study.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least two calendar months before the commencement of the session in which enrolment is to begin.

(2) In every case, before permitting a candidate to enrol, the head of the school in which the candidate intends to enrol shall be satisfied that adequate supervision and facilities are available.

(3) An approved candidate shall be enrolled in one of the following categories:

(a) full-time attendance at the University;

(b) part-time attendance at the University;

(c) external – not in regular attendance at the University and using research facilities external to the University. Before permitting a candidate to enrol externally, the head of the school in which the candidate intends to enrol shall be satisfied that the candidate can be adequately supervised on an external basis. Formal courses may not be taken externally.

(4) A candidate shall undertake such formal courses and, except in exceptional circumstances, pass at the first attempt such assessment as prescribed, and shall demonstrate ability to undertake research by the submission of a thesis embodying the results of an original investigation on a topic approved by the Committee.

(5) A candidate shall maintain an average of credit or better in the formal courses prescribed for the degree. A full-time candidate shall undertake not more than four courses in any session. A part-time candidate shall undertake not more than two courses in any session.

(6) A candidate may also be required to undergo such assessment and perform such other work as may be prescribed by the Committee.

(7) The work on the topic shall be carried out under the direction of a supervisor appointed by the Committee from the full-time academic members of the University staff.

(8) The progress of a candidate shall be reviewed annually by the Committee following a report by the candidate, the supervisor and the head of the school in which the candidate is enrolled and as a result of such review the Committee may cancel enrolment or take such other action as it considers appropriate.

(9) No candidate shall be awarded the degree until the lapse of four academic sessions from the date of enrolment in the case of a full-time candidate or six academic sessions in the case of a part-time or external candidate. In the case of a candidate who has been awarded the degree of Bachelor with Honours or a qualification considered equivalent or who has had previous research experience, the Committee may approve remission of up to two sessions for a full-time candidate and three sessions for a part-time or external candidate.

(10) A thesis shall be submitted not later than five sessions after the completion of the prescribed formal courses. In special cases an extension of this time may be granted by the Committee.

Thesis

4. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the investigation.

(2) The candidate shall give in writing to the Registrar two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of project reports and theses for higher degrees.

(6) It shall be understood that the University retains the three copies of the thesis submitted for examination and is free to allow it to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968 the University may issue the project report or thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination of Thesis

5. (1) There shall be not fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that:

(a) the thesis be noted as satisfactory

(b) the thesis be noted as satisfactory subject to minor corrections as listed being made to the satisfaction of the head of the school

(c) the thesis requires further work on matters detailed in the report. Should performance in this further work be to the satisfaction of the Higher Degree Committee, the thesis would be noted as satisfactory; *or*

(d) the candidate be noted as unsatisfactory but that the candidate be permitted to resubmit the thesis in a revised form after a further period of study and/or research; *or*

(e) the thesis be noted as unsatisfactory and that the candidate be not permitted to resubmit the thesis.

(3) If the performance at the further examination recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to re-present the same thesis and submit to further examination as determined by the Committee within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners, reports and the results of any further examination or prescribed course of study, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the Council.

Master of Information Studies (MInfStuds) by Research

1. The degree of Master of Information Studies by research may be awarded by the Council on the recommendation of the Standing Committee of the Faculty of Commerce and Economics (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation.

Qualifications

2. (1) A candidate for the degree shall:

(a) have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee, *and*

(b) have been awarded a Graduate Diploma of Commerce in Information Management or equivalent from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee, *and*

(c) have had at least one year's employment or equivalent experience of a kind acceptable to the Committee.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) When the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant, before being permitted to enrol, to undergo such examination or carry out such work as the Committee may prescribe.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least one calendar month before the commencement of the session in which enrolment is to begin.

(2) In every case, before permitting a candidate to enrol, the Head of the School of Information Systems, Technology and Management (hereinafter referred to as the head of the school) shall be satisfied that adequate supervision and facilities are available.

(3) An approved candidate shall be enrolled in one of the following categories:

(a) full-time attendance at the University;

(b) part-time attendance at the University;

(c) external – not in regular attendance at the University and using research facilities external to the University.

(4) A candidate shall be required to undertake an original investigation on an approved topic. The candidate may also be required to undergo such examination and perform such other work as may be prescribed by the Committee.

(5) The work shall be carried out under the direction of a supervisor appointed from the full-time members of the University staff.

(6) The progress of a candidate shall be reviewed annually by the Committee following a report by the candidate, the supervisor and the head of the school and as a result of such review the Committee may cancel enrolment or take such other action as it considers appropriate.

(7) No candidate shall be granted the degree until the lapse of three academic sessions in the case of a full-time candidate or four academic sessions in the case of a part-time or external candidate from the date of enrolment. In the case of a candidate who has been awarded the degree of Bachelor with Honours or who has had previous research experience the Committee may approve remission of up to one session for a full-time candidate and two sessions for a part-time or external candidate.

(8) A full-time candidate for the degree shall present for examination not later than six academic sessions from the date of enrolment. A part-time or external candidate for the degree shall present for examination not later than ten academic sessions from the date of enrolment. In special cases an extension of these times may be granted by the Committee.

Thesis

4. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the original investigation.

(2) The candidate shall give in writing two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree theses.

(6) It shall be understood that the University retains the three copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

5. (1) There shall be not fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the merits of the thesis and shall recommend to the Committee that:

(a) the candidate be awarded the degree without further examination; *or*

(b) the candidate be awarded the degree without further examination subject to minor corrections as listed being made to the satisfaction of the head of the school; *or*

(c) the candidate be awarded the degree subject to a further examination on questions posed in the report, performance in this further examination being to the satisfaction of the Committee; *or*

(d) the candidate be not awarded the degree but be permitted to resubmit the thesis in a revised form after a further period of study and/or research; *or*

(e) the candidate be not awarded the degree and be not permitted to resubmit the thesis.

(3) If the performance at the further examination recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to represent the same thesis and submit to a further oral, practical or written examination within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the reports of any oral or written or practical examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the Council.

A Message from the Dean

This Handbook provides descriptions of the postgraduate 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.

Postgraduate engineering education at UNSW can extend undergraduate knowledge in a number of ways:

- Advanced studies in your engineering discipline.
- Broadening studies extending beyond your discipline.
- Research at the leading edge of engineering.

The Faculty is committed to developing the scientific, technical and creative skills of its students. Programs also focus on the skills and knowledge required to direct and manage engineering activities. These latter require an ability to work in teams, an understanding of human and physical environments and highly developed skills in communication with other members of the profession and the public.

Postgraduate study in the Faculty can lead to the awards of Graduate Diplomas and coursework Master degrees as well as Masters and PhD degrees by research.

Postgraduate study is the way to keep up and get ahead in engineering. Many graduates return to formal or informal study many times in their working life.

Brendon Parker
Dean
Faculty of Engineering

Faculty of Engineering

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School of Chemical Engineering and Industrial Chemistry

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School of Civil and Environmental Engineering

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School of Mechanical and Manufacturing Engineering (incorporating Aerospace Engineering, Mechatronic Engineering and Naval Architecture)

Program Outlines

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5710 Mechanical Engineering 136
5710 Mechatronic Engineering 136

School of Mining Engineering

Program Outlines

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Faculty Information and Assistance

The entry for the Faculty of Engineering is divided into separate sections for each school/unit. Before reading program outlines you must read the general information at the front of this Handbook 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 back of this Handbook, which includes session/s offered, pre/corequisite details, class hours, units of credit, etc. For a full list of courses offered by the University, refer to the Virtual Handbook at **www.student.unsw.edu.au/handbook**

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.

Some People Who Can Help You

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:
Mrs Sharon Turnbull, Room 404, Mechanical and Manufacturing Engineering Building,
Tel: (02) 9385 4085

School of Mining Engineering:
Prof Bruce Hebblewhite, Room 159,Old Main Building
Tel: (02) 9385 5160

School of Petroleum Engineering:
Ms Jennifer Lippiatt, Room 115, 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 LG11, 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.

Faculty of Engineering Website

www.eng.unsw.edu.au

This Faculty of Engineering website provides information about programs, courses, research interests, news and current events. The website also contains links to all the schools, units, centers and affiliated research institutes of the Faculty, as well as staff and student information resources.

Re-enrolment Procedures

All current students will be able to re-enrol via the web using *New South Student Online*. This means that, in most cases, you will be able to enrol and drop classes yourself without the need to fill in forms or attend your 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** or by obtaining a leaflet from New South Q.

It is the responsibility of students to enrol in a program consistent with the rules governing re-enrolment and admission to the degree.

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, eg 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, write to the Institution of Engineers, Australia, Sydney Division, 1st Floor, 118 Alfred Street, Milsons Point 2061, Tel: (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 practical insight into the workplace and in particular 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, Tel: (02) 9263 6500, website **www.apesma.asn.au**

Faculty Centres

The Centre for Advanced Macromolecular Design

Director: Professor Tom Davis

The Centre for Advanced Macromolecular Design (CAMD) was established in 2000 in the School of Chemical Engineering and Industrial Chemistry with academic links to the Schools of Applied Bioscience (Department of Biotechnology) and Biochemistry, the Graduate School of Biomedical Engineering and the Department of Surgery at the Prince of Wales Hospital.

Industry links have also been established with BHP, Ciba Specialty Chemicals, CSIRO Molecular Science, DuPont, ICI, Mimotopes, Orica and the Cooperative Research Centre for Polymers.

The mission of CAMD is focused on the synthesis and application of novel macromolecules. To achieve this the members of the Centre combine advanced polymerisation techniques and biomolecular science to produce materials for high technology applications.

Current projects include:

- Propagation rate coefficients from pulsed-laser polymerisation
- Star polymer synthesis using controlled/living radical polymerisation
- Reversible-addition-fragmentation transfer polymerisation (RAFT)
- Polymer honeycomb coatings from self-organising star polymers
- Therapeutic polymers for pharmaceutical applications
- Cobalt-mediated free radical polymerisation
- Hydrogels as biomaterials
- Photochromic response in optical polymers
- Solid phases for combinatorial chemistry
- Free radical ring-opening polymerisation kinetics
- Theoretical studies of radical reactions

Centre for Electrochemical and Minerals Processing

Director: Professor Maria Skyllas-Kazacos
Associate Directors: Professor Barry Welch and Associate Professor Tam Tran

The Centre for Electrochemical and Minerals Processing is a joint venture between the School of Chemical Engineering and Industrial Chemistry and the School of Materials Science and Engineering, UNSW, with the High Temperature Materials Processing Group, University of Auckland. Its aims are to address the growing need in both the Australasian region and around the world for training and research support for the aluminium and other mineral and electrochemical process industries.

The Centre has thus provided a new vehicle which brings together special skills and expertise within the two institutions in the areas of electrochemical engineering, mineral processing and aluminium smelting technologies combined with research and test facilities that can be made available to the relevant industry groups for collaborative research and for the solution of specific technical problems.

Emphasis is given to the following research areas:

- Aluminium smelting technology
  (Prof Maria Skyllas-Kazacos, Prof Barry Welch, A/Prof Jim Metson, Prof Mark Taylor, Dr Margaret Hyland and Dr Roya Sheikholeslami)
- Electrochemical engineering, including battery and fuel cell technology
  (Maria Skyllas-Kazacos and A/Prof Jim Metson)
- Mineral processing and alumina refining
  (A/Prof Tam Tran)
- Applications of ceramics and glass manufacture
  (A/Prof Michael Brungs)
- High temperature corrosion in the process industry
  (Prof David Young)
- High temperature glass and metallurgical processes
  (A/Prof Michael Brungs and A/Prof Veena Sahajwalla)

In addition to the research and testing programs and facilities, the Centre has also established new Graduate Certificate and Graduate Diploma programs in aluminium smelting technology, which are now being offered through the School of Chemical Engineering and Industrial Chemistry. These are currently the only training programs that lead to tertiary qualifications for technical personnel working in the aluminium smelting industry both in Australia and around the world.

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.

Centre for Particle and Catalyst Technologies

Director: Associate Professor R Amal

The Centre for Particle and Catalyst Technologies is located within the School of Chemical Engineering and Industrial Chemistry. It was established to encourage research in particulate systems and heterogenous catalysis undertaken within the University and to promote unique university facilities as services available to industry and government bodies. It aims to be a focus for interdisciplinary particle and catalyst research within the School, the University, and the wider community.

Over the previous five years the Centre has continually received funding through ARC Discovery and Linkage, Sugar Research Development Corporation, Environmental Trust Fund and CRC-Waste Management and Pollution Control grants. This funding has acted to support research by the Centre in fields such as flocculation and floc characterisation, car exhaust catalysts, nanoparticles synthesis and applications, the development of novel magnetic photocatalysts, solid-liquid separation, and computational modeling of particulate systems. In all, 20 PhD students and 7 Research Fellows and Associates work in the Centre on these and other related projects.

Special objectives of the Centre include the promotion of testing facilities available within UNSW. A wide range of industries, including pharmaceutical, chemical, and water, regularly send samples for particle characterisation. In addition to short-term projects the Centre has been successful in attracting long-term industrial research contracts and research grants (such as funding from Jord Engineers and the Sugar Research Institute). This has resulted in the improved transfer of technology to Australian industry in the areas of catalyst development, instrumental methods for particle and catalyst characterisation, and particulate systems.

The Centre also plays an important role in offering continuing education courses and conferences in areas relevant to industry (particularly in the areas of particle characterisation and powder technology).

The Centre houses much state-of-the-art equipment that allows staff and students to characterise particulate material in terms of size (from 5 nm to 2 mm), surface area, pore size (microporous to macroporous), and other important physical and chemical properties. The characteristics of particulate materials influence their behaviour both as raw materials and products in many industries.

Many measurement techniques have been developed within the Centre allowing the UNSW team to maintain its international reputation for expertise in particulate systems.

Centre for Water and Waste Technology

Director: Professor TD Waite

The Centre for Water and Waste Technology was established in 1987 and has operated as a focal point for research in water and waste technologies at the University of New South Wales since that time. The purpose of the Centre is to develop and apply innovative technologies and methodologies to the management of all waters and wastes.

The Centre's research emphases include investigation into Atmospheric Emissions, Biological Treatment and Environmental Microbiology, Physical-Chemical Processes and Waste Management. The Centre's activities include grant and sponsored research projects, consultancies and education and training elements. As well as supporting research students, the Centre provides professional invigorant and additional continuing education courses in the fields of Water and Wastewater Treatment and Solid Waste Management.

The Centre for Water and Waste technology lies within the School of Civil and Environmental Engineering and is continuing to maintain and further develop strong linkages between academic and project staff. Linkages with academic staff in other schools on campus continue to grow particularly through strong associations with the Schools of Chemical Engineering and Industrial Chemistry, Geography and Microbiology.

Energy Research, Development and Information Centre (ERDIC)

Director: Associate Professor AD Owen

UNSW is a major centre for energy research and development in Australia across the full spectrum of energy technologies and issues. The University has internationally recognised expertise in fossil fuels technology, coal, oil, gas and biomass; electrical energy systems, solar energy, photovoltaic, thermal, passive, energy storage, vanadium batteries; energy efficiency in manufacturing, processing, buildings and transport, and economics and socio-economics.

ERDIC produces an annual report on all these activities; organises inter and multidisciplinary seminars and workshops on both current research and development and future directions; publishes reports and newsletters; organises lectures; serves as a focal point for enquiries on energy research and development; and assists in bringing multidisciplinary teams together for consultation and research projects.

ERDIC has established itself as an internationally recognised centre, providing a contact point for energy researchers in many disciplines within the University. It assists Federal and State Governments and industry to determine future policies and directions on energy research and development.

ERDIC disseminates information on energy issues via its seminars, workshops, meetings and newsletters. It is also a point of enquiry in the wider community for information on energy technologies - particularly new and improved energy technologies which are the key to safe, efficient and environmentally acceptable production and use of energy. The Centre is also involved in the production of educational material.

For further information please refer to web site **www.erdic.unsw.edu.au**

UNESCO Centre for Membrane Science and Technology

Directors: Professor HGL Coster (Biophysics Group)
Professor AG Fane (Chemical Engineering Group)
Deputy Director: Associate Professor DE Wiley (Chemical Engineering)

The Centre for Membrane Science and Technology was formed in 1987 as a collaborative venture between the School of Chemical Engineering and Industrial Chemistry and the Department of Biophysics, School of Physics. In 1988 it was granted Commonwealth Special Research Centre status and funding, and in 1992 it became one of only four UNESCO Science Centres worldwide.

Research programs focus on fundamental research on both biomembranes, and membrane processes, as well as synthetic (industrial) membranes; membrane based manufacturing processes (chemical and biological reactor systems); product purification; purification of water; treatment and safe disposal of wastes, including sewage; biomedical applications; and membrane based biosensor technology. Other activities include the development of novel membranes including conducting and isoporous membranes, membrane biophysics, membrane pervaporation, gas separation membrane, supported liquid membranes, and membrane-based systems using metal binding liquids to remove heavy metals. Research covers system and process improvement, design and control as well as characterisation of process mechanisms.

The Centre has close links and collaborative projects operating with research institutes in Italy, France, Germany, Denmark, Finland, The Netherlands, the United Kingdom, Lithuania, Romania, Russia, Oman, the United States, Canada and Thailand. It also maintains connections with membrane groups in Austria, Belgium, China, Indonesia, Israel, Japan, Korea, Malaysia, India, Pakistan, South Africa and Singapore.

The Centre organises postgraduate study programs, with up to half of its 25 students coming from countries other than Australia. It also offers shorter-term training programs for overseas trainees in aspects of membrane science and technology and runs specialist workshops on a diverse range of membrane related subjects.

Program and Course Information

Summary of Programs

The Faculty awards higher degrees as follows: Research – Doctor of Philosophy, Master of Engineering and Master of Science; Coursework Masters – Master of Biomedical Engineering, Master of Computer Science, Master of Engineering Science (available in a number of areas of specialisation), Master of Environmental Engineering Science and Master of Information Science. In addition, the degrees of Doctor of Science and Master of Science may be awarded for research conducted in, or in association with, the Faculty of Engineering.

Conditions governing the award of research degrees are set out later in this Handbook in Conditions for the Award of Degrees.

Research Degrees

Research degrees may be undertaken in the Faculty of Engineering as follows:

PhD

Biomedical Engineering	1710
Chemical Engineering	1010
Civil and Environmental Engineering	1630
Computer Science and Engineering	1650
Electrical Engineering	1640
Industrial Chemistry	1016
Mechanical and Manufacturing Engineering	1662
Mining Engineering	1050
Petroleum Engineering	1017
Photovoltaic Engineering	1655
Surveying and Spatial Information Systems	1681

ME

Biomedical Engineering	2675
Chemical Engineering	2150
Civil and Environmental Engineering	2650
Computer Science and Engineering	2665
Electrical Engineering	2660
Mechanical and Manufacturing Engineering	2692
Mining Engineering	2180
Petroleum Engineering	2156
Photovoltaic Engineering	2655
Surveying and Spatial Information Systems	2721

MSc

Biomedical Engineering	2795
Chemical Engineering	2010
Civil and Environmental Engineering	2750
Computer Science and Engineering	2765
Industrial Chemistry	2016

Doctor of Philosophy

PhD

This degree is awarded for a thesis considered to be a substantially original contribution to the course concerned. The degree is becoming a prerequisite for appointments in government and industrial research and development laboratories and in higher education. Research for this degree may be taken at, or externally to, the University. However the Faculty recommends that periods of residency at the University totalling at least six months be included in the candidate's research program.

Admission guidelines: A candidate for registration for the degree of Doctor of Philosophy should hold an Honours degree from the University of NSW or an Honours degree of equivalent standing from another approved university. Applications for admission should be made to the Registrar

on the prescribed form at least one calendar month before the commencement of the session in which registration is to begin.

Period of candidature: The normal period is 6 academic sessions (full-time) and 8 academic sessions (part-time) from the date of enrolment. In special cases the minimum period of registration may be reduced by up to two academic sessions. The maximum period of registration is 10 academic sessions (full-time) and 12 academic sessions (part-time). In special cases an extension of these times may be granted.

Concurrent coursework: All new PhD candidates in the Faculty of Engineering must complete and pass three courses as approved by the Head of School, normally in the first year of candidature.

Master of Engineering/Master of Science

ME/MSc

These are research degrees in which a thesis embodies the result of an original investigation, or design, or engineering development. Candidates for the award of the degree of ME may be required to carry out a program of advanced study.

Admission guidelines: A candidate for registration for the degree of Master of Engineering or Master of Science should hold a Bachelor's degree usually at Honours level from the University of NSW or from another approved university. Applications for admission should be made to the Registrar on the prescribed form at least one calendar month before the commencement of the session in which registration is to begin.

Period of candidature: The normal period is 3 academic sessions (full-time) and 6 academic sessions (part-time) from the date of enrolment. In special cases the minimum period of registration may be reduced by up to two academic sessions. The maximum period of registration is 6 academic sessions (full-time) and 10 academic sessions (part-time). In special cases extensions may be granted.

Concurrent coursework: All new Masters research candidates in the Faculty of Engineering must complete and pass three courses as approved by the Head of School, normally in the first year of candidature.

Coursework Masters Degrees

Detailed information on coursework programs is available from the schools offering the programs and can be found in this Handbook under the appropriate school section.

Admission guidelines: An acceptable qualification is a degree at Honours level, or at Pass level to a superior standard in a four year program in an approved discipline. The latter is defined as an average of 65% over the last two years of a full-time program (or last three stages of a part-time program) taken in minimum time. If the degree concerned is not in an acceptable discipline, or was of less than four years full-time study, a bridging or qualifying program is required. This is normally arranged by enrolment in the appropriate Graduate Diploma with the possibility of transferring to the Masters program after completion of requirements prescribed by the Faculty.

Applicants for admission to a program of study leading to the award of a Masters degree by coursework commencing in first session should apply to the Registrar on the prescribed form by the 31st October of the year before the year in which enrolment is to begin. Where application is for registration commencing in the second session, applicants should apply at least two months before the commencement of session.

It may be necessary to limit entry to formal programs due to quota restrictions. In such cases, applications may be placed on a reserve list and considered subject to the availability of places. If a firm offer of admission is made, it will be subject to acceptance within three weeks.

Programs of study leading to the award of coursework Masters degrees may be undertaken in the Faculty as follows:

Internal Mode Delivery

MCompSc

Computer Science and Engineering	8680

MBiomedE

Biomedical Engineering	8660

MEngSc

Aerospace Engineering	8710
Biomedical Engineering	8665
Coastal Engineering & Management	8612
Computer Science and Engineering	8685
Construction Management	8612
Electrical Engineering	8501
Engineering and Technology Management	8612
Engineering Geology	8612
Geographic Information Systems	8652
Geotechnical Engineering & Engineering Geology	8612
Groundwater Studies	8612
Hydrology & Water Resources	8612
Infrastructure Management	8612
Land Administration	8653
Manufacturing Engineering and Management	8710
Mechanical Engineering	8710
Mechatronic Engineering	8710
Mining Industry Management	8055
Mining Geomechanics	8055
Photovoltaics & Solar Energy	8512
Process Engineering	8016
Project Management	8612
Remote Sensing	8641
Structural Engineering	8612
Surveying & Spatial Information Systems	8651
Telecommunications	8503
Transport Engineering	8612
Water Engineering	8612
Water Quality Management	8612
Water and Wastewater Treatment	8612
Waste Management	8612

MEnvEngSc

Civil and Environmental Engineering	8615

MInfSc

Information Science	8508

External/Distance Mode Delivery

MEngSc

Construction Management	8617
Construction Management (Offshore)	8607
Engineering and Technology Management	8617
Engineering and Technology Management (Offshore)	8617
Infrastructure Management	8617
Manufacturing Management (Offshore)	8607
Petroleum Engineering	8655
Project Management	8617
Project Management (Offshore)	8607
Transport Engineering	8617
Water Engineering	8617
Waste Management	8617
Water and Wastewater Treatment	8617
Surveying and Spatial Information Systems	8651

MEnvEngSc

Civil and Environmental Engineering	8618

Master of Engineering Science

MEngSc

The Master of Engineering Science is a faculty-wide degree allowing for flexibility of choice between formal coursework and project work. The schools in the Faculty have developed recommended programs of study leading to specialisation in certain areas and further information is available under each School section in this Handbook.

Candidates are required to complete a program totalling a minimum of 48 units of credit. A degree may be awarded for formal coursework only or for the completion of formal coursework and a report on a project depending on the program being offered.

Candidates may undertake interdisciplinary studies and, subject to approval, are able to take courses from any school in the Faculty, other faculties of the University and other universities or institutions. By means of this system, programs of studies best suited to the needs of the candidates may be selected.

Before enrolment an applicant should submit an intended program for approval by the school or division offering the majority of the units of credit to ensure that the prerequisite background held is adequate for all courses including those taken in other schools or institutions.

All coursework Masters programs are fee-paying. A schedule of fees is available on enquiry. HECS Scholarships may be available in certain programs (under certain conditions) for Australian residents and citizens.

Period of candidature: The minimum period is 2 academic sessions (full-time) or 4 academic sessions (part-time) from the date of enrolment. The maximum period of candidature is 4 academic sessions (full-time) and 8 academic sessions (part-time). In special cases an extension of time may be granted.

Graduate Diplomas

Programs of study leading to the award of a Graduate Diploma in the Faculty of Engineering provide graduates with opportunities to extend their professional knowledge. In most cases, candidates may choose from a range of courses in the special area of their choice. There are also opportunities to select courses from other professional areas in which candidates may be interested.

Before enrolment, an applicant should submit an intended program for approval by the school or centre offering the majority of the units of credit. Candidates must usually complete a program totalling 36 units of credit. The program may contain courses from other schools of the Faculty, other faculties of the University and other universities or institutions subject to meeting the prerequisite requirements.

If an applicant nominates a program of study taken from the list below, at least half of the units of credit should come from the courses taken in that area.

It should be noted that some candidates who have partially completed the requirements, but not taken out the award may be considered for upgrading to the relevant Master program with advanced standing. Since the policy on upgrading varies between different schools and centres, further enquiries should be made with the school or centre concerned.

Applicants for admission to a program of study leading to the award of a Graduate Diploma commencing in first session should apply to the Registrar on the prescribed form by 31 October of the year before the year in which enrolment is to begin. Where application is for registration commencing in the second session, applicants should apply at least two months before the commencement of session.

It may be necessary to limit entry to formal programs due to quota restrictions. In such cases, applications may be placed on a reserve list and considered subject to the availability of places. If a firm offer of admission is made, it will be subject to acceptance within three weeks.

All Graduate Diploma programs offered by the Faculty of Engineering are fee paying. A schedule of fees is available on enquiry. HECS Scholarships may be available in certain programs (under certain conditions) for Australian residents and citizens.

Programs of study leading to the award of a Graduate Diploma may be undertaken in the Faculty of Engineering as follows:

Internal Mode Delivery

Aerospace Engineering	5710
Aluminium Smelting	5034
Biomedical Engineering	5445
Civil and Environmental Engineering	5459
Computer Science	5452
Electrical Engineering	5458
Information Science	5453
Land Administration	5493
Manufacturing Engineering and Management	5710
Mechanical Engineering	5710
Mechatronic Engineering	5710
Mining Engineering	5040
Petroleum Engineering	5031
Remote Sensing	5496
Surveying and Spatial Information Systems	5492
Telecommunications	5448

External/Distance Mode Delivery

Civil and Environmental Engineering (Offshore)	5444
Civil and Environmental Engineering	5454
Coal Mine Strata Control	5040
Manufacturing Management (Offshore)	5444
Mine Ventilation	5045
Petroleum Engineering	5031
Surveying Spatial Information Systems	5492

Further details of the recommended programs of study may be obtained from the relevant schools.

Graduate Certificates

Programs of study leading to the award of a Graduate Certificate in the Faculty of Engineering provide graduates with opportunities to extend their professional knowledge. In most cases, candidates may choose from a range of courses in the special area of their choice. There are also opportunities to select courses from other professional areas in which candidates may be interested.

Before enrolment, an applicant should submit an intended program for approval by the relevant school or centre. Candidates must usually complete a program totalling 24 units of credit.

It should be noted that some candidates who have partially completed the requirements but not taken out the Certificate may be considered for upgrading to the other programs with advanced standing. Since the policy on upgrading varies between different schools and centres, further enquiries should be made with the school or centre concerned.

Applicants for admission to a program of study leading to the award of a Graduate Certificate commencing in first session should apply to the Registrar on the prescribed form by 31 October of the year before the year in which enrolment is to begin. Where application is for registration commencing in the second session, applicants should apply at least two months before the commencement of session.

It may be necessary to limit entry to formal programs due to quota restrictions. In such cases, applications may be placed on a reserve list and considered subject to the availability of places. If a firm offer of admission is made, it will be subject to acceptance within three weeks.

All Graduate Certificate programs offered by the Faculty of Engineering are fee paying. A schedule of fees is available on enquiry.

Programs of study leading to the award of a Graduate Certificate may be undertaken in the Faculty of Engineering as follows:

Internal Mode Delivery

Aluminium Smelting Technology	7334
Civil Engineering	7336
Environmental Engineering	7337
Mining Engineering	7335

External/Distance Mode Delivery

Civil Engineering	7336
Environmental Engineering	7337
Petroleum Engineering	7341

Graduate Courses

The courses which may be available for candidates proceeding to the award of the degree of Master of Biomedical Engineering, Master of Computer Science, Master of Engineering Science, Master of Environmental Engineering Science, Master of Information Science, Master of Mining Management and Graduate Diploma can be found in each school section. Not all electives are necessarily offered in any particular year.

Many graduate courses assume that students have prior, or preliminary, knowledge of the area of study. It is the responsibility of students to acquaint themselves with this level of assumed prior knowledge and take steps, if necessary, to obtain it. This may, for example, involve a program of preparatory reading before commencing the course.

In some cases the assumed level of knowledge for a specific course is indicated in this Handbook by the statement of assumed knowledge. This is intended as a guide to the assumed prior knowledge and often uses the description of other courses in the Handbook to indicate the content and level which the lecturer will assume. Students who are in doubt as to the adequacy of their preparation should contact the lecturer concerned and discuss the matter. The lecturer in charge of a course has the authority to decide whether or not the student has the appropriate level of assumed knowledge.

Research and Project Areas

Biomedical Engineering

Cell, tissue and organ engineering

Arterial morphometry
Artificial blood vessels
Bioactive materials
Biocompatibility: tissue/materials interactions
Biomaterials
Biomedical polymers and acrylic cements
Bioprostheses
Bone replacements materials
Cell separation technologies
Chimeric proteins for DNA delivery into cells
Computer-aided histological analysis
Connective tissue healing
Cytometry

Endthelial cell/biomaterial interactions
Extracorporeal therapies Image analysis of cells
Implantable sensors
Infection associated with medical devices
In vivo mechanisms of polymer degradation
Medical image processing and analysis
Neural prostheses
Orthopaedic applications of hydroxyapatite
Orthopaedic implants
Percutaneous access devices
Perfusion bioreactor development
Retinal neuroprostheses
Tissue engineering
Ventricular assist devices

Biofluid and solid mechanics

Arterial haemodynamics
Biomechanics of joints and limbs
Flow in collapsible tubes
Flow visualisation and measurement
Fluid structure interaction
Mechanics of cerebrospinal fluid flow
Nonlinear dynamical systems analysis
Pulsatile crossflow filtration
Ultrasonic distance measurement
Telemedicine and physiological monitoring
Ambulatory monitoring
Analysis of patient therapies
Automatic modulation of cardiovascular function
Biomedical instrumentation and computer acquisition
Blood pressure and heart rate variability
Cardiovascular effects of body movement
Clinical decision support systems
Home telecare
Mechanisms of age related arterial degradation and hypertension
Modelling of artificial kidney therapy
Modelling of cardiac electrical potentials
Modelling of mass transfer processes in medicine
Non-invasive blood pressure measurement
Processing and interpretation of biomedical signals
Surface adsorption of macromolecules

Chemical Engineering and Industrial Chemistry

Industrial Chemistry

Chemical reaction engineering, catalysis and synthetic fuel production and processing; petrochemistry; conversion processes of coal to oil; catalytic methods and reactors; catalytic methods for air pollution control; kinetic modelling of catalytic processes; catalyst activation and de-activation studies; car exhaust catalysts.

Solid state, molten salt and aqueous electrochemistry; electrochemistry of glass and chemistry of glass melting; physical and chemical characterisation of glasses.

Metal electrowining; battery research, vanadium redox cell development. Electrode kinetics and mechanistic studies. Aluminium electrolysis; electrolytic decomposition of organochlorines. Conducting polymer electrodes evaluation and development of solid state gas sensors.

Environmental chemistry; Analysis of industrial pollutants; air and water pollution monitoring; chemical strategies for emission control; occupational health chemistry; development of new analytical methods for process control and environmental monitoring; environmental catalysis; air pollution control.

Polymer Science

Preparative and analytical polymer chemistry
Membrane preparation and properties
Polybutadiene polymerisation by Ziegler-Natta catalysts, molecular weight properties
Elastomer filler applications in rubber and plastics
Thermal analysis of elastomer and plastics
Interpenetrating polymer networks, fracture toughness of polymercomposites and thermoplastics
Conducting polymers; polymer fractals; radiation grafting and crosslinking, conducting polymer membranes
Structure-Property relationships of optical polymers
Free-radical polymerisation kinetics
Hydrogels and biomaterials
Rigid-rigid polymer blends
Conducting polymer composites
Rheology of polymeric systems

Chemical Engineering

Particle dynamics; fluidisation and spouted bed processes drying, carbonisation, devolatisation and gasification; sedimentation and thickening; filtration mechanisms, dewatering of filter cakes; characterisation of particulate materials; particle coating; preparation of novel photocatalysts; aggregation kinetic modelling; electrostatic charge determination; Non-Newtonian fluid-particle systems.

Reaction engineering, mass transfer with chemical reaction in heterogeneous systems; effect of mixing and nonideal transport; complex consecutive reactions, catalytic reaction engineering, pressure reactors; mathematical modelling. Multiphase photocatalytic reactors. Catalytic distillation processes.

Membrane Processes

Membrane fabrication for ultrafiltration and reverse osmosis; membrane characterisation; ultrafiltration of proteinaceous solutions; desalination of brackish water; ion separation; pervaporation, membrane distillation; gas fractionation, cross flow filtration; liquid membranes; membrane bioreactors; environmental applications; dynamic membranes; ceramic membranes; hydrogel coatings.

Pollution Studies

Unit operations in water pollution control, biological treatment methods, advance treatment methods; unit operations in air pollution control; bio-filtration, odour control processes; fabric filtration monitoring; hot gas cleaning.

Process Design and Control

Computer aided design; systems analysis and process identification; plant simulation; strategies for fault analysis; process optimisation studies.

Separations Science

Development and evaluation of new methods for solid-liquid, liquid-liquid and gas-gas separations

Energy conservation and waste minimisation; improved design procedures for heat exchange networks; mass exchange networks for waste minimisation.

Mineral Processing

Hydrometallurgy; minerals dissolution and leaching processes; liquor purification processes, metal recovery by precipitation, adsorption, ion-exchange, cementation and electrolytic processes, dewatering of minerals.

Heat Transfer

Refrigeration, heat transfer and food engineering; neural networks; genetic algorithms and other optimisation methods; computational fluid dynamics; phase change and inverse heat transfer; food refrigeration. Heat exchanger failing.

Supercritical Fluid Technology

Fundamental studies and novel applications in the pharmaceutical environmental and natural product industries.

Fuel Technology Fuel Science and Engineering

Fuel processing; chemical and physical properties of chars; pyrolysis of coal and composition of the volatile products; fluidised bed gasification; thermochemistry of gas-solid reactions in fluidised beds; thermogravimetric analysis of chars; kinetics of carbon gasification; lubricating oil and bitumen from oil shale. Combustion; fluidised bed combustion; flames, burners and flame stability; oil-coal suspensions; incinerator design for gaseous liquid and solid wastes; industrial applications of natural gas; furnace modelling; High efficiency natural gas burners; low emission gas burners. Fuel efficiency; studies on fuel efficiency systems; energy and resource recovery from wastes; efficiency of fuel conversion processes. Fuel constitution; analysis, constitution and characterisation of primary and derived fuels. Air pollution; workplace atmospheres; combustion generated pollutants gaseous and particulate. Solid wastes; pyrolysis of waste material; resource recovery; energy analysis; incineration.

Civil and Environmental Engineering

Concrete Technology

Specification and quality control of concrete
Investigation of alternative cementitious materials
Durability of concrete
High strength and high performance concrete

Ductility of concrete through the use of polymer fibres
Supplementary cementitious materials eg. fly ash, slag and silica fume
Properties of polymer modified concrete

Concrete Structures

Time effects including creep and shrinkage in reinforced and prestressed concrete structures
Finite element modelling of reinforced concrete including beam-column-slab connections
Collapse load behaviour of reinforced concrete slabs
Durability and ductility of concrete structures
Non-metallic tendons for prestressed concrete applications
Behaviour and strength of slender reinforced concrete columns
Studies on high-strength concrete
Reactive powder concrete
Reinforced concrete deep beams
Partially prestressed concrete beams
Analysis and design of end blocks for post-tensioned beams
Strength of precast prestressed concrete planks
Continuous prestressed concrete structures

Composite Structures

Strength and time dependent characteristics of steel-concrete composite structures
Behaviour of composite beams in negative bending
Concrete composite members

Engineering Construction and Management

Construction operations. Equipment selection. Field layout. Productivity.
Systems studies, systems engineering
Construction management, process planning and control
Construction process automation and field robotics
IT based inter-organisational collaboration
Project management
Contracts, quality, safety, environment and risk management
Management of people
Engineering economics. Financial management.
Time management. Asset management. Maintenance management
Marketing, strategic management

Environmental Fluid Mechanics

Two-fluid systems with small density differences
Pollutant dispersion
Stratified flows
Physics of inland and coastal waters
Turbulence in water bodies and the atmosphere
Atmosphere/ocean interactions
Computational algorithms
Numerical modelling

Environmental Microbiology

Microbiology of waste treatment (including composting)
Environmental pathogens
Wastewater recycle

Geotechnical Engineering

Shear strength of jointed rock, soft rock and clay soils, strength of rockfill
Expansive soils
Mine tailings disposal
Uncertainty in geotechnical engineering
Risk assessment for slopes and dams
Landfill design
Contaminant transport
Site remediation
Embankment dams
Landsliding; groundwater response to rainfall, progressive failure, probability of failure
Influence of soil fabric and mineralogy on properties
Predicting excavatibility of rock

Groundwater

Dryland salinity studies
Groundwater modelling
Coastal groundwater
Groundwater geophysics
Hydrogeochemistry
Contaminant detection and movement
Borehole geophysics
Groundwater resource analysis
Surface water and groundwater interaction

Hydraulics and Coastal Engineering

Open channel flow and hydraulic structures
Fluvial and estuarine hydraulics
Catchment drainage and water quality
Sediment transport and dredging
Coastal structures and port engineering
Numerical and physical modelling
Hydraulics of water and wastewater treatment plants
Pump intakes, manifolds, pipe distribution and cooling water systems
Pollutant disposal and dispersion
Wetlands and stormwater pollution control
Flood modelling and floodplain management
Coastal dynamics, wind-wave interaction
Coastal and beach processes
Coastal zone management
Coastal imaging and remote sensing

Hydrology

Methods of flood estimation
Design based on flood estimates
Economics of data collection
Assessment, modelling, forecasting of drought
Computational hydraulics
Rainfall-runoff relationships
Water quality
Urban drainage
Catchment management
Computer applications in hydrology
Fluid mechanics

Numerical Methods in Geomechanics

Finite element techniques and their applications in geotechnical engineering including static and dynamic loading
Numerical modelling of contaminant flow and flow in fractured and porous media
Numerical modelling of partially saturated flow
Numerical techniques in static and dynamic fracture mechanics and damage mechanics
Application of artificial intelligence and fuzzi-sets in geotechnical engineering

Pavement Engineering

Industrial and airport pavements
Pavement management and rehabilitation
Interlocking concrete block pavements
Accelerated trafficking studies of pavements and pavement materials
Constitutive relationships of soils and pavement materials
Pavement design and analysis

Steel Structures

Thin walled sections and buckling of steel members
Computer aided design of steel structures

Computational Structural Mechanics

Stability analysis using bubble functions
Large scale limit and shakedown analyses
Nonsmooth mechanics
Inverse problems in the mechanics of materials
Limit and shakedown analyses in the presence of constitutive instabilities
Structural optimisation under complementarity constraints

Transport Engineering

Modelling of land use and transport interaction
Transport demand forecasting and planning practice
Intelligent transport systems
Microscopic simulation of vehicular and pedestrian traffic
Measurements, planning and control of traffic
Urban and rural transport system analysis and design
Traffic calming and travel demand management
Pedestrian and cycling facilities; modelling, analysis, planning, design
Airports and air transport
Airports and the environment
Transport and the environment; accidents, energy, intrusion, noise, pollution
Investigations into transport economics, policy and decision making
Economic evaluation and transport investments

Transport and health
Urban transport and sustainable development

Water and Wastewater Treatment

Municipal wastewater and sludge treatment
Mathematical modelling of wastewater treatment
Low cost treatment systems
Water quality
Nutrient control in wastewater treatment
Management of water quality in municipal supplies
Water quality management
Potable, environmental and industrial identification and control of public health risks in water supply

Water Resources Engineering

Interactions and processes involving particles and surfaces with application in the water and wastewater treatment industries and in natural and industrial aqueous systems
Experimental and computational studies of the fate and effects of pollutants
Hydro geochemistry of subsurface environments
Application of geographic information systems (GIS) to water resource management
Remote sensing in hydrologic modelling and resources management

Waste Management

Hazardous waste management
Modelling hazardous waste generation
Waste minimisation
Waste audits
Environmental management plans
High temperature incinerator
Solid waste management strategies
Transfer stations
Recycling incineration
Landfill management plans
Leachate generation and control

Computer Science and Engineering

Active vision
Algorithms
Algorithms design
Analogical reasoning
Application of logic programming
Artificial intelligence
Belief revision
Character recognition and natural language
Cognitive modelling
Cognitive and situated robotics
Combinatorial algorithms
Communication protocols
Communication systems
Compilation
Compiler construction and technology
Compilers and parsing
Component software
Component-based software and reuse
Computational algebra and geometry
Computer architecture
Computer assisted learning
Computer graphics
Computer networks
Computer organisation
Computer security
Computer telephony
Computer vision
Computer vision and control for robotics
Computers and biology
Concurrency
Connectionist modelling of human analogical reasoning and relational cognition
Conversational agents
Cross-organisational and dynamic workflows
Data mining
Database system implementation & performance modelling
Database systems
Deductive databases
Descriptive process modelling
Diagrammatic reasoning
Distributed applications
Distributed computing and systems
Document image analysis and recognition
Electronic commerce
Embedded operating systems and architecture
Epistemic and temporal logics in computer science
Evolution of XML documents (versions and views)
Expert systems
Formal methods and specifications
Formal reasoning and refinement
Functional programming
Fuzzy databases
Fuzzy systems and evidence theory
Graph visualisation
Graph-theoretic algorithms
Heterogeneous computing
High performance computing
Human computer interaction
Image processing
Information retrieval/filtering/retrieval
Intensional programming
Internet information management
Internetwork traffic management
Knowledge acquisition
Knowledge based systems
Knowledge discovery
Knowledge engineering
Knowledge representation
Knowledge based image understanding
Languages
Learning algorithms and theory
Logic programming and systems
Logic in computer science
Logic of knowledge and belief
Logics of action
Machine learning
Management of uncertainty and possibility theory
Microkernels and microkernel-based systems
Microprocessor based equipment
Mining software development experience
Mobile computing
Model based reasoning
Multilingual typography
Multimedia
Multimedia transmission
Multiversion websites
Natural language processing
Natural language understanding
Network management
Neural networks
Non-monotonic reasoning
Object technology
Object-oriented databases
Object-orientation
Object-oriented design and technology
Object-oriented distributed systems
Object-oriented software engineering
Open Software systems
Operating systems
Optimising compilers
Parallel and distributed computing and systems
Parallel processing
Parallelism
Parsing and translation
Pattern recognition
Performance specification
Performance evaluation of Internet protocols and architectures
Persistent systems
Philosophical foundations of AI
Planning
Probabilistic refinement
Process algebras
Production systems
Program analysis
Programming environments
Programming languages
Quality of service in the Internet

Querying databases in mobile environments
Querying web-accessible databases
Reactive systems
Real-Time systems
Reconfigurable computing and architectures
Reconfigurable systems
Recurrent network architectures
Reverse engineering
Rigorous methods for program construction
Robotics
Scheduling and resource management in parallel and distributed systems
Semiconductor device simulation
Semistructured/XML databases
Sharing e-services on the web
Signal recognition
Simulation and modelling
Single-address-space operating systems
Software configuration
Software development cost modelling
Software engineering
Software inspections
Software metrics
Specification and refinement
Specification and verification of real-time concurrent systems
Speech recognition and synthesis
Systems theory
TCP/IP and ATM Internetworking
Temporal logic
Tensor product networks
The Internet and intranets
Theory of computation
Theory of computer security and electronic commerce infrastructure
Theory of databases systems
Theory of distributed systems
Theory of neural networks
Theory of programming languages
Timed systems
User-interface design in software engineering
Version control
Versioned software engineering
Visualisation
Web databases
Web Operating System (WOS)

Electrical Engineering and Telecommunications

Photonics

Optical communications systems.
Optical sensors.
Manufacture of optical fibres (both glass and polymer).
Integrated optics.
Fibre devices and waveguide devices.
Nonlinear effects in optical fibres.
Soliton propagation in optical fibres.

Signal Processing

Signal processing and analysis.
Active and adaptive filtering.
Digital filters.
Digital signal processing and applications.
Acoustic and seismic signal processing.
Speech and audio processing and coding.
Cochlear modeling; biophysical modeling of auditory physiology; speech and audio processing; speech compression, enhancement, recognition; audio compression; text to speech synthesis.
Application of neural networks.
Image and video compression.
Digital image processing and video signal processing.

Telecommunications

(1) Communications Networks

Computer communications and local area networks architecture.
New architectures for local area networks.
Network reliability and service availability.
BISDN, ATM protocols and multimedia communications.
Quality of service in data networks, network management position systems.

(2) Communications Systems

Wireless and mobile communications networks
Land & satellite mobile communications, digital communications CDMA.
Adaptive signal processing.
Information theory.
Error control coding.
Channel coding and Trellis coded modulation.
Space-time signal processing and transmit diversity.
Joint source-channel coding.
Diversity techniques for wireless communications, Space time processing, CDMA receiver design (baseband processing), blind or semi-blind channel identification, channel estimation for OFDM over fading channels, iterative techniques for joint channel estimation and detection
Earth station design, spatial acquisition and tracking, low earth orbit satellites, Ka Band communications.
Quality of service in data networks; positioning systems.

Energy Systems

(1) Power Systems and Energy Studies

Power system analysis. Distribution system planning and operation. Harmonics. Optimization of hydro-electric power systems. Load management and control.

Power system planning and economics. Electricity industry restructuring. End-use efficiency. Renewable energy sources. Photovoltaic systems. Remote area supply. Harmonics. Flexible AC transmission system. Remote area supplies. Renewable energy sources and applications. Power system emergency control. Energy storage. Load management and control.

Renewable energy industry development, renewable energy industry development, energy industry restructuring, distributed renewable and demand-side resources, renewables applications, distributed artificial intelligence

(2) Electrical Power Equipment and Utilization

High voltage and high current phenomena. Insulating material application. Partial discharge detection and location. Gaseous discharges and insulation. E.M. Compatibility. SF6 insulated systems. Overvoltages and equipment protection. Electrical lighting. Electrical measurements and data acquisition. Permanent magnet and other electrical machines and drives. Hybrid actuators.

Equipment for hazardous atmospheres. Computer aided teaching. Electrical machine modelling. Online parameter determination of machines. Synthetic loading of machines. Efficiency measurement of machines using synthetic loading. Application of high temperature superconductors.

Drive dynamics. Control techniques for electric drives. Torque control techniques. Sensorless control. Drive state and parameter Estimation. Motion control systems. Drive system modelling. E.M. Compatibility. Electrical Safety.

Vector control of induction and synchronous motor drive. Torque control techniques. Motion control systems. Drive system modelling. Dynamics of drives. Observer techniques for machine speed, position and parameters. Power electronic circuit and drive simulation. Converter harmonics and mitigation techniques. Power factor correction and active filtering.

(3) Power Electronics

DC/DC converters.
High frequency power transformers.
Inverters for machine drives.
Microprocessor control of power electronics.
Variable speed drives.
Simulation.
Converter non linearities and control.
Converter harmonics.
Unity power factor conversion.
Active filtering.

Microelectronics

Analog integrated circuit design, VLSI fabrication technology, floating-gate CMOS design, low voltage low power CMOS design. MicroElectroMechanical Systems (MEMS), micro-sensors/micro-actuators: inertial sensors, MOEMS, microfluidic devices, biomedical applications. Microfabrication technology. Materials for MEMS.

Microprocessor architectures, programmable logic, integrated microelectronic systems. VLSI design. Embedded systems Quantum computational processes and systems, nanostructures. Ferroelectrics. High temperature superconductors and devices. Microwave antennas and filters.

Systems and Control

Adaptive signal processing and control; stochastic control; averaging theory; estimation and control of queueing networks; vision and control. Signal processing; inverse problems; medical image processing (functional magnetic resonance imaging) ; neural encoding; computer vision; random fields. time series; econometrics; stochastic finance; functional data analysis.

Robust control and filtering, hybrid dynamical systems, state estimation and control via telecommunication networks, guidance, application of modern control and signal processing techniques to biomedical engineering and medicine.

Computation issues in control. Adaptive control. Non-linear control. Digital and adaptive Control. Real-time computing. Nonlinear control. Robust control.

Biomedical engineering. Biological signal analysis. Wavelets. Physiological systems modelling and analysis. ECG analysis. Neural networks. Health telematics and home monitoring. Physiological system modelling. Biological signal processing. Computer modelling of information processing. Neural computing and learning machines.

Constructing design tools for nonlinear systems; robust control design; structural backstepping. Real-time instrumentation and control; designing and implementation of real-time systems capable of implementing real-time control solutions;RT-Linux for the purpose of controller implementation.

Mechanical and Manufacturing Engineering

Aerospace Engineering

Composites
Finite element analysis
Fatigue, fracture mechanics and damage tolerance
Computational aerodynamics
Unsteady boundary layers
Turbulence
Laser anemometry
Flow simulation
Compressor aerodynamics
Design of aircraft
Aerospace CAM/CA
Initial project design
Aerospace policy studies
Distributed logic satellite control systems

Manufacturing Engineering and Management

Production planning and control
Job sop scheduling
Artificial intelligence in manufacturing management
Experimental and theoretical investigations of the following processes: machining, electric discharge machining, laser cutting
Performance of single and multipoint cutting tools including tool life and economics of machining
Properties of materials at high rates of strain
Engineering design analysis and tolerance technology
Quality function deployment
Metrology studies
Flexible fixtures
Applications of genetic algorithms and neural nets in manufacturing
Intelligent control of manufacturing systems
Design for manufacture
Ecologically sustainable manufacturing techniques
Cellular manufacturing strategies
Concurrent engineering
CAD/CAM
Computer-integrated manufacturing
Machine vision for manufacturing inspection
Performance measures
Quality management
Human factors in technology and society

Mechanical Engineering: Applied Mechanics

Mechanics of solids
Stress analysis
Fracture mechanics
Impact mechanics
Spatial and planar linkages
Mechanics of machines
Rotor bearing dynamics
Vibrations
Metallic friction, wear and lubrication
Hydrodynamic dampers
Noise and vibration control
Creep analysis

Mechanical Engineering: Design

Biomechanics
Bulk materials handling
Design of surgical equipment
Computer aided design
Concurrent design
Development of engineering design
Design methodology
Design projects: analysing testing and development for industry
Maintenance management
Wind energy systems
Design with mechatronics
Life assessment

Mechanical Engineering: Fluid and Thermal Engineering

Computational fluid dynamics
Solidification in earth and microgravity
Energy conversion and energy conservation
Engine performance and emissions
Heat transfer
Gas dynamics, transonic flow, shock waves
Optical measuring methods
Refrigeration and air conditioning
Solar energy
Two-phase flow with and without heat transfer

Mechatronic Engineering

Applications of Artificial Intelligence in engineering
Computer interfacing
Electromagnetic systems in manufacturing
Logic programming
Microcomputer control
Neural nets
Reliability engineering
Robotics and manufacturing
Active steering
Metal spinning
Welding research

Naval Architecture

Computer-aided ship design
Ships design methodology
Hydrodynamics of planing surfaces
Hydrodynamics of high-speed ferries, catamarans, hovercraft, hydrofoils, surface-effect ships
Problems in wave resistance
Boundary element methods
Water jets
Light weight ship structures
Nonlinear structural analysis
Resistance
Propulsion
Stability

Mining Engineering

Subsidence of strata overlying underground coal workings and related damage effects; development of a 'Generalised Empirical Method' for subsidence prediction, enabling the empirical data from one coalfield to be employed for predictions elsewhere, after appropriate modifications through the use of a parameter reflecting the lithological character of the undermined strata; comparison of the efficiencies of different ground sealing materials in containing leachates from land fill disposal of various wastes.

Application of computing to mining engineering, operations research and computer simulation of processes; mine safety including lighting, ergonomics in mining, vibration and jarring of machine operators; general occupational health and safety; attitudes to safety; windblasts in underground coal mines due to roof falls.

Improving safety and strata control in coal mining, including both field performance of local mine designs to establish mechanisms of behaviour and development of the theoretical knowledge base to address these mechanisms in design; avoidance of sudden uncontrolled collapses of strata in underground coal mines; minimising the hazards from windblasts in coal mines arising from the 'piston effect' of massive strata collapses; use of electrostatically charged water sprays to suppress respirable dust at the coal face; impact breakage of rock.

Mining management, motivating and managing change in the future; management structures for a changing environment; application of TQM techniques in lieu of statutory regulation.

Instrumentation development for frictional ignition and rock cuttability testing; exploration and mining of gemstone deposits.

Minerals engineering, especially coal: residence times and kinetics in flotation; image analysis of coal sections; mathematical modelling of fluid flow in coal distributors.

Mining explosives: the effect of stemming confinement on fragmentation and movement in blasting, including investigation of the size of the stemming material on the effect of blasting efficiency and of fragmentation size and the explosive cavity for the same blasthole diameter to stemming size ratio; design and use of linear shaped charges to form radial cracks along a predetermined line; depth penetration in the target material.

Air leakage in ventilation ducting; compressive strength of mine pillars; failure criteria for rock and rock mass; role of chemical solutions in rock fracturing; role of tensioning in rock bolting.

Geomechanics: boundary element methods for the computation of stress near underground openings; boundary element methods for the prediction of crack propagation in rock, as applied in rock cutting technology, blasting technology and hydro fracturing; finite element methods for the analysis of wind blast in underground coal mines due to goaf collapse.

Petroleum Engineering

Petroleum Production Economics

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, incorporating inflation, real and nominal net cash flow, treatment of sunk costs, project financing).

Economic indicators (the calculation, application, usefulness and meaning of net present value, rate of return and other indicators). Analysis of production acceleration, lease buy and other incremental economics examples.

Risk analysis (risk in the oil and gas industry, expected value, decision tree analysis, value of information, sensitivity analysis, probability analysis, Monte Carlo simulation, portfolio analysis).

The significance and analysis of government involvement in petroleum activities. The effect of petroleum fiscal regimes on the oil and gas industry. Comparison of fiscal regimes worldwide. Effects of fiscal regimes on exploration, field development and operational/engineering decision making (analysing fiscal severity, fiscal efficiency, incremental fiscal effects)

Reservoir Characterisation

Reservoir characterisation and modelling problems. Basic univariate, bivariate and multivariate statistics for geological data analysis. Petrophysical predictions from well logs. Introduction to petroleum geostatistics. Variogram and covariance models. Kriging and cokriging. Stochastic simulation. Sequential simulation. Gaussian and indicator simulation. Uncertainty quantification. Integrating secondary data. Integrating dynamic data. Reservoir upscaling.

Fundamental studies of physical mechanisms for multi-phase flow through porous media. Network modelling and prediction of capillary pressure, relative permeability and residual oil saturation. Effect of correlated heterogeneity on network model predictions. Constant rate injection porosimetery and measurement of heterogeneity on the pore and core scales. Scale-up from pore-scale to core and well log scales. Prediction of petrophysical properties. Gas injection processes and recovery of waterflood residual oil.

Formation Evaluation

Conventional log analysis/petrophysics and formation evaluation. Log interpretation and evaluation in sandstones and shaly sandstones.

Petrophysical study in multi-mineral and lithologically complex formations. Petrophysical evaluation of limestone reservoirs.

Special log analysis, petrophysics and formation evaluation. Determination from well logs of the mineral composition and clay distribution in a reservoir. Estimation and evaluation of permeability from well logs in heterogeneous formations. Electrofacies evaluation in lithologically complex formations. Identification of lithofacies and depositional facies from well logs. Interwell prediction of petrophysical parameters in reservoirs.

Application of state-of-the-art technology in petrophysics. Application of optimisation techniques in log interpretation.

Application of neural network techniques in log analysis and formation evaluation. Application of pattern recognition techniques in log analysis and formation evaluation. Application of the hydraulic flow units concept and theory in log analysis and petrophysical evaluations.

Application of geostatistics in the spatial distribution study of petrophysical parameters.

Geological uncertainty and quantification. Statistical analysis of geological data. Determination of petrophysical properties from well logs.

Reservoir modelling using petroleum geostatistics. Pixel- and object-based algorithms. Integrating seismic attributes, pressure tests and production data. Upscaling of high-resolution reservoir models. Geoscience applications of artificial intelligence. Expert systems, fuzzy logic, neural networks and genetic algorithms.

Drilling Optimisation, Simulation and Equipment Design

Optimum drilling equipment design. Numerical and analytical modelling of drilling equipment and drilling wells. Estimation of equipment strengths, drilling stresses. Prediction and minimisation of drilling costs. Lightweight alloys in drilling and downhole tubular design. Drilling vibrations and elimination techniques. Slim hole drilling and stability of downhole tubular. Coiled tubing design. Penetration rate modelling. Air, foam and mist drilling and improvement techniques.

The South-East Asia region including Australia continues to grow in importance as a major oil and gas producing region. The operators realise the value of developing fields using contemporary drilling and completion techniques to create highly deviated, extended reach and multilateral wells, mono-bore wells, slim hole wells, etc. These new technologies offer economic benefits through a mix of lower development costs, higher production rate and improved recovery. A number of obstacles to the effective application of these techniques include:

- Borehole instability in shales. Directional control in drilling horizontal and multilateral wells. Instability of drill pipes for deep and slim holes,
- Managing incompatibilities between drilling muds and formations. Formation damage due to drilling and completion fluids. Drilling equipment and processes for high temperatures. Hydraulic fracture treatments in high stress and low permeability rocks. Disposal of drill cuttings and mud waste.

The School of Petroleum Engineering has established leading-edge research facilities to improve the understanding of processes and mechanics involved in the above areas and develop drilling and completion technologies to reduce field development costs and improve recovery efficiency. The research facilities include well equipped laboratories and computer modelling capabilities: rock and fracture mechanics laboratory; petrophysical laboratory; drilling fluid and cementing laboratory; formation damage analysis laboratory (dynamic filtration, fluid displacement, SEM, petrographic, etc.); borehole stability analysis laboratory (chemical potential, pore pressure penetration, swelling of shales, transient pressure pulse permeameter etc); torque and drag evaluation in slim-holes; design and optimisation of drilling muds and cements, stability analysis of tubulars including drill pipes and casings; design of well trajectories and completions for different in-situ stress and hole conditions and production strategies; design of hydraulic fracture stimulation programs for tight gas and geothermal reservoir (HDR) development; acid stimulation of low permeability sand stones; and design and planning of mud waste and cutting disposal in deep isolated formations by hydraulic fracturing.

Photovoltaic Engineering

Crystalline silicon solar cells – design and processing techniques
Electrical energy storage
GaAs and SiGe devices
Light tapping in thin crystalline silicon
Novel semiconductor devices
Photovoltaic device fabrication and characterisation
Photovoltaic device physics, modelling, design and characterisation
Photovoltaic module design
Photovoltaic solar energy conversion

Quantum well and advanced solar cell structures
Quantum well structures
Quantum wires
Semiconductor device modeling
Semiconductor device physics
Silicon solar cells
Silicon solar cells – commercially oriented device design, processing and characterisation
Thin film crystalline silicon photovoltaic devices

Surveying and Spatial Information Systems

3-D laser scanning
Airborne gravimetry
Analysis of deformation measurements
Applications of inertial technology
Computer controlled surveying
Coordinate transformation
Digital image analysis for photogrammetry and remote sensing
Digital elevation models from aerial and satellite images
Electronic distance measurement
Geoid determination
Geopotential model testing
GPS data management
GPS geodynamics
GPS heighting
GPS surveying
Gravity field prediction
Height datum determination
High-precision surveying
Imaging radar
Land information management
Land use and urban monitoring
Least squares estimation and alternatives
Machine vision applications of digital photogrammetry
Metrology and dimensional measurement
Monitoring of structures and terrain
Precise satellite orbit determination
Precise GPS navigation
Quality issues in land information systems
Satellite geodesy
Survey network adjustment
Vertical datum unification

Remote Sensing and GIS

Analysis of errors in DEM determination from radar interferometry
Analysis of image and map quality
Analysis of high resolution SPOT and Landsat TM data
Application of aircraft and satellite data to arid land studies
Application of remote sensing to pollution and environmental monitoring
Application of satellite data to geological studies
Application of satellite imagery to small scale mapping
Application of spaceborne synthetic aperture radar data
Artificial intelligence in remote sensing and GIS
Automated feature extraction
Determining the characteristics of surface reflectance
Forest inventory and monitoring
GIS in transport planning
Incorporation of auxiliary data into classification procedures
Monitoring land use change using remotely sensed data
Multimedia
Multispectral linear transformations
Quality issues in hydrographic information systems
Synergism of radar, visible and infrared remotely sensed data
Urban area studies
Vertical topology in GIS
Visualisation

School of Chemical Engineering and Industrial Chemistry

Head of School: Associate Professor Michael Brungs
Administrative Officer: Vivienne Brennan
Research Program Coordinator: Associate Professor John Stubington
Process Engineering Program Coordinator: Dr Roya Sheikholeslami

The School has a vigorous postgraduate training program focused on national and international areas of importance. We have research interests in many leading areas. The School's major research areas are:

- Environmental Technology
- Electrochemical Engineering
- Heat and Mass Transfer
- High Temperature Chemistry
- Membrane Science and Technology
- Minerals and Energy
- Particle Technology and Catalysis
- Polymer Science and Technology.

For a full list contact the School or refer to 'Research and Project Areas'.

Research degrees include a Master of Science in Industrial Chemistry (2016) and in Chemical Engineering (2010) and a Master of Engineering in Chemical Engineering (2150). A doctoral (PhD) research program is offered in Chemical Engineering (1010) and Industrial Chemistry (1016).

A coursework based Master degree in Process Engineering (8016) is offered. The School also has a Graduate Certificate (7334) and Graduate Diploma (5034) in Aluminium Smelting Technology.

All enquiries relating to these courses may be directed by email to the following academics in our School:

Postgraduate research enquiries can be directed to Associate Professor John Stubington: pgstudy.ceic@unsw.edu.au

Postgraduate coursework enquiries can be directed to Dr Roya Sheikholeslami: ceic@unsw.edu.au

Graduate Programs in Aluminium Smelting Technology enquiries can be directed to Professor Maria Skyllas-Kazacos: m.kazacos@unsw.edu.au

Program Outlines

The School welcomes enquiries from graduates interested in pursuing research for the award of the following degrees. Upon applying, applicants for ME, MSc or PhD must attach to their admission form: a statement of about 100 words of a proposed research plan; details of previous research experience; names and addresses of two academic referees from most recent studies who would be willing to support your application; a full academic transcript of your qualifications (a certified English translation is required if this is not in English); and proof that you satisfy English requirements (you may apply to do an intensive English training course if you are not able to satisfy these requirements).

Please contact the School for an information/enrolment package to be sent to you and be sure to include your full address. (Email: pgstudy.ceic@unsw.edu.au)

PhD

Chemical Engineering	1010
Industrial Chemistry	1016

MSc

Chemical Engineering	2010
Industrial Chemistry	2016

ME

Chemical Engineering	2150

Master of Engineering Science Degree Programs

The MEngSc degree programs involve a project that must integrate and apply the principles treated in the program. It may take the form of a design feasibility study or an experimental investigation. Evidence of initiative and of a high level of ability and understanding is required in the student's approach, and the results must be embodied in a report and submitted in accordance with the University's requirements.

8016 Master of Engineering Science in Process Engineering

MEngSc

The program will involve full-time study at UNSW for overseas students for a period of one year. Australian citizens or permanent residents may elect to take the program in a series of modules over a somewhat longer period. The degree can be obtained by taking a combination of courses to a minimum number of 48 units of credits. Students with a recognised 4 year BE or BSc degree OR students with a recognised 3 year BE or BSc plus satisfactory evidence of other academic or professional attainments will be permitted to enrol.

Whilst the program is aimed at maximum flexibility, four courses (6 UOC) from the list of postgraduate courses at CEIC (CEIC81XX, CEIC82XX and CEIC83XX) will be considered as core courses for the

total of 24 units of credit. ***Not all courses are offered in any one session***. Students may choose to register in two more postgraduate courses at CEIC from the list below or instead may choose CEIC8320 (12 UOC), which is a project on relevant aspects of process industries, supervised by academic members of staff. A list of current research areas and supervisors will be given to enrolling students.

The remainder of 12 units of credit can be taken as electives, which may be given as one-week intensive programs or can be taken from other schools at the University.

The Head of School or Graduate Studies Coordinator must approve each student's program.

List of Courses (6 units of credit)

CEIC8101	Reaction Engineering and Catalysis
CEIC8102	Process Control
CEIC8103	Particle and Separation Technology
CEIC8104	Topics in Polymer Technology
CEIC8201	Minerals Engineering I
CEIC8206	Minerals Engineering II
CEIC8204	Topics in Business Management in Chemical Engineering
CEIC8205	Fuel and Energy Engineering I
CEIC8209	Fuel and Energy Engineering II
CEIC8203	Environmental Management
CEIC8301	Electrochemical Engineering
CEIC8302	Process Heat Transfer
CEIC8303	Fouling in Process Industries and Equipment
CEIC8310	Computing Studies in the Process Industries
CEIC8311	Instrumental Analysis in the Process Industries
CEIC8313	Environmental Technology
CEIC8320	Process Engineering Project for MEngSc program only
CEIC8330	Process Engineering Project in the Petroleum Industry
CEIC8331	Process Engineering: Natural Gas and Light Hydrocarbons to Petrochemicals
CEIC8332	Process Engineering in the Food Industry
CEIC8335	Advanced Computer Methods in the Process Industries
CEIC8336	Environmental Chemistry in the Process Industries
CEIC8337	Particle Characterisation in the Process Industries
CEIC8341	Membrane Technology in the Process Industries
CEIC8351	Pharmaceutical Processing

Graduate Programs in Aluminium Smelting Technology

Two levels of training can be undertaken in Aluminium Smelting Technology, each level including a three to four week intensive course that is partly residential, and will include visits to operating smelters for workshop discussions and practical examples of topics being taught. The Graduate Certificate (7334) requires 24 units of credit (four courses each of 6 units of credit), while the Graduate Diploma (5034) requires 36 units of credit to be satisfactorily completed. Satisfactory performance in the Certificate and Diploma courses can lead to the possibility of students subsequently undertaking a Master of Engineering Science in Process Engineering (8016) which is a 48 units of credit degree.

7334 Graduate Certificate in Aluminium Smelting Technology

GradCert

The School of Chemical Engineering and Industrial Chemistry now offers a Graduate Certificate in Aluminium Smelting Technology to allow a flexible entry mode for experienced applicants with limited tertiary qualifications. Applicants with a recognised 3 or 4 year BSc or BE degree will be permitted to enrol in the Graduate Certificate program. Applicants with no tertiary qualifications but with experience in the aluminium smelting industry will also be considered for entry into the GradCert program. Admission will be on an individual basis depending on the level of experience. The content for the GradCert program is made up of the four courses (each of 6 units of credit) detailed below. These courses will be offered as flexible delivery modules which will include a 3-4 week intensive training period (in June/July or November/December) to permit industry personnel to attend on a full-time basis.

Students entering the program with an appropriate degree may progress into the GradDip (5034) / Masters Process Engineering (8016) program providing the normal admission requirements are met. Students entering the program without a degree, but with relevant industrial experience may be eligible to upgrade to the GradDip (5034) depending on their performance. This will usually require a credit average (65%) with no failures in the 4 courses attempted.

Core Courses

CEIC7001	The Aluminium Industry
CEIC7002	Electrochemical Engineering
CEIC7003	Process Operation
CEIC7004	Material Requirements and Selection

Admission requirements: Minimum requirement is a recognised 3 year BSc or BE degree or approved experience in the aluminium smelting industry.

5034 Graduate Diploma in Aluminium Smelting Technology

GradDip

The School of Chemical Engineering and Industrial Chemistry now offers a Graduate Diploma in Aluminium Smelting Technology. Applicants with a recognised 3 or 4 year BSc or BE degree will be permitted to enrol directly into the Diploma program. Applicants with no tertiary qualifications but with experience in the aluminium smelting industry will also be considered for entry into the Diploma program after successful completion of the corresponding Graduate Certificate in Aluminium Smelting Technology (7334). Depending on their performance, students enrolled in the GradCert program may also be eligible to upgrade to the Graduate Diploma prior to taking out the Certificate as long as they already hold a 3-4 year relevant degree and have no recorded failures in the courses attempted.

The Graduate Diploma in Aluminium Smelting Technology will be awarded after successful completion of 36 units of credit courses. For the GradDip, the 4 courses offered under the GradCert in Aluminium Smelting Technology must be completed together with a further 12 units of credit. This must include at least one of the following 6 units of credit Elective Courses. Please note that some of these courses may be offered only every two years. Some courses will be available from 2002 as distance delivery modules, which will include a 3-4 week intensive training period (usually in June/July) to permit industry personnel to attend on a full-time basis. A further 6 units of credit can be chosen from an approved tertiary program.

Applicants who have already completed the GradCert in Aluminium Smelting Technology will need to choose at least 2 of the specified 6 units of credit Elective Courses. Of the additional 24 units of credit required for the GradDip, at least 12 units of credit must be selected from the Master of Process Engineering (8016) program at UNSW. The balance may be chosen from other approved tertiary programs.

Core Courses (Common to Graduate Certificate program)

CEIC7001	The Aluminium Industry
CEIC7002	Electrochemical Engineering
CEIC7003	Process Operation
CEIC7004	Material Requirements and Selection

Elective Courses

CEIC7005	Quality Control in Smelting
CEIC7006	Retrofitting and Advances Cell Design
CEIC7007	Emissions and Waste Minimisation

Entry Requirements: Recognised 3 or 4 year BSc or BE degree or after successful completion of Graduate Certificate in Aluminium Smelting Technology (7334).

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 (civil engineering systems, engineering economics, project planning and management and civil engineering construction), geotechnical engineering (foundation, soil, rock, dam and pavement engineering, geomechanics and environmental geomechanics), structural engineering (structural analysis and design, concrete, steel and composite structures, bridge engineering and concrete and materials technology), transport engineering (planning design and operation of transport systems, traffic analysis, land use and transport modelling, statistical analysis, economic evaluations and environmental impact studies), and water engineering (hydraulics, hydrology, groundwater, coastal engineering, water resources, water and wastewater treatment, waste management and public health engineering).

The School comprises specialist staff with a broad spectrum of expertise across the disciplines of civil and environmental engineering.

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 Centre for Water and Waste Technology is also located within the School.

Program Outlines

Opportunities are provided for graduate research leading to the award of the degrees of Master of Engineering (2650), Master of Science (2750) and Doctor of Philosophy (1630). The School has a large number of full-time research students and it leads the country in research across the breadth of civil and environmental engineering.

The School offers the most extensive range of postgraduate coursework in civil and environmental engineering in Australia. There are formal graduate programs offered in internal mode leading to the award of the degrees of Master of Engineering Science (8612), Master of Environmental Engineering Science (8615), the Graduate Diploma in Engineering (5459) and the Graduate Certificate in Civil or Environmental Engineering (7336 or 7337). These programs are available in specialist areas including project management, construction management, engineering/technology management, infrastructure management, environmental engineering, coastal engineering and management, geotechnical engineering, groundwater studies, hydrology and water resources, structural engineering, transport and traffic engineering, waste management, water and wastewater treatment, water quality management and water engineering. Corresponding programs in external mode delivery are 8617, 8618 and 5454. Within the external Master of Engineering Science and Graduate Diploma programs, students may undertake construction management, project management, engineering/technology management, infrastructure management, environmental engineering, water & wastewater treatment and waste management by distance learning. Some specialisations are also taught in offshore delivery in Singapore – the Master of Engineering Science (8607) and Graduate Diploma (5444).

Fees are payable for postgraduate coursework but a large number of equity scholarships are available. Details are available from NewSouth Q in the Chancellery or on the Scholarships website: **www.scholarships.unsw.edu.au**.

Course Work Programs

Master of Engineering Science and Master of Environmental Engineering Science candidates are required to complete a program totalling 48 units of credit which may include a 12 unit of credit project. Courses are presented in a range of delivery modes including 3 hours per week over a 14 week session (6 units of credit), 3 hours per week over a 7 week period (3 units of credit), and as 3 day short courses (3 units of credit). Some courses are available off-campus in external mode delivery. Subject to approval, candidates may undertake some courses from other schools in the faculty, in other faculties or at other universities.

Students may enrol in a particular academic plan or specialisation. Usually a student undertakes a minimum of 36 units of credit from a list of prescribed courses for the particular plan or specialisation and a maximum of 12 units of credit from other postgraduate courses available within the School. The Postgraduate Coursework Coordinator may approve variations to the above in special circumstances and must approve elective courses taken outside the School.

Graduate Diploma candidates are required to complete a program of study totalling 36 units of credit of coursework and may choose from a range of courses in the discipline of their choice. All courses offered in the Masters program can also be taken in the Graduate Diploma program subject to approval by the Postgraduate Coursework Coordinator. In some cases up to 12 units of credit may be derived from approved undergraduate courses.

It should be noted that some candidates who have partially completed the requirements for Graduate Diploma might be considered for upgrading to the relevant Masters program with advanced standing. Further enquiries should be made at the School Office.

Note that not all courses are offered each year and the School Office should be consulted for details of the timetable for any particular year. Consequently not all academic plans are available on a full-time basis.

8612 Master of Engineering Science

MEngSc

Internal Mode Delivery

In each academic plan or specialization, a minimum of 36 units of credit must be taken from the list of prescribed courses, unless a variation is approved by the Postgraduate Coursework Coordinator. Advice on selection of courses is available from the School Office. If CVEN9930 is undertaken as part of the 36 units of credit minimum requirement, the topic of the research project must be in the area of the relevant specialisation.

CVPGAS 8612 Project Management

Prescribed courses:

CVEN9701 Engineering Economics and Financial Management (6 UOC)
CVEN9702 Project Planning and Control (6 UOC)
CVEN9703 Quality and Quality Systems (6 UOC)
CVEN9706 Human Resources Management (6 UOC)
CVEN9707 Contracts Management (6 UOC)
CVEN9710 Management of Risk (6 UOC)
CVEN9730 International Project Management (6 UOC)
CVEN9731 Project Management Framework (6 UOC)
CVEN9930 Masters Project (12 UOC)

CVPGBS 8612 Construction Management

Prescribed courses:

CVEN9701 Engineering Economics and Financial Management (6 UOC)
CVEN9702 Project Planning and Control (6 UOC)
CVEN9703 Quality and Quality Systems (6 UOC)
CVEN9706 Human Resources Management (6 UOC)
CVEN9707 Contracts Management (6 UOC)
CVEN9710 Management of Risk (6 UOC)
CVEN9714 Resource Management (6 UOC)
CVEN9723 Design of Construction Operations (6 UOC)
CVEN9727 Construction Estimating and Tendering (6 UOC)
CVEN9730 International Project Management (6 UOC)
CVEN9731 Project Management Framework (6 UOC)
CVEN9930 Masters Project (12 UOC)

CVPGCS 8612 Engineering and Technology Management

Prescribed courses:

CVEN9701 Engineering Economics and Financial Management (6 UOC)
CVEN9703 Quality and Quality Systems (6 UOC)
CVEN9706 Human Resources Management (6 UOC)
CVEN9707 Contracts Management (6 UOC)
CVEN9708 Asset Management (6 UOC)
CVEN9710 Management of Risk (6 UOC)
CVEN9714 Resource Management (6 UOC)
CVEN9717 Marketing in Technology and Engineering (6 UOC)
CVEN9718 Strategic Management in Engineering (6 UOC)
CVEN9930 Masters Project (12 UOC)

CVPGDS 8612 Infrastructure Management

Prescribed courses:

CVEN9701 Engineering Economics and Financial Management (6 UOC)
CVEN9703 Quality and Quality Systems (6 UOC)
CVEN9707 Contracts Management (6 UOC)
CVEN9708 Asset Management (6 UOC)
CVEN9710 Management of Risk (6 UOC)
CVEN9714 Resource Management (6 UOC)
CVEN9717 Marketing in Technology and Engineering (6 UOC)
CVEN9718 Strategic Management in Engineering (6 UOC)
CVEN9930 Masters Project (12 UOC)

CVPGES 8612 Geotechnical Engineering

Prescribed courses:

CVEN9500 Engineering Geology and Geotechnical Models (3 UOC)
CVEN9501* Geotechnical Site Investigation Methods (3 UOC)
CVEN9502* Geotechnical Engineering of Foundations (3 UOC)
CVEN9503 Advanced Foundation Engineering (3 UOC)
CVEN9506 Geotechnical Mapping and Logging (3 UOC)
CVEN9507 Advanced Geotechnical Site Investigations (3 UOC)
CVEN9508 Rock Slope Instability and Stabilisation (3 UOC)
CVEN9773* Introduction to Rock Engineering (3 UOC)
CVEN9790 Soil Slope Instability and Stabilisation (6 UOC)
CVEN9793 Geomechanics (6 UOC)
CVEN9794 Geotechnical Engineering of Dams (6 UOC)

**If the student has covered similar topics in his/her Bachelor degree, alternative courses may be included from the following list of recommended electives.*

Recommended electives:

CVEN7807 Groundwater Hydrology (3 UOC)
CVEN7808 Investigation of Groundwater Resources (3 UOC)
CVEN7809 Geophysical Techniques in Groundwater and Geotechnical Studies (3 UOC)
CVEN9509 Pavement Materials (3 UOC)
CVEN9504 Foundation Engineering Construction Methods (3 UOC)
CVEN9770 Introduction to Numerical Methods in Civil Engineering (3 UOC)
CVEN9775 Numerical Methods in Geotechnical Engineering (3 UOC)
CVEN9776 Rock Engineering for Tunnels and Underground Structures (3 UOC)
CVEN9784 Pavement Analysis and Design (6 UOC)
CVEN9785 Pavement Evaluation and Maintenance (3 UOC)
CVEN9786 Industrial, Airport and Heavy Duty Pavements (3 UOC)
CVEN9799 Geotechnics of Waste Disposal and Site Remediation (6 UOC)

CVPGQS 8612 Engineering Geology

Prescribed courses:

CVEN7807 Groundwater Hydrology (3 UOC)
CVEN9500 Engineering Geology and Geotechnical Models (3 UOC)
CVEN9501 Geotechnical Site Investigation Methods (3 UOC)
CVEN9502 Geotechnical Engineering of Foundations (3 UOC)
CVEN9506 Geotechnical Mapping and Logging (3 UOC)
CVEN9507 Advanced Geotechnical Site Investigations (3 UOC)
CVEN9508 Rock Slope Instability and Stabilisation (3 UOC)
CVEN9773 Introduction to Rock Engineering (3 UOC)
CVEN9776 Rock Engineering for Tunnels and Underground Structures (3 UOC)
CVEN9790 Soil Slope Instability and Stabilisation (6 UOC)
CVEN9794 Geotechnical Engineering of Dams (6 UOC)
CVEN9798 Fundamentals of Geomechanics (3 UOC)

Recommended electives:

CVEN7808 Investigation of Groundwater Resources (3 UOC)
CVEN7809 Geophysical Techniques in Groundwater and Geotechnical Studies (3 UOC)
CVEN9503 Advanced Foundation Engineering (3 UOC)
CVEN9504 Foundation Engineering Construction Methods (3 UOC)
CVEN9509 Pavement Materials (3 UOC)
CVEN9770 Introduction to Numerical Methods in Civil Engineering (3 UOC)
CVEN9785 Pavement Evaluation and Maintenance (3 UOC)
CVEN9786 Industrial, Airport and Heavy Duty Pavements (3 UOC)
CVEN9793 Geomechanics (6 UOC)
CVEN9799 Geotechnics of Waste Disposal and Site Remediation (6 UOC)

CVPGFS 8612 Structural Engineering

Prescribed courses:

CVEN9770 Introduction to Numerical Methods in Civil Engineering (3 UOC)
CVEN9802 Structural Stability (6 UOC)
CVEN9806 Prestressed Concrete Design (6 UOC)
CVEN9809 Reinforced Concrete Design (6 UOC)
CVEN9818 Bridge Engineering (6 UOC)
CVEN9820 Computational Structural Mechanics (6 UOC)
CVEN9822 Steel Structures (6 UOC)
CVEN9824 Advanced Materials Technology (6 UOC)
CVEN9827 Composite Steel – Concrete Structures (6 UOC)
CVEN9930 Masters Project (12 UOC)

CVPGGS 8612 Transport Engineering

Prescribed courses:

CVEN9405 Urban Transport Planning Practice (6 UOC)
CVEN9410 Highway Engineering Practice (6 UOC)
CVEN9414 Transport Systems - Part 1: Network Analysis (6 UOC)
CVEN9415 Transport Systems - Part 2: Queuing Theory (6 UOC)
CVEN9421 Fundamentals of Traffic Engineering (6 UOC)
CVEN9422 Traffic Management and Control (6 UOC)
CVEN9423 Design and Evaluation of Urban Transport Systems (6 UOC)
CVEN9425 Intelligent Transport Systems (6 UOC)
GEOG9018 Transportation Applications of GIS (6 UOC)
CVEN9930 Masters Project (12 UOC)

Recommended electives:

CVEN9509 Pavement Materials (3 UOC)
CVEN9702 Project Planning and Control (6 UOC)
CVEN9707 Contracts Management (6 UOC)
CVEN9727 Construction Estimating and Tendering (6 UOC)
CVEN9731 Project Management Framework (6 UOC)
CVEN9784 Pavement Analysis and Design (6 UOC)
CVEN9785 Pavement Evaluation and Management (3 UOC)
CVEN9786 Industrial, Airport and Heavy Duty Pavements (3 UOC)
GEOG9011 Environmental Impact Assessment (6 UOC)

CVPGHS 8612 Waste Management

Prescribed courses:

CVEN9851 Unit Operations in Water and Waste Management (6 UOC)
CVEN9872 Solid Waste Management (6 UOC)
CVEN9881 Hazardous Waste Management (6 UOC)
CVEN9884 Environmental Engineering Science 1 (6 UOC)
or CVEN7825 (3 UOC) and CVEN7826 (3 UOC)
CVEN9885 Environmental Engineering Science 2 (6 UOC)
or CVEN7827 (3 UOC) and CVEN7828 (3 UOC)
CVEN7832 Life Cycle Assessment (3 UOC)
CVEN9799 Geotechnics of Waste Disposal and Site Remediation (6 UOC)
CVEN9930 Masters Project (12 UOC)

CVPGJS 8612 Water and Wastewater Treatment

Prescribed courses:

CVEN9851 Unit Operations in Water and Waste Management (6 UOC)
CVEN9884 Environmental Engineering Science 1 (6 UOC)
or CVEN7825 (3 UOC) and CVEN7826 (3 UOC)
CVEN9855 Water and Wastewater Analysis (6 UOC)
CVEN9856 Water Treatment (6 UOC)
CVEN9857 Wastewater Treatment (6 UOC)
CVEN7822 Water Resources Modelling 2 (3 UOC)
CVEN7829 Decision Support Systems (3 UOC)
CVEN7832 Life Cycle Assessment (3 UOC)
CVEN9930 Masters Project (12 UOC)

CVPGKS 8612 Groundwater Studies

All 3 UOC courses in the following list are offered in 3-day short course mode.

Prescribed courses:

CVEN7807 Groundwater Hydrology (3 UOC)
CVEN7808 Investigation of Groundwater Resources (3 UOC)
CVEN7809 Geophysical Techniques in Groundwater Studies (3 UOC)
CVEN7810 Electrical Methods in Groundwater Investigation (3 UOC)
CVEN7811 Sediment Transport in Alluvial River Systems (3 UOC)
CVEN7819 Hydrological Processes (3 UOC)
CVEN7823 Applied Groundwater Modelling (3 UOC)
CVEN7830 Physical Aspects of Contaminated Groundwater (3 UOC)
CVEN7831 Chemical and Biological Aspects of Contaminated Groundwater (3 UOC)
GEOL9111 Groundwater Environments (3 UOC)
GEOL9053 Hydrogeochemistry (3 UOC)
GEOL9054 Analysis and Interpretation of Hydrochemical Data (3 UOC)
GEOL9055 Hydrogeochemical Modelling (3 UOC)
GEOL9112 Investigation and Management of Salinity (3 UOC)
CVEN9930 Masters Project (12 UOC)

CVPGLS 8612 Coastal Engineering and Management

All courses in the following list with a 7 prefix are offered in 3-day short course mode.

Prescribed Courses:

CVEN7800 Urban Hydrology and Stormwater (3 UOC)
CVEN7801 Design of Stormwater Structures (3 UOC)
CVEN7802 Coastal Dynamics (3 UOC)
CVEN7803 Coastal & Beach Processes (3 UOC)
CVEN7804 Coastal Structures (3 UOC)
CVEN7805 Coastal Zone Management (3 UOC)
CVEN7807 Groundwater Hydrology (3 UOC)
CVEN7808 Investigation of Groundwater Resources (3 UOC)
CVEN7811 Sediment Transport in Alluvial River Systems (3 UOC)
CVEN7812 Natural and Artificial Wetlands (3 UOC)
CVEN7813 Estuarine Processes (3 UOC)
CVEN7818 Channel and River Models (3 UOC)
CVEN7819 Hydrological Processes (3 UOC)
CVEN7822 Water Resources Modelling (3 UOC)

CVEN7824 Risk Analysis in Water Engineering (3 UOC)
CVEN9930 Masters Project (12 UOC)

CVPGMS 8612 Hydrology and Water Resources

All 3 UOC courses in the following list are offered in 3-day short course mode.

Prescribed courses:

CVEN7800 Urban Hydrology and Stormwater (3 UOC)
CVEN7801 Design of Stormwater Structures (3 UOC)
CVEN7806 Catchment and Water Quality Management (3 UOC)
CVEN7807 Groundwater Hydrology (3 UOC)
CVEN7811 Sediment Transport in Alluvial River Systems (3 UOC)
CVEN7812 Natural and Artificial Wetlands (3 UOC)
CVEN7813 Estuarine Processes (3 UOC)
CVEN7814 Flood Estimation (3 UOC)
CVEN7815 Introduction to Catchment Models (3 UOC)
CVEN7816 Catchment Surface Models (3 UOC)
CVEN7818 Channel and River Models (3 UOC)
CVEN7822 Water Resources Modelling 2 (3 UOC)
CVEN7819 Hydrological Processes (3 UOC)
CVEN7820 Rainfall and Runoff Processes (3 UOC)
CVEN7824 Risk Analysis in Water Engineering (3 UOC)
GEOL9112 Investigation and Management of Salinity (3 UOC)
CVEN9930 Masters Project (12 UOC)

CVPGNS 8612 Water Quality Management

All 3 UOC courses in the following list are offered in 3-day short course mode.

Prescribed courses:

CVEN7800 Urban Hydrology and Stormwater (3 UOC)
CVEN7805 Coastal Zone Management (3 UOC)
CVEN7806 Catchment and Water Quality Management (3 UOC)
CVEN7807 Groundwater Hydrology (3 UOC)
CVEN7812 Natural and Artificial Wetlands (3 UOC)
CVEN7813 Estuarine Processes (3 UOC)
CVEN7815 Introduction to Catchment Models (3 UOC)
CVEN7816 Catchment Surface Models (3 UOC)
CVEN7819 Hydrological Processes (3 UOC)
CVEN7822 Water Resources Modelling 2 (3 UOC)
CVEN7824 Risk Analysis in Water Engineering (3 UOC)
CVEN7825 Aquatic Chemistry for Engineering (3 UOC)
CVEN7826 Microbiology for Engineering (3 UOC)
CVEN7827 Contaminant Transport in the Environment (3 UOC)
CVEN7828 Transformation and Fate of Contaminants (3 UOC)
CVEN9930 Masters Project (12 UOC)

8615 Master of Environmental Engineering Science

MEnvEngSc

Internal Mode Delivery

The Master of Environmental Engineering Science consists of the following three courses (18 UOC):

CVEN9884 Environmental Engineering Science 1 (6 UOC)
or CVEN7825 (3 UOC) and CVEN7826 (3 UOC)
CVEN9885 Environmental Engineering Science 2 (6 UOC)
or CVEN7827 (3 UOC) and CVEN7828 (3 UOC))
CVEN9888 Environmental Management (6 UOC)

plus 30 units of credit taken from a wide range of electives courses offered by the School of Civil and Environmental Engineering or other courses approved by the Postgraduate Coursework Coordinator.

Typically elective courses are taken from the program areas of 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; the Masters Project.

8617 Master of Engineering Science

MEngSc

External Mode Delivery

In each academic plan or specialisation, a minimum of 36 units of credit must be taken from the list of prescribed courses, unless a variation is approved by the Postgraduate Coursework Coordinator. Advice on selection of courses is available from the School's External Programs Administrator.

CVPGAS 8617 Project Management

Prescribed courses:

CVEN8701 Engineering Economics and Financial Management (6 UOC)
CVEN8703 Quality and Quality Systems (6 UOC)
CVEN8706 Human Resources Management (6 UOC)
CVEN8707 Contracts Management (6 UOC)
CVEN8710 Management of Risk (6 UOC)
CVEN8720 Problem Solving and Decision Making (6 UOC)
CVEN8730 International Project Management (6 UOC)
CVEN8731 Project Management Framework (6 UOC)

CVPGBS 8617 Construction Management

Prescribed courses:

CVEN8701 Engineering Economics and Financial Management (6 UOC)
CVEN8702 Project Planning and Control (6 UOC)
CVEN8703 Quality and Quality Systems (6 UOC)
CVEN8706 Human Resources Management (6 UOC)
CVEN8707 Contracts Management (6 UOC)
CVEN8710 Management of Risk (6 UOC)
CVEN8714 Resource Management (6 UOC)
CVEN8720 Problem Solving and Decision Making (6 UOC)
CVEN8723 Design of Construction Operations (6 UOC)
CVEN8727 Construction Estimating and Tendering (6 UOC)
CVEN8730 International Project Management (6 UOC)
CVEN8731 Project Management Framework (6 UOC)

CVPGCS 8617 Engineering and Technology Management

Prescribed courses:

CVEN8701 Engineering Economics and Financial Management (6 UOC)
CVEN8703 Quality and Quality Systems (6 UOC)
CVEN8706 Human Resources Management (6 UOC)
CVEN8707 Contracts Management (6 UOC)
CVEN8708 Asset Management (6 UOC)
CVEN8710 Management of Risk (6 UOC)
CVEN8714 Resource Management (6 UOC)
CVEN8717 Marketing in Technology and Engineering (6 UOC)
CVEN8718 Strategic Management in Engineering (6 UOC)
CVEN8720 Problem Solving and Decision Making (6 UOC)

CVPGDS 8617 Infrastructure Management

Prescribed courses:

CVEN8701 Engineering Economics and Financial Management (6 UOC)
CVEN8703 Quality and Quality Systems (6 UOC)
CVEN8707 Contracts Management (6 UOC)
CVEN8708 Asset Management (6 UOC)
CVEN8710 Management of Risk (6 UOC)
CVEN8714 Resource Management (6 UOC)
CVEN8717 Marketing in Technology and Engineering (6 UOC)
CVEN8718 Strategic Management in Engineering (6 UOC)
CVEN8720 Problem Solving and Decision Making (6 UOC)

CVPGFS 8617 Transport Engineering

Prescribed courses:

CVEN8414 Transport Systems Part 1 (6 UOC)
CVEN8415 Transport Systems Part 2 (6 UOC)
CVEN8421 Fundamentals of Traffic Engineering (6 UOC)
CVEN8422 Traffic Management and Control (6 UOC)
CVEN8701 Engineering Economics and Financial Management (6 UOC)
CVEN8703 Quality and Quality Systems (6 UOC)
CVEN8706 Human Resources Management (6 UOC)
CVEN8888 Environmental Management (6 UOC)
CVEN8930 Masters Project (12 UOC)

CVPGOS 8617 Waste Management

Prescribed courses:

CVEN8851 Unit Operations in Water and Waste Management (6 UOC)
CVEN8872 Solid Waste Management (6 UOC)
CVEN8881 Hazardous Waste Management (6 UOC)
CVEN8884 Environmental Engineering Science 1 (6 UOC)
CVEN8885 Environmental Engineering Science 2 (6 UOC)
CVEN8888 Environmental Management (6 UOC)
CVEN8799 Geotechnics of Waste Disposal & Site Remediation (6 UOC)
CVEN8930 Masters Project (12 UOC)

CVPGJS 8617 Water and Wastewater Treatment

Prescribed courses:

CVEN8851 Unit Operations in Water and Water Management (6 UOC)
CVEN8855 Water and Wastewater Analysis and Quality Requirements (6 UOC)
CVEN8856 Water Treatment (6 UOC)
CVEN8857 Wastewater Treatment (6 UOC)
CVEN8881 Hazardous Waste Management (6 UOC)
CVEN8884 Environmental Engineering Science 1 (6 UOC)
CVEN8888 Environmental Management (6 UOC)
CVEN8930 Masters Project (12 UOC)

8607 Master of Engineering Science

MEngSc

Offshore Mode Delivery

This program is taught offshore at Cornerstone in Singapore. A fixed number of courses is offered each academic session (details available from the School Office) and specialisations are offered as follows:

CVPGAS 8607 Project Management

CVPGBS 8607 Construction Management

CVPGCS 8607 Engineering and Technology Management

8618 Master of Environmental Engineering Science

MEnvEngSc

External Mode Delivery

The program consists of the following three courses (18 UOC):

CVEN8884 Environmental Engineering Science 1 (6 UOC)
CVEN8885 Environmental Engineering Science 2 (6 UOC)
CVEN8888 Environmental Management (6 UOC)

plus 30 units of credit from the following list of electives*:

CVEN8799 Geotechnics of Waste Disposal & Site Remediation (6 UOC)
CVEN8851 Unit Operations in Water and Waste Management (6 UOC)
CVEN8855 Water and Wastewater Analysis and Quality Requirements (6 UOC)
CVEN8856 Water Treatment (6 UOC)
CVEN8857 Wastewater Treatment (6 UOC)
CVEN8872 Solid Waste Management (6 UOC)
CVEN8881 Hazardous Waste Management (6 UOC)
CVEN8930 Masters Project (12 UOC)

** Approval may be sought to substitute one or more of these electives for appropriate 3 UOC courses offered in 3-day short course mode. Please check availability with School Office.*

Graduate Diploma in Civil and Environmental Engineering

Graduate Diploma students undertake 36 UOC of coursework. Candidates may choose from a range of courses in the specialist area of their choice.

Subject to the approval of the Postgraduate Coursework Coordinator, all courses offered in the Masters programs can also be taken in the Graduate Diploma program. There are also opportunities to select courses from other professional areas in which candidates may be interested. In some circumstances and with the approval of the Postgraduate Coursework Coordinator, 12 UOC may be derived from approved undergraduate courses and the programs may contain courses from other schools in the Faculty, other faculties of the University and other universities.

It should be noted that some candidates who have partially or fully completed the requirements but not taken out the diploma might be considered for upgrading to the MEngSc program with advanced standing.

5459 Graduate Diploma in Civil and Environmental Engineering

GradDip

Internal Mode Delivery

Courses offered are the same as those for 8612 (see above).

5454 Graduate Diploma in Civil and Environmental Engineering

GradDip

External Mode Delivery

Courses offered are the same as those for 8617 (see above)

5444 Graduate Diploma in Civil and Environmental Engineering

GradDip

Offshore Mode Delivery

This program is taught offshore at Cornerstone in Singapore. A fixed number of courses is offered each academic session. Details are available from the School Office.

7336 Graduate Certificate in Civil Engineering

Grad Cert

and

7337 Graduate Certificate in Environmental Engineering

Grad Cert

A Graduate Certificate in either Civil Engineering or Environmental Engineering is awarded on the successful completion of postgraduate courses totalling 24 UOC. There is a wide range of courses available (see lists of courses for the Master of Engineering Science programs 8612 and 8617) in a range of delivery modes including internal, external and short course modes. Most courses offered in the Masters programs can also be taken in the Graduate Certificate programs subject to the approval of the Postgraduate Coursework Coordinator.

The Graduate Certificate program is suited to practising engineers and other graduates, wishing to pursue a specialised range of courses to enhance their career opportunities in a particular area. It also provides an opportunity to those who have relevant professional experience but limited formal qualifications to study in a specialist area at the graduate level. Enquiries and applications should be directed to the School Office.

Subject to satisfactory performance, students may continue with their postgraduate studies by subsequently enrolling in a Graduate Diploma or Master of Engineering Science degree program and may be granted advanced standing.

School of Computer Science and Engineering

Head of School: Professor P Compton
Associate Head of School: Associate Professor WH Wilson
Student Office Manager: Miss CJ Nock
Postgraduate Coordinators:
Miss CJ Nock (Admission, enrolment, progression),
Dr JA Shepherd (Academic matters),
Associate Professor A Nymeyer (Research)

The School of Computer Science and Engineering (CSE) has grown to become one of the largest schools in UNSW and one of the largest information technology schools in Australia.

The School has a strong research commitment, with research focus in the areas of artificial intelligence, computer architecture, computer systems, databases, networks, and software engineering. The School is also committed to incorporating the latest research into its curriculum, and courses in the above areas are available to all students undertaking major studies in the School. Introductory-level computing courses are also available more generally to students studying Science, Arts or Engineering.

Computing has links to many other areas of study. Discrete mathematics furnishes the theory behind algorithms and computing systems. Electrical engineering supplies the current technology underlying physical computing devices. Information systems deal with the application of computing technology within organisations. Biology, and biotechnology in particular, are increasingly making use of advanced computing techniques in the analysis and synthesis of new biological systems. As a result of these links, many of the School's degree programs are run in conjunction with other schools at UNSW.

At the postgraduate level, the School offers an advanced Masters program and two retraining programs that can be taken at either Masters or Graduate Diploma level. Entry to these programs is very competitive and candidates must have performed at a high level in their previous degree in order to be accepted.

The Master of Engineering Science (8685) is designed for students with an undergraduate computing degree to extend their knowledge and skills via advanced electives. The Master of Computer Science (8680) and Master of Information Science (8508) are designed for students with a 4 year undergraduate degree which includes some mathematics but limited or no computing to acquire sufficient knowledge and skills to work in the IT industry. The Graduate Diploma in Computer Science (5452), and Graduate Diploma in Information Science (5453) are designed for students with a 3 year undergraduate degree.

Opportunities are also provided for graduate research leading to the award of the degree of Master of Engineering (2665), Master of Science (2765) and Doctor of Philosophy (1650).

Program Outlines

The formal graduate programs offered in CSE are Master of Computer Science (8680), Master of Information Science (8508), Master of Engineering Science in Computer Science and Engineering (8685), Graduate Diploma in Information Science (5453), Graduate Diploma in Computer Science (5452).

Opportunities are also provided for graduate research leading to the award of the degree of Master of Engineering (2665), Master of Science (2765), and Doctor of Philosophy (1650).

Coursework Programs

The postgraduate degrees offered by the School allow for flexibility of choice between formal course work and research and are available on a full or part-time basis which will be attractive to people working in industry. Most compulsory courses are available in an evening (6pm–9pm) or late afternoon (3pm–6pm) pattern.

All degrees have an option for high-achieving students to replace some coursework by a research project. The project option is available only to full-time students in the final semester of their program, and must be completed within a single semester. In order to undertake a project, students must (a) achieve a Distinction (75%) average over all courses prior to their final semester, (b) obtain prior approval for a topic from a potential supervisor, (c) obtain approval from the Postgraduate Enrolment Coordinator.

Most courses offered by CSE require the completion of practical work, which is typically completed outside class hours by students working unsupervised. CSE practical work can be quite demanding, and students should not underestimate the amount of time that they will need to commit to their coursework. The maximum full-time load is four courses per semester, but students would be well advised to consider taking only two or three courses if they have other commitments such as significant outside employment.

The range of choice in courses is wide, allowing individual specialisation and breadth of aspirations to be satisfied. There is opportunity to choose courses from other disciplines offered by this and other universities. In degrees that have a Secondary Core requirement, one of the Secondary Core courses may be replaced by a postgraduate course of interest to the student. In degrees that have a Group D requirement, up to two of the Group D courses may be replaced by a postgraduate course of interest to the student. In degrees that have electives, elective courses may be chosen from the CSE postgraduate timetable or from other schools within the University. In all cases, any courses chosen must be of a suitable postgraduate standard (i.e. not an introductory-level course), and the student must seek *prior* approval from the Postgraduate Enrolment Coordinator. Courses from other schools or universities also require *prior* approval from the organisation offering the course.

Entry to postgraduate programs in Computer Science and Engineering is highly competitive and subject to a quota.

Graduate Programs in Information Science

The Master of Information Science is a postgraduate program aimed towards graduates who have a 4 year degree in science or engineering and who wish to become computing specialists. The program assumes that students already have some computing background.

Students who are not eligible for entry to the Master of Information Science, or who wish to take a shorter postgraduate qualification, may apply for the Graduate Diploma in Information Science.

The Information Science Program offers three plans for graduate diploma and masters students: a general Information Science stream; a Database Systems stream for those who wish to become database specialists; and an Internetworking stream for those who wish to become network specialists.

8508 Master of Information Science

MInfSc

MInfSc students complete a program totalling 72 UOC, typically 12 courses. The typical duration for the MInfSc is three semesters full-time (based on the maximum full-time load) or six semesters part-time.

COMPFS8508 (Information Science)
Master of Information Science

This program provides an overview of the theory and practice of designing and building computer systems for the processing of information in a range of disciplines.

Core requirement: (all five courses)

COMP9021 Principles of Programming
COMP9024 Data Structures and Algorithms
COMP9311 Database Systems
COMP9331 Computer Networks and Applications
COMP9511 Human Computer Interaction

Secondary core requirement: (three courses from the following)

COMP9314 Next Generation Databases
COMP9315 Database System Implementation
COMP9316 eCommerce Systems Implementation
COMP9414 Artificial Intelligence
INFS5982 Advanced Data Communications
IMGT5110 Information Retrieval Systems
INFS5927 Knowledge Based Information Systems
INFS5991 Decision Support Systems
GEOG9012 Remote Sensing Applications
GMAT9604 Land Information Systems

The remaining 24 UOC may be taken as four elective courses, or as one elective course plus a project worth 18 units of credit.

COMPGS8508 (Database Systems)
Master of Information Science

This program provides specialised education in all aspects of data management, including database design, database programming, and database administration.

Core requirement: (all four courses)

COMP9021 Principles of Programming
COMP9024 Data Structures and Algorithms
COMP9311 Database Systems
COMP9511 Human Computer Interaction

Advanced database requirement: (two courses from the following)

COMP9314 Next Generation Databases
COMP9315 Database System Implementation
COMP9316 eCommerce Systems Implementation

Secondary core requirement: (two courses from the following)

COMP9331 Computer Networks and Applications
COMP9334 Capacity Planning of Computer Systems
COMP9414 Artificial Intelligence
INFS5927 Knowledge Based Information Systems
INFS5983 Business Data Communications
INFS5982 Advanced Data Communications
INFS5974 Advanced Database Implementation

The remaining 24 UOC may be taken as four elective courses, or as one elective plus a project worth 18 UOC.

COMPHS8508 (Internetworking)
Master of Information Science

This program provides specialised education in all aspects of computer network programming and administration. It is aimed at graduates with a four year technical degree in science, mathematics or engineering.

Core requirement: (all nine courses)

COMP9021 Principles of Programming
COMP9022 Digital Systems Structures
COMP9024 Data Structures and Algorithms
INFS5983 Business Data Communications
COMP9331 Computer Networks and Applications
COMP9332 Network Routing and Switching
INFS5982 Advanced Data Communications

COMP9311 Database Systems
SENG9338 Network Project

Secondary core requirement: (three courses from the following)

COMP9031 Internet Programming
COMP9333 Advanced Computer Networks
COMP9334 Capacity Planning of Computer Systems
COMP9201 Operating Systems
TELE9303 Network Management
ELEC9337 Data Networks 2
COMP9314 Next Generation Database Systems
COMP9316 eCommerce Systems Implementation
INFS5926 Advanced Data Management
INFS5984 Information Systems Security
INFS5985 Managing Electronic Commerce

There is no Project Option available for this degree; it is superseded by the SENG9338 Network Project course.

5453 Graduate Diploma in Information Science

GradDip

GradDip candidates are required to complete a program totalling 48 UOC, typically 8 courses. The typical duration of this program is two semesters full-time (based on the maximum full-time load) or four semesters part-time. There is no Project Option available in the GradDipInfSc degree.

COMPFS5453 (Information Science)
Graduate Diploma in Information Science

This program provides an overview of the theory and practice of designing and building computer systems for the processing of information in a range of disciplines.

Core requirement: (all five courses)

COMP9021 Principles of Programming
COMP9024 Data Structures and Algorithms
COMP9311 Database Systems
COMP9331 Computer Networks and Applications
COMP9511 Human Computer Interaction

Secondary core requirement: (three courses from the following)

COMP9314 Next Generation Databases
COMP9315 Database System Implementation
COMP9316 eCommerce Systems Implementation
COMP9414 Artificial Intelligence
INFS5927 Knowledge Based Information Systems
INFS5991 Decision Support Systems
GEOG9012 Remote Sensing Applications
GMAT9604 Land Information Systems
IMGT5110 Information Retrieval Systems
Elective 6 UOC

COMPGS5453 (Database Systems)
Graduate Diploma in Information Science

This program provides specialised education in all aspects of data management, including database design, database programming, and database administration.

Core requirement: (all four courses)

COMP9021 Principles of Programming
COMP9024 Data Structures and Algorithms
COMP9311 Database Systems
COMP9511 Human Computer Interaction

Advanced database requirement: (two courses from the following)

COMP9314 Next Generation Databases
COMP9315 Database System Implementation
COMP9316 eCommerce Systems Implementation

Secondary core requirement: (two courses from the following)

COMP9331 Computer Networks and Applications
COMP9414 Artificial Intelligence
INFS5927 Knowledge Based Information Systems
INFS5974 Advanced Database Implementation
INFS5983 Business Data Communication
INFS5982 Advanced Data Communications
Elective 6 UOC

COMPHS5453 (Internetworking)
Graduate Diploma in Information Science

This program provides specialised education in all aspects of computer network programming and administration. It is aimed at graduates with a technical degree in science, mathematics or engineering.

Core requirement: (seven courses)

COMP9021 Principles of Programming
COMP9022 Digital Systems Structures
COMP9024 Data Structures and Algorithms
COMP9331 Computer Networks and Applications
COMP9332 Network Routing and Switching
INFS5983 Business Data Communication
INFS5982 Advanced Data Communications

The remaining course (6 UOC) is taken as an elective.

Graduate Programs in Computer Science

The Master of Computer Science is a postgraduate program aimed towards graduates who have a four year degree in science or engineering and wish to become computing professionals. This two year full-time program addresses all aspects of modern computing systems, including their hardware, software and applications.

Students who are not eligible for entry to the Master of Computer Science, or who wish to take a shorter postgraduate qualification, may apply for the Graduate Diploma in Computer Science.

The Master of Engineering Science program is aimed at providing specialised postgraduate education in Computer Science and Engineering to practitioners and professionals who already have a broad-based undergraduate computing degree. The flexibility in the program allows students to choose from specialising in a number of areas, including software engineering, computer systems engineering, database systems, knowledge-based systems, and visual information processing. The courses offered in the program are continually evaluated for their relevance and currency.

The typical duration of these programs is:

MEngSc: two semesters full-time or four semesters part-time.
MCompSc: four semesters full-time or eight semesters part-time.
GradDipSc: three semesters full-time or six semesters part-time.

This is based on an enrolment in the maximum full-time load, i.e. 4 courses per semester.

Course Selection

Group A

Group A consists of foundational material in computing. Computer Science students who are able to demonstrate that they have thoroughly covered equivalent material in their previous studies may request Advanced Standing in some or all of these courses. These courses are not available in the MEngSc program for credit.

COMP9020 Foundations of Computer Science
COMP9021 Principles of Programming
COMP9022 Digital System Structures
COMP9024 Data Structures and Algorithms

Group B

Group B courses constitute the knowledge in computing that every postgraduate student in computing should possess. Knowledge of most of these courses is essential before admission to the MEngSc course can be given.

COMP9008 Software Engineering
COMP9031 Internet Programming*
COMP9101 Design & Analysis of Algorithms
COMP9201 Operating Systems
COMP9221 Microprocessors and Embedded Systems
COMP9311 Database Systems
COMP9414 Artificial Intelligence

Group C

Group C courses constitute the secondary core courses that emphasise important aspects of computing, but due to time constraints it is not feasible to expect students to take all of them.

COMP9102 Compiling Techniques and Programming Languages
COMP9151 Foundations of Concurrency
COMP9331 Computer Networks & Applications
COMP9415 Computer Graphics
COMP9511 Human-Computer Interaction

Group D

The courses of interest to the MEngSc course are mainly from Group D. These are advanced electives that can be used to gain specialisation in one of several areas of computing. Because of the specialised nature of these courses, they are not guaranteed to be available in every semester.

COMP4001 Object-Oriented Software Development
COMP4141 Theory of Computation
COMP4411 Experimental Robotics
COMP4415 Logical Foundations of Artificial Intelligence
COMP9103 Algorithms and Computational Complexity
COMP9116 Software System Development
COMP9211 Computer Architecture
COMP9231 Integrated Digital Systems
COMP9242 Advanced Operating Systems (12 units of credit)
COMP9243 Distributed Systems
COMP9314 Next Generation Database Systems
COMP9315 Database System Implementation
COMP9316 eCommerce Systems Implementation
COMP9332 Network Switching and Routers
COMP9333 Advanced Computer Networks
COMP9334 Capacity Planning of Computer Systems and Networks
COMP9417 Machine Learning
COMP9444 Neural Networks
COMP9517 Computer Vision
COMP9518 Pattern Recognition
COMP9519 Multimedia Authoring and Co-operative Agents
COMP9790 Principles of GNSS Positioning
COMP9791 Modern Navigation & Positioning Technologies

Notes: See timetable for availability of courses – **www.cse.unsw.edu.au**

** Not available to 8685 students. Subject to group classification change.*

8685 Master of Engineering Science in Computer Science and Engineering – Plan COMPES8685

MEngSc

MEngSc students complete a program totalling 48 units of credit (UOC). The program can be completed in two modes:

Coursework only: 8 x 6 UOC courses
or

Coursework and project: 5 x 6 UOC courses, plus an 18 UOC project (in the final semester).

Courses in the MEngSc program are divided into three groups. Each course is worth 6 UOC.

The number of UOC, which must be taken from each group, is given below:

Mode: Course work only

Group B&C	max 18 UOC	(3 courses)
Group D	min 30 UOC	(5 courses)
Other	–	

Mode: Course work and project

Group B&C	max 12 UOC	(2 courses)
Group D	min 18 UOC	(3 courses)
Other	18 UOC Project	

Up to two Group D courses may be replaced by advanced postgraduate courses from other schools or universities (see details under **Coursework Programs**).

8680 Master of Computer Science – Plan COMPAS8680

MCompSc

MCompSc students complete a program totalling 96 units of credit (UOC). The program can be completed in two modes:

Course work only: 16 x 6 UOC courses
or

Course work and project: 12 x 6 UOC courses, plus a 24 UOC project (in the final semester).

Courses in the MCompSc program are divided into four groups. Each course is worth 6 UOC.

The units of credit which must be taken from each group is given below:

Mode: Coursework only

Group A	24 UOC	(4 courses)
Group B&C	42 UOC	(7 courses)
Group B/C/D	30 UOC	(5 courses)

Mode: Coursework and project

Group A	24 UOC	(4 courses)
Group B&C	42 UOC	(7 courses)
Group B/C/D	6 UOC	(1 course)
Other	24 UOC Project	

The Group B&C option means that at least 7 courses must be taken from these two groups. The Group B/C/D options means that additional courses may be taken from either Group D or from any other courses in Groups B or C not already taken.

5452 Graduate Diploma in Computer Science – Plan COMPAS5452

GradDip

GradDipCS students complete a program totalling 72 UOC, typically 12 courses.

Courses in the GradDipCS program are divided into four groups. Each course is worth 6 UOC.

The units of credit which must be taken from each group is given below:

Group A	24 UOC	(4 courses)
Group B&C	42 UOC	(7 courses)
Group B/C/D	6 UOC	(1 course)

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
Postgraduate Coordinator: Associate Professor C.Y. Kwok

The School comprises several discipline areas, indicating shared research interests and teaching commitments: Telecommunications; Photonics; Energy Systems; Microelectronics; 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 ever-changing challenges of present and future needs.

The School offers undergraduate and graduate training in all branches of the professions of electrical engineering and telecommunications. The degree programs are accredited by the Institution of Engineers, Australia, as meeting the requirements for admission to graduate membership. The School is also associated with the Australian Photonics Cooperative Research Centre which conducts research into optical fibre communication devices and technology.

Program Outlines

The formal postgraduate coursework programs offered by the School of Electrical Engineering and Telecommunications are:

8501 – Plan ELECXS8501
Master of Engineering Science in Electrical Engineering

8503 – Plan TELEAS8503
Master of Engineering Science in Telecommunications

5458 – Plan ELECXS5458
Graduate Diploma in Electrical Engineering

5448 – Plan TELEAS5448
Graduate Diploma in Telecommunications

Opportunities are provided for graduate research programs leading to the award of the degrees of Master of Engineering 2660 and Doctor of Philosophy 1640.

Coursework Programs

8501 Master of Engineering Science in Electrical Engineering – Plan ELECXS8501

MEngSc

Major Areas of Study

Programs consist of 48 units of credit (UOC) of coursework. At least 24 UOC must be taken from one of the following areas of specialisation (plans):

Energy Systems (ELECDS8501)
Program Coordinator: Associate Professor T.R. Blackburn

Microelectronics (ELECES8501)
Program Coordinator: Dr. R. Ramer

Photonics (ELECHS8501)
Program Coordinator: Dr G.D Peng

Signal Processing (ELECGS8501)
Program Coordinator: Dr. D. Taubman

Systems and Control (ELECLS8501)
Program Coordinator: Dr. D.J. Clements

The courses satisfying the 48 UOC requirement must be comprised of the following:

– At least 24 UOC from the postgraduate elective courses related to the area of specialisation, including 12 UOC from the two core postgraduate electives in the area of specialisation.
– Remaining UOC may comprise of courses from
  – Postgraduate core/non-core electives in or outside the area of specialisation
  – One (only) Year 4 professional elective.

One Year 4 Elective may be selected to make up prerequisite requirements for an area of study within the postgraduate program. These courses are taught by lecture during the day and require attendance at laboratory sessions.

Core Postgraduate Electives are taught in-session at Kensington, and may include a component of web-based learning. However, these courses will require attendance at formal lectures.

The Postgraduate Project must be supervised by a member of the academic staff of the University. The project must relate to the major area of study being undertaken by the candidate; only a limited number of projects are offered. Candidate must enroll in ELEC9912 and ELEC9913 in consecutive order for the project report. The project may take one of two forms:

- Industry-related project: Such a project will require the agreement of an industry "sponsor", who will define the industrial requirements of the project. The project must still meet academic requirements, defined by the academic supervisor. An industry co-supervisor may be appointed from persons with appropriate academic standing or industrial experience, acceptable to the Committee.
- Academic project: Such projects will be undertaken in the School's laboratories. The project may be motivated by an industrial problem, or it may be theoretical, experimental or design-based.

Completion Time: If students attempt successfully 24 UOC per session, the program can be completed in one year.

Postgraduate Electives may each contribute 3 or 6 units of credit, and may take one of several forms:

- Formal Coursework: These courses will have the same format as the Core Postgraduate Electives above.
- Distance Education: Such courses will be taught using web-based material, formal course notes, books and papers, and will require extensive self-study by the candidate. The subjects may require a component of attendance at lectures given within the School, or at other suitable venues.
- Short Courses: Short courses are oriented toward continuing education. Each course will deal with a topical subject, and will provide UOC which may be counted toward the MEngSc, or may be taken as a non-award course. Short courses may contribute either 3 UOC or 6 UOC (the equivalent of 75–90 hours or 150–180 hours of work on the part of the candidate). Short courses will typically require attendance at lectures, either periodically or in a block, supplemented by self-study and assignment work.
- Symposia: Symposia will be similar to short courses, except that material will be delivered in a conference format, by the course candidates themselves, and/or by members of academic staff and invited speakers.

Core Postgraduate Electives (offered yearly by the School of EE&T)

Energy Systems

ELEC9213 Electrical Energy Systems
ELEC9240 Power Electronics

Microelectronics

ELEC9340 Electronic Communication Systems
ELEC9503 Microelectronics Design

Photonics

ELEC9350 Optical Fibres
ELEC9355 Optical Communication Systems

Signal Processing

ELEC9342 Digital Signal Processing and Applications
ELEC9370 Digital Image Processing Systems

Systems & Control

ELEC9421 Robust and Linear Control Systems
ELEC9422 Analysis and Design of Nonlinear Controllers

Postgraduate Electives

Postgraduate Electives to be offered will be determined for a two year rolling program, providing information for potential candidates about electives that will be offered for the foreseeable duration of a part-time program. Information regarding offerings for a specific session is available from the School Office or from the Postgraduate Coordinator.

If so desired, students are permitted to select not more than 12 UOC from the Special Electives from the MBT program. Admission to MBT courses require four years of previous working experience.

Energy Systems

ELEC9201 Power System Planning & Economics[2]
ELEC9202 Power System Operation & Control[2]
ELEC9214 Power Systems Equipment[2]
ELEC9226 Electrical Services in Buildings[1]
ELEC9231 Electric Drive Systems[1]
ELEC9232 Motion Control Systems[2]
ELEC9233 Electrical Safety[1]

Microelectronics

ELEC9353 Microwave Circuits, Theory, Techniques[2]
ELEC9501 Advanced Semiconductor Devices[2]
ELEC9502 VLSI Technology[2]
ELEC9505 Micro-Systems Technology – Design and Fabrication[1]
COMP9231 Integrated Digital Systems[1]

Signal Processing

COMP9444 Neural Networks
ELEC9344 Speech and Audio Processing[1]

Systems and Control

ELEC9403 Real Time Computing and Control[2]
ELEC9405 Human Movement Control Systems[2]
ELEC9412 Biomedical Instrumentation and Informatics[1]
ELEC9450 Engineering Finance: From Random Processes to Derivative Prices[2]

Telecommunications

TELE9337 Advanced Networking[1]
TELE9343 Principles of digital Communications[1]
TELE9344 Cellular Mobile Communication Systems[1]
TELE9345 Adaptive Signal Processing in Telecommunications[1]
COMP9008 Software Engineering
COMP9311 Database System

Special Electives

GBAT9101 Project Management
GBAT9105 Risk Management
GBAT9113 Strategic Management of Business and Technology
IROB5690 Strategic People Management

Project

ELEC9912 Project Report A (6 UOC, for EE students)
ELEC9913 Project Report B (6 UOC, for EE students)
TELE9912 Project Report A (6 UOC, for Tele students)
TELE9913 Project Report B (6 UOC, for Tele students)

[1] offered yearly by the School of EE&T
[2] offered once every two years by the School of EE&T

8503 Master of Engineering Science in Telecommunications – Plan TELEAS8503

MEngSc

Program Coordinator: Dr Tim Moors

Major Areas of Study

The program consists of 48 units of credit (UOC) of coursework. Courses satisfying the 48 UOC requirement must be comprised of the following:

– At least 30 UOC from the postgraduate elective courses related to the area of Telecommunications, including the 18 UOC from the three Core Postgraduate Telecommunications Electives.
– Remaining UOC may comprise of courses from
  – Postgraduate core/non-core electives in or outside the area of specialisation
  – One (only) Year 4 professional elective.

One Year 4 Telecommunications Elective may be selected to make up prerequisite requirements for an area of study within the postgraduate program. These courses are taught by lecture during the day, and require attendance at laboratory sessions.

Core Postgraduate Telecommunications Electives are taught in-session at Kensington, and may include a component of web-based learning. However, these courses will require attendance at formal lectures.

Completion Time: If students attempt successfully 24 UOC per session, the program can be completed in one year.

The Postgraduate Telecommunications Research Project must be supervised by a member of the academic staff of the University. Only a limited number of projects are offered. Candidate must enroll in TELE9912 and TELE9913 in consecutive order for the Project Report.

Postgraduate Electives are as for Program 8501.

Core Postgraduate Telecommunications Electives (offered yearly by the School of EE&T)

TELE9301 Switching System Design
TELE9302 Computer Networks
TELE9303 Network Management

Postgraduate Electives

As for Program 8501.

Supporting Program

The Telecommunications Program Coordinator will ensure that each student has prior knowledge equivalent to that embodied in the courses given below. Where such prior knowledge is lacking, candidates may be asked to undertake a qualifying program, usually in the form of a Graduate Diploma, which will ensure that prior knowledge requirements are met. Note that one undergraduate course may be included as part of the requirements for the MEngSc (Telecommunications).

ELEC3004 Signal Processing 1
ELEC3006 Electronics 2
ELEC3016 Electronics 3
ELEC3041 Real Time Engineering
TELE4354 Network Management
TELE4333 Wireless Data communication Systems
TELE3018 Data Networks 1
TELE4353 Mobile and Satellite Communication Systems
TELE4363 Telecommunication Systems 2
COMP3231 Operating Systems
Other Year 4 Telecommunications Professional Electives

Entry Qualifications for Master of Engineering Science (8501, 8503)

A candidate for the degree shall have been awarded a Bachelor of Engineering from the University of NSW in an appropriate discipline, or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Higher Degree Committee of the Faculty of Engineering (hereinafter referred to as the Committee).

Articulation from a UNSW Graduate Diploma, or upgrading from a Graduate Diploma program with advanced standing may be allowed by the Committee. Upgrading in other circumstances may be permitted by the Higher Degree Committee on the recommendation of the Head of School, and may be offered with a reduced level of advanced standing. Upgrading to the MEngSc will be allowed after satisfactory progress and completion of at least 18 units of credit, with advanced standing in subjects which meet the requirements for the MEngSc. Progress will not be deemed to be satisfactory unless all subjects are passed at the first attempt at Credit level.

In exceptional cases, an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

Where a potential candidate does not meet the prerequisite required knowledge, a qualifying program can be arranged which will generally require enrolment in the Graduate Diploma, with the inclusion of Year 4 Electives. Progression to the MEngSc is subject to the articulation and upgrading rules mentioned above.

Enrolment with advanced standing will be permitted where a candidate has completed non-award courses which would otherwise be acceptable for the MEngSc.

Enrolment and Progression

An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least two calendar months before the commencement of the session in which enrolment is to begin. Candidates may commence in Session 1 or Session 2.

All candidates elect to study in at least one of the Major programs offered by the School of Electrical Engineering and Telecommunications: each Program Coordinator will advise if applicants are adequately qualified to undertake the proposed courses and must recommend the chosen program to the Committee.

A candidate for the degree shall be required to undertake such courses and pass such assessment as prescribed.

The progress of a candidate shall be reviewed at least once annually by the Committee and as a result of its review the committee may cancel enrolment, permit the candidate to re-enrol in a Graduate Diploma, or take such other action as it considers appropriate. A candidate will not normally be permitted to re-enrol after failing more than two courses.

Graduate Diploma Program (Local students only)

5458 Graduate Diploma in Electrical Engineering

GradDip

5448 Graduate Diploma in Telecommunications

GradDip

Students will enrol in the Graduate Diploma for one of three reasons:

- A student may wish to undertake postgraduate coursework in one area of electrical engineering or telecommunications with a specialised focus.
- A student may wish to transfer from a related discipline such as science into electrical engineering or telecommunications.
- A student may use the Graduate Diploma as a qualifying program for the MEngSc.

Program coordinators are as listed in the MEngSc program.

Entry Qualifications for Graduate Diploma (5458, 5448)

A candidate for the degree shall have been awarded a Bachelor of Engineering from the University of NSW in an appropriate discipline, or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Higher Degree Committee of the Faculty of Engineering (hereinafter referred to as the Committee).

In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

Where a potential candidate does not meet the prerequisite required knowledge, a non-award qualifying program can be arranged which will generally require enrolment in undergraduate courses, recommended by the relevant Program Coordinator.

Enrolment with advanced standing may be permitted where a candidate has completed non-award courses which would otherwise be acceptable for the Graduate Diploma.

Enrolment and Progression

An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least two calendar months before the commencement of the session in which enrolment is to begin. Candidates may commence in Session 1 or Session 2.

All candidates elect to study in at least one of the major programs offered by the School of Electrical Engineering and Telecommunications: each Program Coordinator will advise if applicants are adequately qualified to undertake the proposed courses and must recommend the chosen program to the Committee.

A candidate for the degree shall be required to undertake such courses and pass such assessment as prescribed.

The progress of a candidate shall be reviewed at least once annually by the Committee and as a result of its review the committee may cancel enrolment, permit the candidate to re-enrol in a Graduate Diploma, or take such other action as it considers appropriate. A candidate will not normally be permitted to re-enrol after failing more than two courses.

Students who have previously undertaken an electrical engineering undergraduate qualification at a sufficiently high standard (Credit level) will normally be offered advanced standing for 18 units of credit.

Major Areas of Study

A usual program will comprise 36 units of credit (UOC). A full program consists of 54 UOC of coursework, taken over three sessions. Advanced standing for 18 UOC of undergraduate courses will be given for students suitably qualified in electrical engineering.

The Graduate Diploma Program comprises coursework only (**there is no project in the Graduate Diploma program**). The courses satisfying the 54 UOC requirement are comprised of the following:

- 18 UOC from suitable Year 3 and Year 4 courses (unless advanced standing granted)
- At least 24 UOC from the postgraduate elective courses related to the area of specialisation, including the 12 UOC from the two Core Postgraduate Electives in the area of specialisation (for ELEC(A–F)5458) or 18 UOC from the three Core Postgraduate Telecommunications Electives (for TELES5448)
- Remaining UOC may be comprised of courses from
  - Postgraduate core/non-core electives in or outside the area of specialisation
  - One (only) Year 4 professional elective

Undergraduate courses and core postgraduate courses and electives are listed earlier in the Master of Engineering Science programs.

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

Program Outlines

Formal graduate coursework programs are offered in Aerospace Engineering, Manufacturing Engineering and Management, Mechanical Engineering and Mechatronic Engineering. The programs lead either to a Graduate Diploma, or to a Master of Engineering Science degree. For more information about these programs, please contact Mrs SM Turnbull, telephone: (02) 9385 4085, email: s.turnbull@unsw.edu.au.

Opportunities are provided for graduate research through program **2692** leading to the award of the degree Master of Engineering and program **1662** leading to the award of the degree Doctor of Philosophy. For more information about these degrees please contact Mrs M Rolfe, telephone: (02) 9385 5782, email: mary.rolfe@unsw.edu.au or Professor RB Randall, telephone: (02) 9385 5697, email: b.randall@unsw.edu.au.

Master of Engineering Science Programs

MEngSc

To satisfy the requirements for the degree, students are required to complete 48 units of credit (UOC) of courses; that is, eight courses since each course is worth 6 UOC. At the discretion of the Head of School, a 12 UOC project may replace two courses.

8710 Aerospace Engineering

Aerospace Engineering, plan AEROAS8710

Staff Contact: Dr NE Ahmed

The maximum number of courses should be selected from those listed below. The actual number required, in order for the testamur to state Master of Engineering Science in Aerospace Engineering, will depend on how many of the courses are offered during the student's total period of enrolment. Additional courses, to make up 48 UOC, should be selected from other courses listed on the current Mechanical and Manufacturing Engineering Postgraduate timetable. If permitted, project AERO9010 may replace two courses.

		UOC
AERO9105	Aerospace Vehicle Design and Manufacture	6
AERO9606	Aerodynamics	6
AERO9415	Finite Element Analysis and Applications for Aerospace Structures	6
AERO9543	CAD/CAM for Aerospace Structures	6
AERO9607	Flight Dynamics	6
AERO9705	Aerospace Propulsion	6

8710 Manufacturing Engineering and Management

Three specialisation plans are available. Two are based on on-campus delivery. These plans are Computer Integrated Manufacturing and Industrial Management. The third plan is Manufacturing Management which is based fully, or partially, on distance delivery. For all plans, a student is required to complete six core courses plus two elective courses. If permitted, project MANF9010 may replace two elective courses.

Computer Integrated Manufacturing, plan MANFXS8710

Staff Contact: Dr B Kayis

Core courses:		**UOC**
MANF9340	Factory Automation	6
MANF9410	Total Quality Management	6
MANF9472	Production Planning and Control	6
MANF9543	CAD/CAM	6
MANF9544	Concurrent Product and Process Design	6
MANF9560	Computer Integrated Manufacturing	6
Elective courses:		
MANF9601	Economic Decisions in Industrial Management	6
MANF9400	Industrial Management	6
MECH9410	Finite Element Applications	6

The testamur, awarded on successful completion, will state Master of Engineering Science in Computer Integrated Manufacturing. On request, the testamur may simply state Master of Engineering Science in Manufacturing Engineering and Management.

Industrial Management, plan MANFHS8710

Staff Contact: Dr B Kayis

Core courses:		**UOC**
MANF9400	Industrial Management	6
MANF9410	Total Quality Management	6
MANF9420	Managing Manufacturing Operations	6
MANF9471	Manufacturing Strategy	6
MANF9472	Production Planning and Control	6
MANF9601	Economic Decisions in Industrial Management	6
Elective courses:		
MANF9340	Factory Automation	6
MANF9543	CAD/CAM	6
MANF9544	Concurrent Product and Process Design	6
SESC9471	Industrial Ergonomics	6

The testamur, awarded on successful completion, will state Master of Engineering Science in Industrial Management. On request, the testamur may simply state Master of Engineering Science in Manufacturing Engineering and Management.

Manufacturing Management (full or partial distance delivery), plan MANFDS8710

Staff Contact: Professor H Kaebernick

This plan is based fully, or partially, on distance delivery. In either case, the six core courses listed below are compulsory. The distance, MANF8XXX, versions are shown. In addition, two elective courses have to be chosen from the elective courses listed below. Not all elective courses are offered in any one year. On-campus, MANF9XXX, versions are usually available. A combination of distance and on-campus courses is possible. On approval of the Head of School, students may select, as electives, other distance and on-campus courses offered by the Faculty of Engineering. If permitted, project MANF9010 may replace two elective courses.

Core courses:		**UOC**
MANF8340	Factory Automation	6
MANF8420	Managing Manufacturing Operations	6
MANF8544	Concurrent Product and Process Design	6
MANF8471	Manufacturing Strategy	6
MANF8472	Production Planning and Control	6
MANF8560	Computer Integrated Manufacturing	6
Elective courses (distance delivery):		
CVEN8701	Engineering Economics and Financial Management	6
CVEN8703	Quality and Quality Systems	6
CVEN8706	Human Resources Management	6
CVEN8710	Management of Risk	6
CVEN8714	Resource Management	6
CVEN8718	Strategic Management for Engineering	6
CVEN8720	Problem Solving and Decision Making	6
SECS9471	Industrial Ergonomics	6
Elective courses (on-campus delivery):		
MANF9400	Industrial Management	6
MANF9410	Total Quality Management	6
MANF9543	CAD/CAM	6
MANF9601	Economic Decisions in Industrial Management	6

For students transferring from the Mahanakorn University of Technology Master of Engineering program to the UNSW Master of Engineering

Science program, credit will be granted for any of the above core courses taken in Bangkok up to a maximum of four courses. These students complete their UNSW Master of Engineering Science program on-campus at UNSW. They therefore take at least 50% of their program at UNSW.

Mahanakorn students who are permitted to upgrade to MEngSc after being admitted to a Graduate Diploma, must take 10 courses in total. Included must be all six core courses.

The testamur, awarded on successful completion, will state Master of Engineering Science in Manufacturing Management. On request, the testamur may simply state Master of Engineering Science in Manufacturing Engineering and Management.

8607 Manufacturing Management (delivered externally in Singapore in association with Cornerstone Training Centre)

Manufacturing Management, plan MANFDS8607

This program is delivered externally in Singapore in association with Cornerstone Training Centre. Distance delivery is used in conjunction with intensive seminars. The six core courses are compulsory.

Core courses:		**UOC**
MANF8340	Factory Automation	6
MANF8420	Managing Manufacturing Operations	6
MANF8471	Manufacturing Strategy	6
MANF8472	Production Planning and Control	6
MANF8544	Concurrent Product and Process Design	6
MANF8560	Computer Integrated Manufacturing	6

Elective courses:

CVEN8701	Engineering Economics and Financial Management	6
CVEN8703	Quality and Quality Systems	6
CVEN8706	Human Resources Management	6
CVEN8710	Management of Risk	6
CVEN8717	Marketing in Technology and Engineering	6
CVEN8718	Strategic Management for Engineering	6
CVEN8720	Problem Solving and Decision Making	6

The testamur, awarded on successful completion, will state Master of Engineering Science in Manufacturing Management.

Students who are permitted to upgrade to MEngSc after being admitted to a Graduate Diploma, must take 10 courses in total. Included must be all of the above six core courses, and four elective courses from the above elective courses list.

8710 Mechanical Engineering

Two general plans and six specialisation plans are available.

The general plans are for students wishing to select courses to suit their personal requirements. The plans are MECHAS8710 and MECHDS8710, which cover on-campus delivery, and distance delivery, respectively. The testamur, awarded on successful completion of the program, will simply state Master of Engineering Science in Mechanical Engineering. Courses should be selected from courses listed in the current Mechanical and Manufacturing Engineering Postgraduate timetable. If permitted, project MECH9010 may replace two courses.

The specialisation plans are for students wishing to study a particular specialisation in mechanical engineering. Students are required to select the maximum number of courses from a prescribed list. The actual number required, in order for the testamur to state Master of Engineering Science in a particular specialisation, will depend on how many of the courses are offered during the student's total period of enrolment. Additional courses, which may be required to make up 48 UOC, should be selected from other courses listed on the current Mechanical and Manufacturing Engineering Postgraduate timetable. If permitted, project MECH9010 may replace two courses.

Computational Fluid Dynamics and Heat Transfer, plan MECHCS8710

Staff Contact: Professor E Leonardi

		UOC
MATH5245	Computational Fluid Dynamics	6
MATH5305	Finite Differential Schemes for PDE's	6
MATH5315	High Performance Computing	6
MATH5325	Mesh Generation and Visualisation	6
MECH9610	Advanced Fluid Dynamics	6
MECH9620	Computational Fluid Dynamics	6
MECH9750	Industrial Applications of Heat Transfer	6

The testamur, awarded on successful completion, will state Master of Engineering Science in Computational Fluid Dynamics and Heat Transfer.

Structural Analysis, plan MECHSS8710

Staff Contact: Professor DW Kelly

		UOC
MATH5115	Analysis of Finite Element Methods	6
MATH5315	High Performance Computing	6
MATH5325	Mesh Generation and Visualisation	6
MECH9131*	Advanced CAD Modelling and Applications	6
MECH9310	Advanced Vibration Analysis	6
MECH9400	Mechanics of Fracture and Fatigue	6
MECH9410	Finite Element Applications	6

**or MANF9543 Computer Aided Design/Computer Aided Manufacturing*

The testamur, awarded on successful completion, will state Master of Engineering Science in Structural Analysis.

Noise and Vibration, plan MECHXS8710

Staff Contact: Professor RB Randall

		UOC
MECH8323	Environmental Noise	6
MECH8324	Building Acoustics	6
MECH9310	Advanced Vibration Analysis	6
MECH9311	Fundamentals of Vibration	6
MECH9312	Fundamentals of Noise and Vibration Measurement	6
MECH9325	Fundamentals of Noise	6
MECH9326	Advanced Noise	6
MTRN9223	Machine Condition Monitoring	6

The testamur, awarded on successful completion, will state Master of Engineering Science in Noise and Vibration.

Noise and Vibration (distance delivery), plan MECHYS8710

Staff Contact: Professor RB Randall

		UOC
MECH8310	Advanced Vibration Analysis	6
MECH8311	Fundamentals of Vibration	6
MECH8312	Fundamentals of Noise and Vibration Measurement	6
MECH8323	Environmental Noise	6
MECH8324	Building Acoustics	6
MECH8325	Fundamentals of Noise	6
MECH8326	Advanced Noise	6
MTRN8223	Machine Condition Monitoring	6

The testamur, awarded on successful completion, will state Master of Engineering Science in Noise and Vibration.

Refrigeration and Air Conditioning, plan MECHGS8710

Staff Contact: Professor E Leonardi

		UOC
MECH8326	Advanced Noise	6
MECH9325	Fundamentals of Noise	6
MECH9610	Advanced Fluid Dynamics	6
MECH9620	Computational Fluid Dynamics	6
MECH9720	Solar Thermal Energy Design	6
MECH9730	Multiphase Flow	6
MECH9740	Power Plant Engineering	6
MECH9742	Power Production Assessment	6
MECH9750	Industrial Applications of Heat Transfer	6
MECH9751	Refrigeration and Air Conditioning 1	6
MECH9752	Refrigeration and Air Conditioning 2	6
MECH9757	Ambient Energy Air Conditioning	6
MECH9758	Refrigeration and Air Conditioning Design	6

The testamur, awarded on successful completion, will state Master of Engineering Science in Refrigeration and Air Conditioning.

Refrigeration and Air Conditioning (distance delivery), plan MECHHS8710

Staff Contact: Professor E Leonardi

		UOC
CVEN8710	Management of Risk	6
MECH8324	Building Acoustics	6
MECH8325	Fundamentals of Noise	6
MECH8326	Advanced Noise	6
MECH8620	Computational Fluid Dynamics	6
MECH8730	Multiphase Flow	6
MECH8751	Refrigeration and Air Conditioning 1	6
MECH9010	Project Mechanical Engineering	12

The testamur, awarded on successful completion, will state Master of Engineering Science in Refrigeration and Air Conditioning.

8710 Mechatronic Engineering

Mechatronic Engineering, plan MTRNAS8710

Staff Contact: Associate Professor RA Willgoss

The core courses listed below should be completed by the student. Additional courses, required to make up 48 UOC, should preferably be selected from the elective courses listed below, but it is permissible to select other courses from the current Mechanical and Manufacturing Engineering timetable. If permitted, project MTRN9010 may replace two courses.

Core courses:		**UOC**
MTRN9201	Digital Logic Fundamentals for Mechanical Engineers	6
MTRN9202	Microprocessor Fundamentals for Mechanical Engineers	6
MTRN9211	Modelling and Control of Mechatronic Systems	6
MTRN9221	Industrial Robotics	6

Elective courses:

MTRN9222	Artificially Intelligent Machines	6
MTRN9223	Machine Condition Monitoring	6

The testamur, awarded on successful completion, will state Master of Engineering Science in Mechatronic Engineering.

Graduate Diploma Programs

GradDip

5710 Aerospace Engineering

5710 Manufacturing Engineering and Management

5444 Manufacturing Management (external delivery in Singapore)

5710 Mechanical Engineering

5710 Mechatronic Engineering

To satisfy the requirements for the diploma, students are required to complete 36 UOC of courses, that is, six courses since each course is worth 6 UOC.

Courses are to be selected from those listed under the corresponding Master of Engineering Science programs. Selection of suitable courses, particularly core courses, is important for students intending to upgrade from a Graduate Diploma program to a Master of Engineering Science program.

School of Mining Engineering

Head of School: Professor BK Hebblewhite
Administrative Assistant: Mrs Carol Bell

Mining Engineering offers a diverse range of career paths, challenging jobs, 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 technology, people, equipment, financial resources, community and government.

Mining Engineering is concerned with the safe, economic and environmentally responsible recovery, processing and marketing of mineral resources from the earth. The Mining Engineering degree programs include elements from a number of other disciplines such as 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 sections affiliated to the industry.

Career opportunities exist in areas such as mine production, mine management, engineering design and technology, computer software development, geotechnical engineering, environmental engineering, corporate management, merchant banking, consulting (mine design financial evaluation, feasibility studies, geotechnical design environmental assessment), civil tunnelling, quarrying risk management, project management, education and training and Government (inspectors, policy formulation, administration).

This spectrum of career paths provides male and female graduates with the flexibility to work in and move between a diverse range of environments and locations: national and international, country and city, surface or underground, office or field.

Upon graduating, many mining engineers spend at least one to three years gaining work experience at mine sites and may then elect to gain their statutory mine manager qualifications. Initially in charge of a small section of a mine, they take increasingly responsible positions, managing mines with between 300–400 employees and annual turnovers of more that $100 million. They can then progress to the management of larger or more diverse mines and mining complexes, reaching the top levels of mining industry management.

In recognition of the rapid career progression available to mining engineers in the commercial and management sectors, a combined Bachelor of Mining Engineering/Master of Commerce program is offered at UNSW. Some students completing this program are recruited directly into the commercial sector; others progress up through the management levels of major mining companies.

As in other areas of engineering and science there has been a rapid change in technology applied to the mining industry. This has meant that today mining operations are much safer and more automated with a much less "manual" component associated with the day-to-day operation of a mine. There is a demand for graduates with computer skills to be involved in the design of complex mine planning systems, the development of remote controlled mining systems and the economic evaluation of mining operations. Throughout the course, academic staff through research and close industry involvement promote the application of new technologies to all areas of mining.

Mining engineering is an international profession with Australia's major mining companies operating in South East Asia, Africa, South and North America and Europe, and our graduates have the 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.

The School also offers formal postgraduate programs including a Graduate Certificate, a Graduate Diploma and a Master of Engineering Science, plus ongoing professional development short courses.

A number of coursework Masters degrees and Graduate Diplomas are available through the School of Mining Engineering. In addition, the School offers the research degrees of Doctor of Philosophy PhD in Mining Engineering (1050) and Master of Engineering ME in Mining Engineering (2180). The research degrees may also be undertaken externally by staff employed full-time in the industry over a longer duration.

Program Outlines

8055 Master of Engineering Science in Mining Engineering

MEngSc

The Master of Engineering Science in Mining Engineering will be awarded after successful completion of 48 units of credit (UOC) of coursework, either full-time or part-time. A majority of the courses will be offered as modules over a short period to permit mineral industry personnel to attend on a part-time basis. Please note that some electives may only be offered every two years.

Master of Engineering Science (Mining Geomechanics)

Course 8055 – plan MINEKS8055

Core courses

MINE8110	Mining Processes and Systems
MINE8120	Hazard Identification, Risk and Safety Management in Mining
MINE8140	Mining Geomechanics
MINE8760	Mine Geology and Geophysics for Mining Operations

Elective courses

Select four 6 UOC courses from the following list:

MINE8130	Technology Management in Mining
MINE8230	Mine Sampling, Grade Control and Reserves Definition
MINE8710	Mine Slope Stability
MINE8720	Advanced Rock Mechanics
MINE8730	Mechanised Excavation Engineering
MINE8740	Blasting and Rock Fragmentation
MINE8750	Advanced Soil Mechanics and Mine Fill Technology

Master of Engineering Science (Mining Industry Management)

Course 8055 – plan MINEJS8055

Core courses:

MINE8110 Mining Processes and Systems
MINE8120 Hazard Identification, Risk and Safety Management in Mining
MINE8210 Management Systems – Projects, Processes, Contracts, Contractors
MINE8220 Mine Feasibility, Planning and Project Evaluation

Elective courses:

Select four from the following list of 6 UOC Electives

MINE8130 Technology Management in Mining
MINE8230 Mine Sampling, Grade Control and Reserves Definition
MINE8760 Mine Geology and Geophysics for Mining Operations
MINE8770 Mining Law
MINE8780 Environmental Management for the Mining Industry
MINE8790 Advanced Mineral Economics and Commodity Marketing
MINE9910 Mine Ventilation
GBAT9104 Management of Innovation and Technical Change
GBAT9106 Information Systems Management
GBAT9112 Managing Occupational Health and Safety
IROB5690 Strategic People Management

5040 Graduate Diploma in Mining Engineering – Plan MINEFS5040

GradDip

The Graduate Diploma program in Mining Engineering serves two purposes. It can provide a professional introduction to the mining industry for graduates in Science and Technology or Engineering and as a qualifying course for entry to the Master of Engineering Science or Masters by Research programs.

The Graduate Diploma will be awarded after successful completion 36 UOC of coursework, either full-time or part-time. A majority of the courses will be offered as modules over a short period to permit mineral industry personnel to attend on a part-time basis. Please note that some electives may be offered only every two years.

The level of the Graduate Diploma is designed to be equivalent to a four year Honours degree.

Core courses:

MINE8110 Mining Processes and Systems
MINE8120 Hazard Identification, Risk and Safety Management in Mining

Elective courses:

Select four from the following list of 6 UOC Courses

MINE8130 Technology Management in Mining
MINE8140 Mining Geomechanics
MINE8210 Management Systems – Projects, Processes, Contracts, Contractors
MINE8220 Mine Feasibility, Planning and Project Evaluation
MINE8230 Mine Sampling, Grade Control and Reserves Definition
MINE8710 Mine Slope Stability
MINE8720 Advanced Rock Mechanics
MINE8730 Mechanised Excavation Engineering
MINE8740 Blasting and Rock Fragmentation
MINE8750 Advanced Soil Mechanics and Mine Fill Technology
MINE8760 Mine Geology and Geophysics for Mining Operations
MINE8770 Mining Law
MINE8780 Environmental Management for the Mining Industry
MINE8790 Advanced Mineral Economics and Commodity Marketing
GBAT9104 Management of Innovation and Technical Change
GBAT9106 Information Systems Management
GBAT9112 Managing Occupational Health and Safety
IROB5690 Strategic People Management

5045 Graduate Diploma in Mine Ventilation – Plan MINEVS5045

GradDip

This program provides professional development in mine ventilation and environment for mining engineers and other mining personnel. It is delivered in a distant, flexible format using an internet platform. The Diploma is structured so that it can be tailored to the needs of either the metalliferous or coal mining sectors. The accredited programs offered by UNSW for the appointment of Statutory Coal Mine Ventilation Officers in both NSW and Qld can be taken as options in the Diploma. The course contents have been developed from standard texts, industry guidelines and case studies. These are delivered from both a theoretical and operational perspective with the aim that course contents will be immediately relevant to industry. The program is affiliated to the Australian National Centre for Mine Ventilation (ANCMV), established in 1999 as an initiative of MTEC, the tertiary minerals education arm of the Minerals Council of Australia.

This program consists of four, 6 UOC core courses plus two electives, each presented in block teaching format.

Core courses:

MINE9901 Ventilation and Mine Services
MINE9902 Environmental Contaminants
MINE9903 Heat in Underground Mines
MINE9904 Ventilation System Management

Coal Mine Electives

MINE9905 Coal Mine Hazards and Control
MINE9906 Coal Mine Ventilation Planning

Metalliferous Mine Electives

MINE9907 Metalliferous Mine Hazards and Control
MINE9908 Metalliferous Mine Ventilation Planning

It is assumed that applicants for this program are currently employed in the Australian mining industry, as much of the assessment will depend on students having access to a mine site. Intending applicants should contact the Head of School before applying for entry as all applications must be approved by the Head, School of Mining Engineering.

5040 Graduate Diploma in Coal Mine Strata Control – Plan MINESC5040

GradDip

The Graduate Diploma in Coal Mine Strata Control is offered as a specialist postgraduate coursework qualification for people who currently, or plan in the future to, work within the underground coal mining industry with particular responsibilities in the field of strata control. The program has been designed to cater for people with different backgrounds, including either engineering or scientific tertiary qualifications and/or relevant experience. The program may be undertaken on either a part-time or full-time basis.

The overall program content provides an initial grounding in fundamental principles of rock mechanics and geotechnical engineering, followed by a comprehensive coverage of practical strata control applications, from the point of view of both the technologies involved, together with their implementation and management. The learning outcomes of this program will therefore provide a student with both the fundamental and practical knowledge base to be able to fulfil the role of a mine Strata Control Engineer.

The program is particularly designed for people working at mine sites, or those who have access to a mine site for practical assignments. The course is offered in a flexible delivery format, with a large component available in a distance format, plus a limited number of face to face workshops/sessions. Assessments will include a number of practical, site-based assignments, including group and interactive work and presentations.

The program consists of six core courses, each worth 6 UOC, to satisfy the program requirement of 36 UOC. All courses will be presented in a block or distance mode. It is envisaged that a student would normally complete the program in three sessions (18 months). The six courses are as follows:

MINE5010 Fundamentals of rock behaviour for underground mining
MINE5020 Geotechnical assessment for underground mining
MINE5030 Mining excavations in rock
MINE5040 Coal mining methods, mine planning and applied geomechanics
MINE5050 Ground control principles and practice in underground coal mining
MINE5060 Operational geotechnical management (underground coal mining)

MINE5010, MINE5020 and MINE5030 are prerequisites for the three remaining courses. All other five courses are pre-requisites for MINE5060. (Prerequisite requirements may be waived, at the discretion of the Head of School).

Interested students should contact the Postgraduate Coordinator, School of Mining Engineering for further details, prior to formal enrolment.

7335 Graduate Certificate in Mining Engineering – Plan MINEFS7335

GradCert

The School of Mining Engineering offers a Graduate Certificate in Mining Engineering to allow a more flexible entry mode for applicants who have limited tertiary qualifications. Admission will be considered on an individual basis and will be based on level of experience within the mining industry. Students may be eligible to upgrade to a Graduate Diploma depending upon satisfactory academic progress. This usually requires maintaining at least a credit average in each course attempted. Please note that some electives may be offered only every two years.

Students will be required to complete two core courses plus two electives.

Core courses:

MINE8110	Mining Processes and Systems
MINE8120	Hazard Identification, Risk and Safety Management in Mining

Elective Courses:

Select two from the following list of 6 UOC courses
One course to be undertaken in Session 1 and one in Session 2.

MINE8130	Technology Management in Mining
MINE8140	Mining Geomechanics
MINE8210	Management Systems – Projects, Processes, Contracts, Contractors
MINE8220	Mine Feasibility, Planning and Project Evaluation
MINE8230	Mine Sampling, Grade Control and Reserves Definition
MINE8710	Mine Slope Stability
MINE8720	Advanced Rock Mechanics
MINE8730	Mechanised Excavation Engineering
MINE8740	Blasting and Rock Fragmentation
MINE8750	Advanced Soil Mechanics and Mine Fill Technology
MINE8760	Mine Geology and Geophysics for Mining Operations
MINE8770	Mining Law
MINE8780	Environmental Management for the Mining Industry
MINE8790	Advanced Mineral Economics and Commodity Marketing
MINE9910	Mine Ventilation
GBAT9104	Management of Innovation and Technical Change
GBAT9106	Information Systems Management
GBAT9112	Managing Occupational Health and Safety
IROB5690	Strategic People Management

School of Petroleum Engineering

The School of Petroleum Engineering is recognised as one of the leading teaching and research institution in Australia and the South-East Asia region. Graduates from the School are keenly sought by national and international petroleum companies and work throughout the world.

The School conducts internationally recognised leading-edge research in a wide range of subjects of relevance to the upstream oil and gas business, and is part of the Australian Petroleum Cooperative Research Centre (APCRC) – Australia's foremost provider of research and development to the upstream petroleum industry. The School also conducts research programs in geothermal energy and alternative geothermal energy resources.

Postgraduate Study by Coursework

The School of Petroleum Engineering offers coursework programs which lead to the award of the **Master of Engineering Science in Petroleum Engineering (8655), Graduate Diploma in Petroleum Engineering (5031) and Graduate Certificate in Petroleum Engineering (7341)**.

Staff Contact: Associate Professor S. Rahman
Tel: (+61 2) 9385 5297
Fax: (+61 2) 9385 5936
Email: sheik.rahman@unsw.edu.au

5031 Graduate Diploma in Petroleum Engineering

GradDip

External/Internal

The petroleum industry traditionally relies on 'on-the-job' training programs, supplemented by in-house and external short courses to train and update petroleum engineers and earth scientists. The School of Petroleum Engineering has developed a graduate diploma program which is delivered by lecture as well as distance learning mode.

The GradDip Open Learning Program is specifically designed to cater for personnel who are currently working in the industry and unable to attend classes on campus. Students are provided with specially written resource material/study guides and pre-prepared computer-based software for problem solving and self-study. Contact with the subject facilitator is via the web using WebCT Software, which provides an interactive learning environment.

To qualify for a GradDip in Petroleum Engineering, candidates must pass a minimum of 36 units of credit (UOC). The final composition of a program requires Head of School or his nominee's approval.

Graduate Diploma by Distance Learning Mode

Courses		UOC
PTRL6001	Reservoir Engineering I	6
PTRL6003	Well Pressure Testing	6
PTRL6004	Numerical Reservoir Simulation	6
PTRL6007	Reservoir Engineering II	6
PTRL6008	Petroleum Production Economics	6
PTRL6009	Well Drilling Equipment & Operations	6
PTRL6012	Drilling Mud – Formulation, Selection & Maintenance	6
PTRL6016	Well Completions & Stimulation	6
PTRL6025	Well Control & Blowout Prevention	6
PTRL6027	Casing Design & Cementing	6
PTRL6028	Practical Aspects of Well Planning & Drilling Cost Estimates	6
PTRL6029	Directional, Horizontal & Multilateral Drilling	6
PTRL6107	Formation Evaluation	6
GEOL9151	Petroleum Geology	6
GEOL9152	Petroleum Geophysics	6
CVEN8707	Contracts Management	6
CVEN8710	Management of Risk	6
CVEN8888	Environmental Management	6

Graduate Diploma by Lecture Mode

Courses		UOC
PTRL5001	Fluid Dynamics in Porous Media	6
PTRL5003	Well Pressure Testing	6
PTRL5004	Numerical Reservoir Simulation	6
PTRL5007	Reservoir Engineering	6
PTRL5008	Petroleum Production Economics	6
PTRL5009	Well Drilling Equipment & Operations	6
PTRL5012	Drilling Mud – Formulation, Selection & Maintenance	6
PTRL5016	Well Completions & Stimulation	6
PTRL5021	Reservoir Characterisation	6
PTRL5022	Drilling Systems Design & Optimisation	6
PTRL5107	Formation Evaluation	6

Open Learning Programs

Staff Contact: Associate Professor S. Rahman/Dr D. Nguyen

Open Learning Program
School of Petroleum Engineering
UNSW Sydney NSW 2052 Australia

Tel: (+61 2) 9385 6970/5184
Fax: (+61 2) 9385 5182/5936
Email: openlearn.pe@unsw.edu.au
Website: www.petrol.unsw.edu.au/online/oplearn.html

8655 Master of Engineering Science in Petroleum Engineering

MEngSc

External

This program is designed to cater for upstream oil and gas personnel who are interested in expanding their knowledge base and improving their technical understanding in the area of petroleum engineering. Candidates must have an appropriate degree in Engineering or Science and a minimum of one year of petroleum industry experience.

Courses		UOC
PTRL6001	Reservoir Engineering I	6
PTRL6003	Well Pressure Testing	6
PTRL6004	Numerical Reservoir Simulation	6
PTRL6007	Reservoir Engineering II	6
PTRL6008	Petroleum Production Economics	6
PTRL6009	Well Drilling Equipment & Operations	6
PTRL6012	Drilling Mud – Formulation, Selection & Maintenance	6

PTRL6016	Well Completions & Stimulation	6
PTRL6021	Reservoir Characterisation	6
PTRL6025	Well Control & Blowout Prevention	6
PTRL6027	Casing Design & Cementing	6
PTRL6028	Practical Aspects of Well Planning & Drilling Cost Estimates	6
PTRL6029	Directional, Horizontal & Multilateral Drilling	6
PTRL6107	Formation Evaluation	6
GEOL9151	Petroleum Geology	6
GEOL9152	Petroleum Geophysics	6
CVEN8707	Contracts Management	6
CVEN8710	Management of Risk	6
CVEN8888	Environmental Management	6

To qualify for the MEngSc in Petroleum Engineering, candidates are required to pass a minimum of 48 UOC. The final composition of the proposed program requires Head of School or nominee's approval.

7341 Graduate Certificate in Petroleum Engineering

GradCert

External

This program is designed to cater for upstream oil and gas personnel who, although working as petroleum engineers, have no formal qualifications in petroleum engineering; or personnel with a formal petroleum engineering background but interested in expanding their knowledge base to allow them to operate more effectively in interdisciplinary teams.

To qualify for the GradCert in Petroleum Engineering, candidates will have to pass a minimum of 24 UOC. The final composition of the proposed program will require Head of School or nominee's approval.

Courses		**UOC**
PTRL6001	Reservoir Engineering I	6
PTRL6007	Reservoir Engineering II	6
PTRL6009	Well Drilling Equipment & Operations	6
PTRL6016	Well Completions & Stimulation	6
PTRL6027	Casing Design & Cementing	6
PTRL6107	Formation Evaluation	6
GEOL9151	Petroleum Geology	6

School of Surveying & Spatial Information Systems

Head of School: Associate Professor A H W Kearsley
Administrative Officer: Mr L Daras

The School offers four main postgraduate programs, one in both face-to-face and external mode, as well as research degrees at Masters and PhD level. The course work programs can be taken at both the Masters and the Graduate Diploma level, and include the general program in Surveying and Spatial Information Systems, and specialist programs in each of GIS, Remote Sensing (with the School of Biological, Earth and Environmental Science), and Land Administration. Courses offered in these programs include GPS and Geodesy, GIS, Remote Sensing and Modern Technologies such as 3D Laser Scanners. Spatial data underpins many applications in modern society and the range of spatial technologies and applications is expanding rapidly.

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.

Program Outlines

Formal graduate programs lead to the award of the degrees of **Master of Engineering Science (8651)**. Specialisation is available in **GIS (8652)**, **Land Administration (8653)** and **Remote Sensing (8641)**. Programs are also available leading to **Graduate Diplomas in Surveying and Spatial Information Systems (5492), Land Administration (5493)** and **Remote Sensing (5496)**.

Opportunities are provided for graduate research leading to the award of the degrees of **Master of Engineering (2721)** and **Doctor of Philosophy (1681)**.

8651 Master of Engineering Science in Surveying and Spatial Information Systems

MEngSc

Programs of study leading to the degree of MEngSc are offered by the School of Surveying and Spatial Information Systems in a range of topics including:

- advanced surveying
- geodesy
- image analysis in photogrammetry (research only)
- land administration
- land and geographic information systems
- remote sensing

Candidates are allowed a wide choice in selecting courses. These can be selected to suit individual student needs and typical course structures can be supplied by the School on request. The program of study must total at least 48 units of credit (UOC). About 2 UOC are normally equal to attendance for one hour per week for one session. Some senior undergraduate courses may be taken for partial credit towards the degree. Examples of suitable external courses are computing, statistics, oceanography, project management and a range of others. Postgraduate courses in Surveying and Spatial Information Systems are only run if there are sufficient enrolment numbers. The school should be contacted directly for information on which courses are running.

8651 Master of Engineering Science in Surveying and Spatial Information Systems

MEngSc

External Mode Delivery

Candidates are required to complete a program totalling at least 48 UOC.

Core courses		**UOC**
GMAT9950	Modern Technology in Surveying & Spatial Inf. Sys.	6
GMAT9951	Land Information Systems	6
GMAT9952	GPS Surveying	6
GMAT9953	Principles of Remote Sensing	6

Additional subjects presented either in external or face to face mode can be selected from those offered by the Schools of Computer Science and Engineering; Civil & Environmental Engineering; Biological, Earth and Environmental Sciences; and School of Information Systems, Technology and Management.

8652 Master of Engineering Science in Geographic Information Systems

MEngSc

Candidates are required to complete a program totalling at least 48 UOC made up of compulsory core courses and electives. Compulsory courses not offered in a particular year may be substituted by an equivalent course approved by the appropriate Head of School. The program comprises one year of full-time study or two years of part-time study.

Core courses		**UOC**
GEOS9016	Principles of Geographic Inf. Systems & Science	6
GEOS9017	Advanced GIS and Science	6
GMAT9604	Land Information Systems	6
Elective courses		
COMP9021	Principles of Programming	6
COMP9311	Data Base Systems	6
GEOS9012	Remote Sensing Applications	6
GEOH9018	Transport Applications of GIS	6
GEOS9021	Image Analysis in Remote Sensing	6
GMAT9107	Special Topic in Surveying and Spatial Information Systems B	6
GMAT9600	Principles of Remote Sensing	6
GMAT9606	Microwave Remote Sensing	6
IMGT5110	Information Retrieval Systems	6
GMAT9906	Major Assignment	12

Other elective courses may be added with the approval of the Head of School.

The Masters degree program in Geographic Information Systems is offered in both the Faculty of Engineering and the Faculty of Science. Entry into either faculty depends on the background of the applicant and the orientation of the proposed program.

8653 Master of Engineering Science in Land Administration

MEngSc

The program is specifically designed for employees in developing countries and Australian consultants who are associated with the introduction of Land Title Reform programs in developing countries. It is run when there is sufficient demand for the program.

Candidates are required to complete a program totalling at least 48 UOC made up of seven compulsory core courses and one elective. Compulsory courses not offered in a particular year may be substituted by an equivalent course approved by the appropriate Head of School. The program normally comprises one year of full-time study or two years of part-time study.

Core courses		**UOC**
CVEN9731	Project Management Framework	6
GMAT9604	Land Information Systems	6
GMAT9608	Cadastral Systems	6
GMAT9609	Land Registration Systems	6
GMAT9610	Reform in Land Titling and Registration	6
GMAT9611	Land Law for Land Administration	6

Elective courses

REST0005	Real Estate Valuation	3
CVEN9701	Engineering Economics & Financial Management	6
GEOS9016	Principles of GIS & Science	6
GEOH9018	Transport Applications of GIS	6
GMAT3200	Geospatial Information Tech & App	6
GMAT9533	Land Use Mapping and Administration	6
ACCT5917	Strategic Management: Systems and Processes	6
IMGT 5110	Information Retrieval Systems	6

8641 Master of Engineering Science in Remote Sensing

MEngSc

Candidates are required to complete a program totalling at least 48 UOC, made up of core courses and electives. Compulsory courses not offered in a particular year may be substituted by an equivalent course, approved by the appropriate Head of School. The degree will normally comprise one year of full-time study (two sessions of 24 UOC) or two years of part-time study.

Core courses		**UOC**
GEOS9012	Remote Sensing Applications	6
GEOS9021	Image Analysis in Remote Sensing	6
GMAT9600	Principles of Remote Sensing	6
GMAT9606	Microwave Remote Sensing	6
4 electives chosen from the list below		12

Elective courses

Candidates may include additional courses selected from the following listed elective courses, or from other relevant courses offered within the University, as approved by the appropriate Head of School.

		UOC
COMP1011	Computing 1A	6
COMP1021	Computing 1B	6
ELEC9370	Digital Image Processing Systems	6
GEOS9016	Principles of GIS and Science	6
GEOL0360	Remote Sensing Applications in Geoscience	6
GMAT9604	Land Information Systems	6

5492 Graduate Diploma in Surveying and Spatial Information Systems

GradDip

Candidates are required to complete a program totalling 36 UOC. Details of the recommended programs of study may be obtained from the Head of the School of Surveying and Spatial Information Systems. Programs from the Masters programs can be taken in the Graduate Diploma programs subject to the approval of the Postgraduate Coordinator.

5493 Graduate Diploma in Land Administration

GradDip

Candidates are required to complete a program totalling 36 UOC, made up of six compulsory courses, with compulsory attendance at seminars and work experience as prescribed by the program authority. The Diploma will normally comprise one year of full-time study or two years of part-time study.

Core courses		**UOC**
CVEN9731	Project Management Framework	6
GMAT9604	Land Information Systems	6
GMAT9608	Cadastral Systems	6
GMAT9609	Land Registration Systems	6
2 Electives		

5496 Graduate Diploma in Remote Sensing

GradDip

Candidates are required to complete a program totalling 36 UOC. Details of the recommended programs of study may be obtained from the Head of the School of Surveying and Spatial Information Systems. Programs from the Masters programs can be taken in the Graduate Diploma programs subject to the approval of the program coordinator.

Graduate School of Biomedical Engineering

Head of School: Professor BK Milthorpe

The Graduate School of Biomedical Engineering is an interdisciplinary unit which conducts its own teaching programs and research, and also 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.

Available research areas are listed in the Faculty listing which appears earlier in this Handbook.

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 Telecommunication Engineering.

Students are expected to perform at a Credit level (65%) average 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.

Coursework Programs

8660 Master of Biomedical Engineering

MBiomedE

The MBiomedE degree program is designed to cater for students with either a medical/biological science or engineering/physical science background.

Initially, students with a medical/biological science background study basic engineering courses such as mathematics, mechanics, electronics and computing, whilst students with a non-medical background take courses in physiology, anatomy, pathology and biochemistry. Later, both groups choose electives from biomechanics, biophysics, biomaterials, medical instrumentation and mass transfer in medicine, as well as undertaking a research project.

This degree is primarily obtained through course work but may include an optional 12 UOC project conducted within the School, or in a hospital or other institution. The program of study offers scope for original research into the application of engineering principles and technology to medical problems. Candidates must complete a program totalling 72 UOC, 48 of which must be for the study of courses at graduate level. Of the 72 UOC, a minimum of 48 UOC must be from courses offered by the Graduate School of Biomedical Engineering (i.e. any courses with BIOM9 prefix).

Period of candidature: The normal period is three academic sessions (full-time) or six academic sessions (part-time) from the date of enrolment. The maximum period of candidature is six academic sessions (full-time) and twelve academic sessions (part-time). In special cases extensions may be granted. A candidate is not permitted to continue in the program if the unit value of the courses failed totals more than 18.

Strand A courses are directed to candidates with an engineering/physical sciences background and Strand B to those with a medical/biological sciences background. Selection of courses is not limited to those listed below. Relevant courses from other areas may be undertaken subject to the approval of the Head of School. There is an optional 12 UOC project.

Strand A Courses, Engineering/Physical Sciences Candidates		**UOC**
ANAT2511	Fundamentals of Anatomy[1]	6
PHPH2101	Physiology 1A[1]	6
PHPH2201	Physiology 1B[1]	6

Strand B Courses, Medical/Life Sciences Candidates

BIOM9040	Analogue Electronics for Biomedical Engineers	6
BIOM9101	Mathematical Modelling for Biomedical Engineers	6
BIOM9501	Computing for Biomedical Engineers	6
BIOM9050	Microprocessors and Circuit Design for Biomedical Engineers	6

Session 1		**UOC**
General Courses		
BIOM9060	Biomedical Systems Analysis	6
BIOM9420	Clinical Laboratory Science	6
BIOM9430	Electromedical Standards	6
BIOM9510	Introductory Biomechanics[2]	6
BIOM9551	Biomechanics of Physical Rehabilitation	6
BIOM9601	Biomedical Applications of Microcomputers	6
BIOM9613	Medical Instrumentation	6
BIOM9621	Biological Signal Analysis	6
BIOM9701	Dynamics of the Cardiovascular System	6
BIOM9913	Project Report[3]	12

Session 2		**UOC**
General Courses		
BIOM9012	Biomedical Statistics	6
BIOM9027	Medical Imaging	6
BIOM9311	Mass Transfer in Medicine	6
BIOM9321	Physiological Fluid Mechanics	6
BIOM9332	Biocompatibility	6
BIOM9410	Regulatory Requirements	6
BIOM9440	Biomedical Practical Measurements	6
BIOM9450	Clinical Information Systems	6
BIOM9541	Mechanics of the Human Body	6
BIOM9551	Biomechanics of Physical Rehabilitation	6
BIOM9561	Mechanical Properties of Biomaterials	6
BIOM9342	Polymers*	6
BIOM9913	Project Report[3]	12

** subject to approval*

[1] Highly recommended
[2] For students with no mechanics background
[3] Project Report may be done concurrently with coursework during the other sessions.

NB: A complete and up-to-date listing of courses on offer may be found on the Biomedical Engineering website **www.gsbme.unsw.edu.au**

Some courses may not be offered.

8665 Master of Engineering Science

MEngSc

Candidates are required to complete a program totalling at least 48 UOC composed of graduate level courses, including an optional 12 UOC project.

Individual study programs, generally selected from the courses listed below, are to be approved by the Head of School or nominee. Although appropriate graduate level courses may be taken from other schools within the University a minimum of 60% of the coursework units of credit (i.e. 30 units) are to be selected from courses offered by the Graduate School of Biomedical Engineering (BIOM9XXX). The degree will normally comprise one year (two sessions) of full-time study or two years (4 sessions) of part-time study.

Session 1		**Notes**	**UOC**
BIOM9060	Biomedical Systems Analysis		6
BIOM9420	Clinical Laboratory Science		6
BIOM9430	Electromedical Standards		6
BIOM9551	Biomechanics of Physical Rehabilitation	(1)	6
BIOM9601	Biomedical Applications of Microcomputers	(2)	6
BIOM9613	Medical Instrumentation		6
BIOM9621	Biological Signal Analysis		6
BIOM9701	Dynamics of the Cardiovascular System		6
Session 2			
BIOM9012	Biomedical Statistics		6
BIOM9027	Medical Imaging		6
BIOM9311	Mass Transfer in Medicine		6
BIOM9321	Physiological Fluid Mechanics		6
BIOM9332	Biocompatibility		6
BIOM9410	Regulatory Requirements		6
BIOM9440	Biomedical Practical Measurements		6
BIOM9450	Clinical Information Systems		6
BIOM9541	Mechanics of the Human Body	(1)	6
BIOM9551	Biomechanics of Physical Rehabilitation		
BIOM9561	Mechanical Properties of Biomaterials	(2)	6
BIOM9913	Project Report	(3)	12

Notes:

(1) These three electives vary according to session offered. BIOM9510, or equivalent, is prerequisite for BIOM9541, and BIOM9541 is prerequisite for BIOM9551.

(2) Prerequisite BIOM9050 or equivalent. Class size restricted.

(3) Research project may be done concurrently with course work during the other sessions.

NB: A complete and up-to-date listing of courses on offer may be found on the Biomedical Engineering website **www.gsbme.unsw.edu.au**

Some courses may not be offered.

5445 Graduate Diploma in Biomedical Engineering

GradDip

Details of the recommended programs of study, totalling at least 36 UOC, may be obtained from the Head of the Graduate School of

Biomedical Engineering. Graduate courses from the Masters programs can be taken in the Graduate Diploma program subject to the approval of the course coordinators.

Research Programs

PhD in Biomedical Engineering(1710)
ME in Biomedical Engineering (2675)
MSc in Biomedical Engineering (2795)

For information on research and project areas please see 'Research and Project Areas' earlier in this Faculty section.

Centre for Photovoltaic Engineering

Head of Centre: Professor S.R. Wenham
Director of Academic Studies: Dr J.E. Cotter
Postgraduate Co-ordinator: Dr A.B Sproul
Administrative Office Manager: Ms. L. Cahill

The need for the Centre for Photovoltaic Engineering has arisen due to rapid growth and evolution in the photovoltaic industry in recent years, with considerable demand by industry for UNSW developed technologies and appropriately trained engineers across the entire photovoltaic and renewable energy sectors. It originally comprised three centres established by the Australian Research Council: the Photovoltaics Special Research Centre, the Key Centre for Teaching and Research in Photovoltaic Engineering, and the Special Research Centre for Third Generation Photovoltaics. However, in 2003 the UNSW Centre of Excellence for Advanced Silicon Photovoltaics and Photonics was established merging the three centres into one.

The Centre for Photovoltaic Engineering offers undergraduate and postgraduate training encompassing all aspects of the photovoltaic sector. Innovative teaching techniques have been developed to enhance the learning environment. UNSW academics in this 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 photovoltaic technology internationally throughout the same period.

The Centre for Photovoltaic Engineering offers one postgraduate coursework program and two research programs. Research programs include a Master of Engineering (2655), and a Doctor of Philosophy (1655). Research topics are available for research students covering the entire photovoltaic sector but with greatest emphasis on device theory, device and module design, balance of system components, photovoltaic systems and applications. Further information on the specific areas of interest of academic staff can be obtained from the Centre. These degrees are intended to provide students with an exceptional basis in advanced concepts and research in the photovoltaic area.

Program Outlines

Coursework Programs

8512 Master of Engineering Science in Photovoltaics and Solar Energy

MEngSc

Qualifications

1. A candidate for the degree shall have been awarded a Bachelor of Engineering from the University of New South Wales in an appropriate discipline, or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Higher Degree Committee of the Faculty of Engineering (hereinafter referred to as the Committee).

2. Articulation from a Graduate Diploma, or upgrading from a Graduate Diploma program with advanced standing may be allowed by the Committee. Upgrading in other circumstances may be permitted by the Higher Degree Committee on the recommendation of the Head of School, and may be offered with a reduced level of advanced standing.

3. In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

4. Where a potential candidate does not meet the prerequisite required knowledge, a qualifying program can be arranged, with the inclusion of Year 4 Electives. Upgrading to the MEngSc will be allowed after satisfactory progress and completion of at least 18 units of credit, with advanced standing in courses which meet the requirements for the MEngSc. Progress will not be deemed to be satisfactory unless all courses are passed at the first attempt.

5. Enrolment with advanced standing will be permitted where a candidate has completed non-award courses which would otherwise be acceptable for the MEngSc.

Enrolment and Progression

1. An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least two calendar months before the commencement of the session in which enrolment is to begin. Candidates may commence in Session 1 or Session 2.

2. All candidates elect to study in the Photovoltaics and Solar Energy program offered by the Centre for Photovoltaic Engineering. The Program Coordinator will advise if applicants are adequately qualified to undertake the proposed courses and must recommend the chosen program to the Committee.

3. A candidate for the degree shall be required to undertake such courses and pass such assessment as prescribed.

4. The progress of a candidate shall be reviewed at least once annually by the Committee and as a result of its review the committee may cancel enrolment, permit the candidate to re-enrol in a Graduate Diploma, or take such other action as it considers appropriate.

The courses satisfying the 48 units of credit (UOC) requirement may be selected from the following:

0 – 6 units of credit	Year 4 Electives*
12 units of credit	Core Postgraduate Courses
0 or 12 units of credit	Postgraduate Research Project
0 – 36 units of credit	Postgraduate Electives

18 units of credit must be taken in the area of specialisation.

**Only available to students who have not completed a BE in Photovoltaics and Solar Energy at UNSW.*

Variations from the above combinations of courses comprising the 48 UOC can be approved by the Head of School or program authority.

One Year 4 Elective may be selected to make up prerequisite requirements for an area of study within the postgraduate program. These courses are taught by lecture during the day, and require attendance at laboratory sessions.

Core Postgraduate Courses are taught in-session at Kensington, and may include a component of web-based learning. However, these courses will require attendance at formal lectures.

The Postgraduate Research Project must be supervised by a member of the Academic Staff of the University. The project must relate to the major area of study being undertaken by the candidate. The project may take one of two forms:

- Industry-related project. Such a project will require the agreement of an industry "sponsor", who will define the industrial requirements of the project. The project must still meet academic requirements, defined by the academic supervisor. An industry co-supervisor may be appointed from persons with appropriate academic standing or industrial experience, acceptable to the Committee.
- Academic project. Such projects will be undertaken in the School's laboratories. The project may be motivated by an industrial problem, or it may be theoretical, experimental or design-based.

Postgraduate Electives may each contribute 3 or 6 UOC and may take one of several forms:

- Formal Coursework: These courses will have the same format as the core postgraduate courses above.
- Distance Education: Such courses will be taught using web-based material, formal course notes, books, CD-ROMs and papers, and will require extensive self-study by the candidate. The subjects may require a component of attendance at lectures given within the School, or at other suitable venues.
- Short Courses: Short courses are oriented toward continuing education. Each course will deal with a topical subject and will provide UOC which may be counted toward the MEngSc, or may be taken as a non-award course. Short courses may contribute either 3 or 6 UOC (the equivalent of 75–90 hours or 150–180 hours of work on the part of the candidate). Short courses will typically require attendance at lectures, either periodically or in a block, supplemented by self-study and assignment work.
- Symposia: Symposia will be similar to short courses, except that material will be delivered in a conference format, by the course

candidates themselves, and/or by members of academic staff and invited speakers.

Major Areas of Study:

Programs consist of 48 UOC of coursework, with 12 UOC comprising the core postgraduate courses:

SOLA9001 Photovoltaics
SOLA9002 Solar Cells and Systems

At least 18 UOC must be taken from one of the following areas of specialisation:

Photovoltaic Devices

Program Coordinator: Associate Professor C.B. Honsberg

SOLA9003 High Efficiency Silicon Solar Cells
SOLA9005 Advanced Semiconductor Devices
SOLA9006 Photovoltaic Technology & Manufacturing
SOLA9008 Special Topic in Photovoltaics
SOLA9020 Semiconductor Laboratory Operation & Development
SOLA9021 Advanced Semiconductor Laboratory Design and Operation
SOLA9022 Solar Cell Design, Fabrication & Characterisation

Photovoltaic Systems and Applications

Program Coordinator: Prof. S. R. Wenham

SOLA9007 Grid-Connected Photovoltaics
SOLA9009 Photovoltaics in Buildings
SOLA9013 Renewable Energy Product Reliability
SOLA9014 Stand-Alone Photovoltaic Systems
SOLA9028 Special Topic in Photovoltaic Systems & Applications
M523 (Murdoch University) Renewable Energy Systems Design

Renewable Energy Technologies

Program Coordinator: Dr A.B. Sproul

SOLA9004 Solar Energy
SOLA9010 Wind Energy
SOLA9011 Biomass
SOLA9012 Renewable Energy Policy
SOLA9013 Renewable Energy Product Reliability
SOLA9018 Special Topic in Renewable Energy

Postgraduate Electives

Not all the postgraduate electives listed above are offered every year. Some are organised as part of a two year rolling program. Students should consult with course advisors prior to completing enrolment to ascertain course availability.

Students not enrolling in the project are permitted to select not more than 12 UOC from the Special Electives from the MBT program.

Conditions for the Award of Degrees

For the rules, regulations and conditions of postgraduate coursework programs (Masters, Graduate Diplomas and Graduate Certificates) turn to the relevant program description earlier in this section. The conditions for postgraduate degrees by research follow.

Doctor of Philosophy (PhD)

1. The degree of Doctor of Philosophy may be awarded by the Council on the recommendation of the Higher Degree Committee of the appropriate faculty or board (hereinafter referred to as the Committee) to a candidate who has made an original and significant contribution to knowledge.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor with Honours from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment as a candidate for the degree.

Enrolment

3. (1) An application to enrol as a candidate for the degree shall be lodged with the Registrar at least one month prior to the date at which enrolment is to begin.

(2) In every case before making the offer of a place the Committee shall be satisfied that initial agreement has been reached between the *School and the applicant on the topic area, supervision arrangements, provision of adequate facilities and any coursework to be prescribed and that these are in accordance with the provisions of the guidelines for promoting postgraduate study within the University.

(3) The candidate shall be enrolled either as a full-time or a part-time student.

(4) A full-time candidate will present the thesis for examination no earlier than three years and no later than five years from the date of enrolment and a part-time candidate will present the thesis for examination no earlier than four years and no later than six years from the date of enrolment, except with the approval of the Committee.

(5) The candidate may undertake the research as an internal student ie. at a campus, teaching hospital, or other research facility with which the University is associated, or as an external student not in attendance at the University except for periods as may be prescribed by the Committee.

(6) An internal candidate will normally carry out the research on a campus or at a teaching or research facility of the University except that the Committee may permit a candidate to spend a period in the field, within another institution or elsewhere away from the University provided that the work can be supervised in a manner satisfactory to the Committee. In such instances the Committee shall be satisfied that the location and period of time away from the University are necessary to the research program.

(7) The research shall be supervised by a supervisor and where possible a co-supervisor who are members of the academic staff of the School or under other appropriate supervision arrangements approved by the Committee. Normally an external candidate within another organisation or institution will have a co-supervisor at that institution.

Progression

4. The progress of the candidate shall be considered by the Committee following report from the School in accordance with the procedures established within the School and previously noted by the Committee.

(i) The research proposal will be reviewed as soon as feasible after enrolment. For a full-time student this will normally be during the first year of study, or immediately following a period of prescribed coursework. This review will focus on the viability of the research proposal.

(ii) Progress in the course will be reviewed within twelve months of the first review. As a result of either review the Committee may cancel enrolment or take such other action as it considers appropriate. Thereafter, the progress of the candidate will be reviewed annually.

Thesis

5. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the investigation.

(2) The candidate shall give in writing to the Registrar two months notice of intention to submit the thesis.

(3) The thesis shall comply with the following requirements:

(a) it must be an original and significant contribution to knowledge of the subject;

(b) the greater proportion of the work described must have been completed subsequent to enrolment for the degree;

(c) it must be written in English except that a candidate in the Faculty of Arts and Social Sciences may be required by the Committee to write a thesis in an appropriate foreign language;

(d) it must reach a satisfactory standard of expression and presentation;

(e) it must consist of an account of the candidate's own research but in special cases work done conjointly with other persons may be accepted provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may not submit as the main content of the thesis any work or material which has previously been submitted for a university degree or other similar award, but may submit any work previously published whether or not such work is related to the thesis.

(5) Four copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(6) It shall be understood that the University retains the four copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act,

1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

6. (1) There shall be not fewer than three examiners of the thesis, appointed by the Committee, at least two of whom shall be external to the University.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that one of the following:

(a) The thesis merits the award of the degree.

(b) The thesis merits the award of the degree subject to minor corrections as listed being made to the satisfaction of the head of school.

(c) The thesis requires further work on matters detailed in my report. Should performance in this further work be to the satisfaction of the higher degree Committee, the thesis would merit the award of the degree.

(d) The thesis does not merit the award of the degree in its present form and further work as described in my report is required. The revised thesis should be subject to re-examination.

(e) The thesis does not merit the award of the degree and does not demonstrate that resubmission would be likely to achieve that merit.

(3) If the performance in the further work recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to submit the thesis for re-examination as determined by the Committee within a period determined by it but not exceeding eighteen months.

(4) After consideration of the examiners' reports and the results of any further examination of the thesis, the Committee may require the candidate to submit to written or oral examination before recommending whether or not the candidate be awarded the degree. If it is decided that the candidate be not awarded the degree, the Committee shall determine whether or not the candidate be permitted to resubmit the thesis after a further period of study and/or research.

Fees

7. A candidate shall pay such fees as may be determined from time to time by the Council.

**'School' is used here and elsewhere in these conditions to mean any teaching unit authorised to enrol research students and includes a department where that department is not within a school, a centre given approval by the Academic Board to enrol students, and an interdisciplinary unit within a faculty and under the control of the Dean of the Faculty. Enrolment is permitted in more than one such teaching unit.*

Note: All new PhD candidates in the Faculty of Engineering must complete and pass three courses as approved by the Head of School, normally in the first year of candidature.

Master of Engineering (ME) and Master of Science (MSc)

1. The degree of Master of Engineering or Master of Science by research may be awarded by the Council on recommendation of the Higher Degree Committee of the appropriate faculty (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of the thesis embodying the results of an original investigation.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee.

(2) An applicant who submits evidence of such other academic or professional attainment as may be approved by the Committee may be permitted to enrol for the degree.

(3) When the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant, before being permitted to enrol, to undergo such examination or carry out such work the Committee may prescribe.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least one calendar month before the commencement of the session in which enrolment is to begin.

(2) In every case, before permitting a candidate to enrol, the head of the school* in which the candidate intends to enrol shall be satisfied that adequate supervision and facilities are available.

(3) An approved candidate shall be enrolled in one of the following categories:

(a) full-time attendance at the University;

(b) part-time attendance at the University;

(c) external – not in regular attendance at the University and using research facilities external to the University.

(4) A candidate shall be required to undertake an original investigation on an approved topic. The candidate may also be required to undergo such examination and perform such other work as may be prescribed by the Committee.

(5) The work shall be carried out under the direction of a supervisor appointed from the full-time members of the University staff.

(6) The progress of a candidate shall be reviewed annually by the Committee following a report by the candidate, the supervisor and the head of the school* in which the candidate is enrolled and as a result of such review the Committee may cancel enrolment or take such other action as it considers appropriate.

(7) No candidate shall be granted the degree until the lapse of three academic sessions in the case of a full-time candidate or four academic sessions in the case of a part-time or external candidate from the date of enrolment. In the case of a candidate who has been awarded the degree of Bachelor with Honours or who had previous research experience the Committee may approve remission of up to one session for a full-time candidate and two sessions for a part-time or external candidate.

(8) A full-time candidate for the degree shall present for examination not later than six academic sessions from the date of enrolment. A part-time or external candidate for the degree shall present, for examination not later than ten academic sessions from the date of enrolment. In special cases an extension of these times may be granted by the Committee.

Thesis

4. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the original investigation.

(2) The candidate shall give in writing two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree theses.

(6) It shall be understood that the University retains the three copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

5. (1) There shall be not fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the merits of the thesis and shall recommend to the Committee that:

(a) the candidate be awarded the degree without further examination; *or*

(b) the candidate be awarded the degree without further examination subject to minor corrections as listed being made to the satisfaction of the head of the school; *or*

(c) the candidate be awarded the degree subject to further examination on questions posed in the report, performance in this further examination being to the satisfaction of the Committee; *or*

(d) the candidate be not awarded the degree but be permitted to resubmit the thesis in a revised form after a further period of study and/or research; *or*

(e) the candidate be not awarded the degree and be not permitted to resubmit the thesis.

(3) If the performance at the further examination recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee

may permit the candidate to re-present the same thesis and submit to a further oral, practical or written examination within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the reports of any oral or written or practical examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the Council.

**'School' is used here and elsewhere in these conditions to mean any teaching unit authorised to enrol research students and includes a department where that department is not within a school, a centre given approval by the Academic Board to enrol students, and an interdisciplinary unit within a faculty and under the control of the Dean of the Faculty. Enrolment is permitted in more than one such teaching unit.*

Note: All new Masters research candidates in the Faculty of Engineering must complete and pass three courses as approved by the Head of School, normally in the first year of candidature.

Master of Engineering (ME) and Master of Science (MSc) *without supervision*

1. The degree of Master of Engineering or Master of Science without supervision may be awarded by the Council on the recommendation of the Higher Degree Committee of the appropriate faculty (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation.

Qualification

2. A candidate for the degree shall have been awarded an appropriate degree of Bachelor of the University of New South Wales with at least three years relevant standing in the case of Honours graduates and four years relevant standing in the case of Pass graduates, and at a level acceptable to the Committee.

Enrolment and Progression

3. An application to enrol as candidate for the degree without supervision shall be made in the prescribed form which shall be lodged with the Registrar not less than six months before the intended date of submission of the thesis. A graduate who intends to apply in this way should, in his or her own interest, seek at an early stage the advice of the appropriate head of school (or department) with regard to the adequacy of the subject matter and its presentation for the degree. A synopsis of the work should be available.

Thesis

4. (1) A candidate shall submit a thesis embodying the results of the investigation.

(2) The candidate shall give in writing to the Registrar two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not related to the thesis.

(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation an submission of theses for higher degrees.

(6) It shall be understood that the University retains the three copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

5. (1) There shall be not fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) Before the thesis is submitted to the examiners, the head of the school in which the candidate is enrolled shall certify that it is prima facie worthy of examination.

(3) At the conclusion of the examination each examiner shall submit to the Committee that:

(a) the candidate be awarded the degree without further examination; *or*

(b) the candidate be awarded the degree without further examination subject to minor corrections as listed being made to the satisfaction of the head of the school (or department); *or*

(c) the candidate be awarded the degree subject to a further examination on questions posed in the report, performance in this further examination being to the satisfaction of the Committee; *or*

(d) the candidate be not awarded the degree but be permitted to resubmit the thesis in a revised form after a further period of study and/or research; *or*

(e) the candidate be not awarded the degree and be not permitted to resubmit the thesis.

(4) If the performance at the further examination recommended under (3)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to re-present the same thesis and submit to further examination as determined by the Committee within a period specified by it, but not exceeding eighteen months.

(5) The Committee shall, after consideration of the examiners' reports and the results of any further examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the Council.

A Message from the Dean

On behalf of the UNSW Law Faculty, I extend a warm welcome to you as postgraduate students. An internationally recognised Faculty, our postgraduate students come to us from varied walks of life. They include legal practitioners seeking specialised coursework training, academics pursuing research degrees, and non-lawyers seeking legal and related qualifications complementary to their disciplines. Whatever your legal background or program of study, we are committed to teaching and scholarly excellence within a setting of social responsibility. We aim to ensure your highest satisfaction by extending your educational horizons in the fulfillment of our educational mission as a centre of both academic and professional excellence.

Postgraduate Coursework Programs

The UNSW Law School offers five postgraduate coursework degrees: a Master of Laws, a Graduate Diploma in Law, a Master of Legal Studies, a Graduate Diploma in Legal Studies, and a Master of Law and Management, offered jointly with the Australian Graduate School of Management, the premier management school in Australia.

The postgraduate coursework curriculum provides a legal education in discrete areas of specialisation including: Corporate and Commercial Law; Corporate, Commercial and Taxation Law; Media, Communications and Information Technology Law; International Law; Criminal Justice; Asian and Comparative Law; Financial Services; and Human Rights and Social Justice.

Postgraduate coursework at the UNSW Law School has the specific goal of strengthening the professional knowledge and skills of lawyers and related professionals. As a result, coursework programs often are oriented around the specialised areas of law identified above, and each course contains a significant research component.

Consistent with the career enhancing goals of postgraduate coursework students, LLM and Grad Dip Law graduates who have completed a minumum of three courses from one of the specialisations may elect to have their specialisation noted on their testamur.

In its Tax School (Atax), the Law Faculty offers a Master of Taxation, a Master of Applied Taxation, a Graduate Diploma in Advanced Taxation and a Graduate Diploma in Taxation Studies. These programs are offered primarily, but not exclusively, through distance education. Over 30 postgraduate courses are available to students throughout the country or located offshore, and the programs offer the most comprehensive range of specialised taxation courses anywhere in the southern hemisphere.

Research Degrees

The UNSW Law Faculty also offers three research degrees under the supervision of leading scholars: the Doctor of Philosophy, the Doctor of Juridical Science and the Master of Laws.

The Faculty has particular research strengths in Constitutional and Administrative Law, Corporate and Commercial Law, Taxation Law, Criminal Justice and Criminology, European Law and International Law, Japanese Law, Indigenous Law and Human Rights, Information Technology Law, Intellectual Property, Media and Communications Law, Law and Social Theory and Procedure and Evidence.

The Faculty seeks to provide postgraduate research students with an intellectual atmosphere conducive to research. While research students have primary contact with their supervisors, UNSW also provides a collegial setting in which research students can exchange ideas with one another and the Faculty at large.

The Faculty also provides research students with a reflective atmosphere in which to develop their ideas. Illustrating that atmosphere are the two new postgraduate rooms in which access is provided to computer work terminals and the opportunity to enjoy quiet, reflective space.

Specialised Research Centres

Both postgraduate coursework and research students have the opportunity to draw upon the services of UNSW's important specialist research centres. These centres include: the Australian Human Rights Centre; the Indigenous Law Centre; the Australasian Legal Information Institute (AustLII); the Baker & McKenzie Cyberspace Law and Policy Centre; the European Law Centre; the Communications Law Centre; the Gilbert + Tobin Centre of Public Law; the Financial Services Consumer Policy Centre; the National Pro Bono Resource Centre; and the National Children's Youth Law Centre.

I wish you every success in your postgraduate studies at the UNSW Law Faculty.

Leon Trakman, SJD (Harvard)
Dean and Professor of Law
Faculty of Law

Faculty of Law

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Faculty of Law

The Faculty of Law comprises the School of Law, Atax (Australian Taxation Studies Program) and various centres and units. Information concerning the School of Law and Atax can be found in the relevant sections below.

Faculty Centres and Units

Australasian Legal Information Institute (AustLII)

The Australasian Legal Information Institute (**www.austlii.edu.au**) provides free internet access to Australian legal materials and to global legal materials through its WorldLII service.

AustLII is one of the largest sources of legal materials on the net. AustLII publishes public legal information, both primary legal materials (legislation, treaties and decisions of courts and tribunals) and secondary legal materials created by public bodies for purposes of public access (law reform and royal commission reports etc). AustLII's policy agenda is to convince parliaments, governments, courts, law reform bodies and other public institutions to make legal materials they control available free via the internet.

The AustLII collection contains full-text databases of all Australian legislation and Superior Court decisions. It includes most federal courts (High Court, Federal Court, Family Court, AAT etc) and most significant State and Territory courts and tribunals. AustLII also includes a number of more subject specific databases.

AustLII has provided its software and expertise to assist in the creation of legal information institutes in the South Pacific (**www.paclii.org**), United Kingdom and Ireland (**www.bailii.org**), Hong Kong (**www.hklii.org**) and Canada (**www.canlii.org**). In cooperation with all these organisations, AustLII has created and runs WorldII, the World Legal Information Institute (**www.worldlii.org**). WorldII is also developing its own databases of decisions of international courts and tribunals. In addition to over 300 legal databases, WorldLII includes the WorldLII Catalogue of over 5,100 different categories into which over 15,000 legal websites are classified.

AustLII and WorldLII provide access to over 700,000 pages of information daily. AustLII's users span the whole community, including educational institutions, the legal profession, business and government.

Through project DIAL, funded by the Asian Development Bank, AustLII has carried out in-country training of government lawyers in Mongolia, China, Vietnam, Indonesia, Pakistan, Cambodia and other countries.

AustLII is operated jointly by the Faculties of Law at the University of Technology, Sydney and UNSW. It is funded by grants averaging $800,000 per year from sources such as its host universities, the Australian Research Council, Australian Business Ltd, Asian Development Bank, Ausaid, CCH Australia Ltd, the Department of Defence, the Department of Foreign Affairs and Trade and other bodies.

For more information about AustLII, send mail to feedback@austlii.edu.au

Australian Human Rights Centre

The Australian Human Rights Centre was established in August 1986. The objectives of the Centre are: to undertake, encourage and facilitate research (including postgraduate research) in the field of human rights; to coordinate and develop courses in the field of human rights including the establishment of cross-faculty teaching linkages; to conduct specialised human rights courses of a continuing education nature for various professional groups; to promote and stimulate informed thinking about human rights and their implications for law and society through excellence in analysis and research; to organise occasional conferences for both specialist and non-specialist groups and assist in similar activity by others; to assist, in association with other relevant bodies, in the dissemination of information about human rights to the broader community; and to collaborate with a variety of bodies and individuals working in the human rights area at the national, regional and international levels.

The Centre publishes the *Australian Journal of Human Rights* and the *Human Rights Defender*. The Centre has promoted the establishment of an Australian Human Rights Information Centre which is setting up a comprehensive database and document collection on human rights.

For further information contact the Director, telephone: (02) 9385 3637.

Baker & McKenzie Cyberspace Law and Policy Centre

The Baker & McKenzie Cyberspace Law and Policy Centre facilitates research, education and public interest advocacy on legal and policy issues concerning transactions in cyberspace. The distinctive aim of the Centre is to assess these frequently technical issues from a public interest perspective.

Core Centre activities include the organisation of conferences and symposia for the public or various professions, the support of research and publications by our research associates and postgraduate research associates, and promotion of awareness of public interest aspects of online and IT issues. Major past conferences topics include 'e-Commerce and Content', 'e-Crime and e-Security', 'International aspects of Internet regulation' and 'e-Authentication'. These dealt with a range of cutting-edge topics such as mechanisms for ensuring trust in online transactions, the extension of privacy rules to the private sector, new legislative initiatives on cyber-crime and Internet censorship, and the resolution of jurisdictional issues in relation to disputes arising out of cross-national online transactions. The symposia provide a forum for free–ranging discussion between experts about the issues involved. The symposia thus avoid the usual conference format and allow experts a unique opportunity to exchange views.

The Centre is conducting a number of projects with a strong research element. These include: a review of the practical effectiveness of various proposed legal policy and technical solutions to the scourge of 'Spam'; the initiation of the Asia-Pacific Privacy Charter Council to encourage debate about emerging privacy protection in countries in the region, particularly in the light of the limited APEC initiatives in this area; and, in co-operation with Oz NetLaw (the Internet Legal Practice of the Communications Law Centre), 'Making privacy laws work', which examines Australian privacy laws from a complaints and casework perspective. A highlight in this project is the major international conference held in September 2003, "Terrorists and Watchdogs: Privacy and Surveillance 2003".

For more information, see the Centre's website at:
www.BakerCyberLawCentre.org

Communications Law Centre

The Communications Law Centre (CLC) is a research centre which specialises in media, communications, and online law and policy. It aims to be an innovative, professional and influential source of research, ideas and policy in the public interest on media and communications issues. The Centre is jointly affiliated with the Faculty of Law and the Faculty of Arts and Social Sciences.

The CLC pursues its aims through: research, policy submissions to public policy inquiries, professional training, participating in consultative and co-regulatory forums. It publishes: research and conference papers; *Communications Update*, a quarterly magazine including an annual media ownership update; *Australian Telecommunications Regulation: The CLC Guide*, a comprehensive guide to Australian telecommunications regulation; and maintains a specialist library, which is open to students and the public.

The Centre operates a specialist Internet legal practice, Oz NetLaw, that provides free legal information about Internet and e-commerce related law to individuals, small business, Internet service providers, start-ups and community/non-profit organisations. Other areas of law in which the Centre specialises include: broadcasting; defamation; free speech; media ownership; privacy; and telecommunications.

Located on campus at UNSW, the CLC teaches and provides research supervision for higher degree candidates in the Faculty of Law and the Faculty of Arts and Social Sciences. Volunteer assistance from students and others is welcomed in appropriate projects.

For more information contact the Centre on 9385 7385 or admin@comslaw.org.au and see **www.oznetlaw.net** and **www.comslaw.org.au**

Continuing Legal Education Centre

The Continuing Legal Education Centre (CLE) provides high quality professional education for lawyers and other professionals. CLE provides an important link between the Faculty of Law, the legal profession in Australia and the wider national and international community.

The objectives of the CLE program are:

- to provide programs which meet the legally-related educational needs of professional groups, especially but not limited to, lawyers;
- to develop the image of the Faculty as being in the forefront of legal development in key areas and active in legal criticism by running high quality educational programs in these areas; and
- to derive income from the conduct of programs for the Faculty's purposes.

The range of programs offered includes:

- day-time or evening seminars designed to update the knowledge of legal practitioners and other professionals;
- conferences which provide a forum for discussion of and training in new or developing areas of law and legal practice;
- legal skills and accreditation programs for lawyers and non-lawyers in areas of practice and procedure such as immigration law and legal research;
- short programs that can be accredited to one of three postgraduate legal degrees;
- short programs in substantive law for particular professional groups, including professionals from foreign jurisdictions.

For further information on particular CLE activities please contact the Director, Christopher Lemercier, telephone (02) 9385 3227, fax 9385 3227, website **www.cle.unsw.edu.au**

Diplomacy Training Program

The Diplomacy Training Program (DTP) is a non-government organisation, having an affiliation with the University through the Faculty of Law. It is physically located within the Faculty and enjoys the close involvement of academic staff in a voluntary capacity, both as trainers and Board Members. The DTP was founded in 1989 by Professor José Ramos Horta, 1996 Nobel Peace Laureate and representative of East Timor at the UN for more than twelve years. The Program provides training in human rights and "people's diplomacy" to non-governmental organisations and other sectors of civil society throughout the Asia-Pacific and indigenous Australia.

In its eleven years of existence, the DTP has developed specialised teaching materials and participatory skill-building methods based upon NGO needs and priorities. It provides an introduction to international human rights standards and procedures, including relevant UN conventions and institutions, and practical skills for human rights education, conflict resolution and good governance. Sessions include lobbying and negotiation, working with the media, NGO strategies and institutional standards.

Since January 1990, the DTP has conducted ten regional training sessions of 3-4 weeks in Bangkok, Manila, Sydney and Darwin, as well as 16 in-country sessions of 1-2 weeks duration in Australia, Fiji, India, Nepal, New Zealand, Sri Lanka, Taiwan and Thailand. Special trainings were designed and conducted with Indigenous Women of Australia before their participation in the Fourth UN World Conference on Women in 1994. To date, the DTP has trained over 600 human rights defenders from 30 countries.

Its board members are Professor Paul Redmond (Chair) (UNSW), Ms Susan Armstrong (UNSW), Ms Olga Havnen (Fred Hollows Foundation), Emeritus Professor Garth Nettheim (UNSW), Dr Sarah Pritchard, Ms Louise Sylvan (Australian Consumers Association), John Pace, Janet Hunt (adjunct Professor, Deakin and former Director of Australian Council for Overseas Aid), Philip Chung (AUSTLII). Professor José Ramos-Horta continues to be a patron of the DTP.

The DTP is independently funded from outside sources. Funders of programs have included: Community Aid Abroad, AusAID, the Canadian International Centre for Human Rights and Democratic Development, the Australian National Council of Churches, the Commonwealth Foundation (London), the Royal Ministry of Foreign Affairs-Norway and the Myer Foundation.

The DTP has close working relations with other NGOs, including the Australian Council for Overseas Aid (Canberra), the Asian Forum for Human Rights and Development (Bangkok), the International Service for Human Rights (Geneva) and the Unrepresented National and People's Organisation (The Hague).

European Law Centre

The European Law Centre was established in 1996. The Centre's objectives are to advance research into, and the graduate study of, European Law and European legal and political institutions particularly with a view to fostering interdisciplinary studies in:

- European Community Law;
- European Comparative Law;
- European and Comparative Human Rights;
- European Integration;
- the framework of economic, trade and political cooperation between Europe and the Australasian region;
- workable models for regional economic and political cooperation which may be of use in Australia's own region.

For further information contact the Directors: Dr. Adam Czarnota, telephone (02) 9385 2255, and Professor Martin Krygier, telephone (02) 9385 2240.

Financial Services Consumer Policy Centre

The Financial Services Consumer Policy Centre (FSCPC) is a non-profit research and advocacy organisation. The FSCPC was set up with a grant from the National Consumer Trust Fund. The Centre conducts research and policy advocacy on behalf of low income consumers and other disadvantaged sections of the community. In conjunction with the UNSW Faculty of Law, the FSCPC also teaches a range of courses in the Masters of Law program, including Financial Services Law & Compliance, Superannuation Law and Insurance Law.

The Centre's policy focus is on access issues and the affordability of financial services. Some of the issues which we cover include: unfair and anti-competitive fees and charges; the relationship between the social security system and financial services; superannuation choice; insurance law reform; small business access to banking; and consumer protection in electronic commerce.

For further information phone (02) 9385 1208 or visit **www.fscpc.org.au**

Gilbert + Tobin Centre of Public Law

The Gilbert + Tobin Centre of Public Law provides a focal point for research into and discussion of important questions of public law for the academic, professional and wider community. The Centre promotes independent ideas and ground breaking research. The Centre is supported by the considerable weight of research and teaching expertise in the area of public law contributed by other members of academic staff of the Faculty.

The Centre has a high profile and an influential role in public debate in the broad domain of public law, a site of change of considerable legal, political and social significance. The work of the Centre is concentrated on specific long and short-term projects. Its projects cover topics such as Bills of Rights, Electoral Law, Public Law Litigation, an Australian Republic, a Treaty between Indigenous and non-Indigenous Australians and the impact of International Law on Australian domestic law.

Inquires from people wishing to be involved in these or other projects within the field of public law are welcome, as are inquiries from prospective postgraduate students.

Professor George Williams, the Centre Director, can be contacted on (02) 9385 2259 or george.williams@unsw.edu.au. The Centre website can be found at **www.gtcentre.unsw.edu.au**

Indigenous Law Centre

The Indigenous Law Centre was established (originally as the Aboriginal Law Research Unit, then the Aboriginal Law Centre) within the University in 1981. Since its inception, the Centre has made a consistent contribution to the development of scholarship, the appropriate reform of laws and policy, the education of law students and others.

The Centre aims to develop and coordinate research, teaching and the dissemination of information in the multi-disciplinary area of the relationship between indigenous peoples and the law. The Centre has focused largely on the indigenous peoples of Australia but demonstrated an interest also in matters of comparative law and policy.

The Centre has published the *Indigenous Law Bulletin* (previously the Aboriginal Law Bulletin) continuously since 1981 and currently produces eight issues per year. The *Australian Indigenous Law Reporter*, a quarterly journal, is edited by the Centre and published by Butterworths Lexis/Nexis.

Staff and associates of the Centre teach both undergraduate and graduate electives in the Faculty of Law. Staff and associates are regularly called up on to give occasional presentations in other faculties and outside the University.

For more information, call the Centre on (02) 9385 2252 or email us at ilc@unsw.edu.au

Kingsford Legal Centre

Kingsford Legal Centre is the Faculty of Law's legal clinic. The Centre provides a clinical teaching program for law students where students are able to analyse the operation of the legal system and lawyer client relationships while working on cases for real clients.

The Centre is one of over 35 community legal centres in NSW and students work with Centre lawyers in acting for members of the local community who cannot afford private legal assistance.

The Centre provides legal advice in a wide variety of matters and takes on cases in areas such as domestic violence, discrimination, housing, wills and estates, employment, family, criminal law and victims compensation. The Centre assists over 3,000 people a year.

The Centre began operation in 1981. It has five lawyers, one of whom (the Director) is a Senior Lecturer in the Faculty of Law. The Centre is jointly funded by the Faculty of Law and the Community Legal Services Legal Funding Program through the State and Federal Governments and with assistance from Randwick City Council. In addition, the law firm Freehills maintains the permanent secondment of a solicitor's position to the Centre.

The courses LAWS2303 Clinical Legal Experience (Intensive), LAWS2304 Clinical Legal Experience, and LAWS2305 Clinical Program-Employment Law, are electives for later year students. Students can take a course in either session. All courses are available over summer. Students take instructions from clients, prepare necessary documents, undertake legal research and are responsible for preparation of any Court hearings. In this way, students can consolidate their study of the law by practical application. Small group classes, daily tutorials and constant consultation with the clinical supervisors who are practising lawyers provide an opportunity for students to analyse both their role as lawyers and the role of law in society. Over 60 volunteer solicitors and barristers participate in public advice sessions in the evenings and provide a legal mentoring scheme for students at the Centre.

All students enrolled in the course LAWS6210 Law Lawyers and Society undertake sessions at the Centre assisting volunteer lawyers in advising clients and completing a file management session.

The Centre is an internationally recognised Centre of excellence in clinical teaching and produces annual *Guides To Australian Clinical Legal Education* and a clinical newsletter.

In its community legal centre function the Centre has been prominent in several areas, particularly anti-discrimination, legal aid and domestic violence. Students are also involved in reform campaigns, policy work and education services to the local community.

For further information contact the Centre: 11 Rainbow Street Kingsford NSW 2032 Australia, telephone (02) 9398 6366, fax (02) 9399 6683, TTY (02) 9314 6430, email legal@unsw.edu.au.

National Children's and Youth Law Centre

The National Children's and Youth Law Centre is a community legal centre which aims to promote the rights and interests of children and young people throughout Australia. The Centre commenced in 1993 as a joint project of the University of New South Wales, the University of Sydney, and the Public Interest Advocacy Centre. The Centre occupies premises provided by UNSW at 32 Botany Street, Randwick.

The Centre provides free legal advice to children and young people and conducts case work and litigation where the issues are significant to children and young people in Australia. The Centre has a website (**www.lawstuff.org.au**) which provides legal information to young people on a broad number of issues in an accessible, colourful and approachable format, in addition to an email facility (LawMail) where young people may email the Centre for advice, information or referral from solicitors. *Article Thirteen* (formerly known as *Rights Now*) is a leading journal on young people and law containing news, discussion and debate on a variety of children's legal and rights issues.

For further information contact the Centre: telephone (02) 9398 7488, fax (02) 9398 7416, email cylc@unsw.edu.au, website **www.ncylc.org.au**

National Pro Bono Resource Centre

The National Pro Bono Resource Centre (NPBRC) was established in August 2002 as an initiative of the Commonwealth Attorney-General. The Centre's main objective is to promote and support high quality pro bono services in Australia. Funded by the Commonwealth Attorney-General's Department, the NPBRC aims to meet its objectives by:

- producing materials and setting up systems which will be of practical assistance to pro bono providers and people and organisations that are likely to benefit from pro bono services,
- investigating, developing and promoting ways of delivering pro bono that provide maximum benefit to disadvantaged communities and individuals,
- promoting discussion and information exchange including through a website (**www.nationalprobono.org.au**), an e-newsletter and, in October 2003, the 2nd National Pro Bono Conference,
- addressing barriers to effective pro bono including advocating changes to the legal system that will facilitate pro bono, and
- undertaking consultation and research that will support the promotion of effective pro bono work.

The NPBRC is located in The White House (Fig Tree Lane, Gate 4 High Street), telephone (02) 9385 7381, email info@nationalprobono.org.au

Social Justice Project

The Social Justice Project grew out of a desire to strengthen the work of a number of the Faculty's centres concerned with issues of social policy, socio-legal studies or which operate in the broad social justice area. These include the Australian Human Rights Centre, Indigenous Law Centre, National Children's and Youth Law Centre, Cyberspace Law and Policy Centre and the Diplomacy Training Program, which is

affiliated with the Faculty of Law. The Director of the Project, Professor Julian Disney, AO assists the Centres to pursue opportunities for funding and other initiatives to develop their mission and provide them with access to international networks of utility. He also provides advice to the Dean in relation to other developments that the Faculty may consider to strengthen its research, teaching and community service role in the social justice area.

School of Law

Information and Assistance

Some People Who Can Help You

If you require advice about enrolment, degree requirements, progression within programs, information about course content and requirements, contact the Law School, email pglaw@unsw.edu.au, telephone (02) 9385 2227.

The Faculty of Law homepage (timetables and general information) can be found at **www.law.unsw.edu.au**

Advanced Standing

The policy of the School of Law is to grant credit for courses which have been successfully completed at postgraduate level in another Faculty of Law where those courses, in the opinion of the School, are equivalent in content and depth to comparable courses at UNSW. Advanced standing for up to 50% of the program may be approved at the discretion of the Associate Dean (Postgraduate). There is an overriding requirement that at least 50% of the program must be completed within the Law School. Where Advanced Standing for up to 50% of the program is approved, there is no further right to undertake cross-institutional study.

Computing Information

The School of Law manages a multimedia computer laboratory equipped with 26 PCs for instructional purposes. 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 WWW access. For more information, please refer to the booklet 'IT Resources for Students' or visit the Faculty 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

New students are informed of enrolment procedures at the time of offer.

Cross Institutional Studies and Exchange Programs

Students enrolled at UNSW may be permitted to undertake some studies at overseas or interstate institutions ('Cross-Institutional Studies') provided that they are equivalent in content and depth to comparable courses at UNSW. Students must note that the School requires that at least 50% of law studies be completed at UNSW. Where advanced standing for up to 50% of the program is approved there is no further right to undertake cross-institutional study. Courses undertaken on a cross-institutional basis will be awarded 6 units of credit towards postgraduate law programs. Students should discuss their plans for cross-institutional studies with the Postgraduate Coordinator.

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 Australian legal profession and international visitors 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 two postgraduate students – one from coursework programs and one from research – are elected to Faculty membership for the following year. Student representatives attend Faculty 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

Postgraduate Study

The University provides facilities for approved students to engage in advanced studies and research in Law leading to the award of higher degrees.

The degree of Doctor of Philosophy (PhD) is available in the Faculty of Law (program 1730). This degree requires the completion of a program of research over a period of at least three years full-time study leading to the preparation of a thesis of not more than 100,000 words. The degree of Doctor of Juridical Science (SJD) (program 1740) requires completion of at least three years of full-time study (one year of coursework and two years of research leading to the preparation of a thesis).

The degree of Master of Laws (LLM) may be undertaken either by coursework (program 9200 – one year full-time study) or by research (program 2440 – a program of research over a period of at least three semesters of full-time study leading to the preparation of a thesis). The degree of Master of Law and Management (MLM) (program 9210) is offered in part-time mode only over a minimum of five semesters in conjunction with the Australian Graduate School of Management.

The Graduate Diploma in Law (Grad Dip)(program 5740) is undertaken by coursework and requires the completion of two sessions of part-time study.

The Master of Legal Studies (MLS) and the Graduate Diploma in Legal Studies (Grad Dip Leg Studs) are coursework programs offered over a minimum of two semesters to non-law professionals. The aim is to provide knowledge, skills and techniques needed to identify legal issues in the workplace. The framework allows for postgraduate law courses to be combined with postgraduate courses drawn from other disciplines. Further information is available on the Law Faculty web site at **www.law.unsw.edu.au**

Program Outlines

1740 Doctor of Juridical Science (SJD)

The Doctor of Juridical Science degree provides an opportunity to combine a doctoral thesis with the coursework component of an LLM degree. In addition to the contact with academic staff fostered by the program, SJD students will become part of the mainstream student body of the law school and enjoy the advantages of contact with other committed research students. The degree consists of one-third coursework (equivalent to one year full-time) and two-thirds research (equivalent to

two years full-time) which may be in an area encountered by the student while undertaking coursework.

The SJD is intended to be equivalent to a PhD and therefore one of the highest degrees that a university can award. The degree is intended to prepare candidates for an academic career, or for high level research and policy formulation. While exceeding the requirements of most practising lawyers who wish to undertake a higher degree, the SJD is widely accepted by the profession as an indicator of expertise and original contribution to an area of knowledge as is the case in North America and elsewhere overseas.

The coursework component of the degree is described under the entry for LLM by Coursework. All coursework units must be completed before the commencement of the dissertation. After completion of at least four coursework units, students intending to enrol in the dissertation may submit an outline of a proposed topic to the Associate Dean (Postgraduate). The topic of the dissertation, which may be a development of one or more coursework units, must be nominated by the candidate and approved by the Research Committee of the Faculty of Law. The dissertation must amount to an original contribution to a field of study, and be of publishable quality. It will be assessed by not less than three examiners appointed by the Faculty Research Committee. Assessment is as for other final research degrees, ie award / not award / re-submit.

9200 Master of Laws by Coursework (LLM)

The Master of Laws by Coursework offers law graduates an opportunity to study in an organised fashion areas of specialty and greater difficulty than are met within a Bachelor of Laws program, some of which call for advanced interdisciplinary perspectives. Courses offered in the LLM by Coursework program combine a degree of sophistication or technical difficulty in terms of legal content with a substantial consideration of relevant interdisciplinary aspects of the subject matter and a focus on policy. Each course contains a significant research component. All courses are not necessarily available in any one year.

The LLM by Coursework may be taken full-time in two semesters or part-time in a minimum of three semesters. Students must undertake and satisfactorily complete six semester-long courses or the equivalent. A total of 48 units of credit are required for the award of the degree. Students may elect to complete a major sequence of courses (see below). Postgraduate courses are taught in a variety of formats both during the University's formal academic semesters and over the winter teaching break. While many are taught for two hours per week over a teaching semester, in others the class hours are arranged more intensively to permit students to focus fully on a research project. Some courses of particular interest to students in employment are scheduled in a venue situated in the CBD.

A student may apply to the Associate Dean (Postgraduate) to complete a research paper of about 30,000 words in place of one year-long course, or one or two research papers of about 15,000 words each in place of one or two semester-long courses.

A student may apply to the Associate Dean (Postgraduate) for permission to take, as appropriate to the student's overall program, up to 50 per cent of the program from courses offered at postgraduate level by another university or from courses offered by Atax. No student may be permitted to take more than 50 per cent of the program from courses of either type.

Specialist Major Sequences

1. Candidates for the LLM by Coursework may undertake study incorporating a major sequence in any one of the following specialist areas:

- Asian and Comparative Law
- Comparative Law
- Corporate and Commercial Law
- Corporate, Commercial and Taxation Law
- Criminal Justice
- Financial Services Law
- Human Rights and Social Justice
- International Law
- Media, Communications and Information Technology Law

2. In order to incorporate a major sequence in the degree a student will be required to obtain no less than 24 of the 48 units of credit required for the award of the degree from the courses allocated to that major sequence.

3. From time to time the allocation of courses to major sequences may be altered.

4. The Associate Dean (Postgraduate) may when considering it appropriate authorise the inclusion of a Special Elective within, or the deletion of a Special Elective from among, the courses allocated to a major sequence.

5. The Associate Dean (Postgraduate) may when considering it appropriate approve as part of an individual student's major sequence a course or courses taken by that student on a cross-institutional basis.

6. Where a special case is made, or where an individual student's assessment program for the course concerned is tailored specifically to issues relevant to a major sequence, the Associate Dean may approve a course not otherwise allocated to a major sequence as part of that student's major sequence.

7. Research Thesis courses may be counted towards the units of credit required for a major sequence where, in the opinion of the Associate Dean, the subject matter of the thesis topic concerned is substantially related to the specialist area of the major sequence.

8. When a student completes the LLM by Coursework incorporating a major sequence as above, the student's academic transcript will identify the major sequence and the courses which constitute it and the student's Testamur will contain the words 'Master of Laws specialising in... (the major sequence completed)' or words to like effect.

Award of the Degree

1. The degree of Master of Laws by Coursework may be awarded by the Council to a candidate who has satisfactorily completed a program of advanced study.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor of Laws from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Faculty Education Committee of the Faculty of Law (hereinafter referred to as the Committee).

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) When the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant, before being permitted to enrol, to undergo such examination or carry out such work as the Committee may prescribe.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar by the advertised due date.

(2) A candidate for the degree shall be required to undertake such formal courses and pass such assessment as is prescribed.

(3) The progress of a candidate shall be reviewed at least once annually by the Committee and as a result of its review the Committee may cancel enrolment or take such other action as it considers appropriate.

(4) No candidate shall be awarded the degree until the lapse of two academic semesters from the date of enrolment in the case of a full-time candidate or three semesters in the case of a part-time candidate. The maximum period of candidature shall be three academic semesters from the date of enrolment for a full-time candidate and six semesters for a part-time candidate. In special cases an extension of these times may be granted by the Committee.

9210 Master of Law and Management (MLM)

The Master of Law and Management by coursework is a specially designed Masters degree which provides advanced study in the disciplines of law and management. Participants will be able to establish or reinforce a legal specialisation whilst acquiring or consolidating an understanding of the functional areas of management.

The degree is primarily directed towards three target groups. First, practitioners who have management responsibilities in a firm. Second, lawyers dealing with corporations who need advanced legal knowledge and a solid understanding of the language and core concepts of management. Third, practising managers in industry who seek to broaden both their management and legal expertise.

The MLM is offered jointly by the Faculty of Law and the Australian Graduate School of Management (AGSM).

A minimum of three courses (24 units of credit) must be drawn from the choice offered by Law and Atax and a minimum of four core management courses from the AGSM. The Law courses include most of those listed for the LLM. Atax courses are listed in the relevant section of this Handbook. All courses will not necessarily be available in any one year.

The AGSM compulsory courses for the MLM are: Managing People and Organisations; Marketing Principles; Managers, Markets and Prices; and Corporate Finance. A further two courses may be selected from: Data Analysis and Statistical Modelling for Business; Accounting and Financial Management; Managerial Skills; Managing Change; and Managing Information Technology.

The Law courses will normally be taught in the evening. Many courses are available in alternative formats both during the academic sessions and over the summer and winter teaching break. The AGSM courses are available in four locations in the Sydney CBD and in five other major city venues interstate (participants may attend these synchronised classes if travelling). Atax courses are available by distance learning with audio-conferences scheduled to suit busy professionals. Most classes are between 1.5 and 2 hours in duration and some courses are offered in a Sydney CBD location. Please consult the Atax website for timetables. In addition, the AGSM courses have on average two half-day Saturday workshops. Both the AGSM and Atax courses are supported by comprehensive open learning self-directed study materials. For AGSM courses no other study resources need be obtained.

A total of 60 units of credit are required for the award of the degree. The MLM by coursework is offered part-time only over a minimum of five sessions.

In relation to law courses, students may apply to the Program Director for permission to take, as appropriate, one or two single-semester courses (or the equivalent in year-long courses) offered at postgraduate level by another university.

Award of the Degree

1. The degree of Master of Law and Management may be awarded by the council to a candidate who has satisfactorily completed a program of advanced study approved by the Faculty Education Committees of the Faculty of Law and the Australian Graduate School of Management (hereinafter referred to as the Committees).

Qualifications

2. (1) Applicants for enrolment in the degree shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committees.

(2) Applicants shall in addition have had a minimum of two years' relevant work experience.

(3) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committees may be permitted to enrol for the degree.

(4) If the Committees are not satisfied with the qualifications submitted by an applicant the Committees may require the applicant to undergo such assessment or carry out such work as the Committees may prescribe, before permitting enrolment**.**

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar by the advertised due date.

(2) A candidate for the degree shall be required to undertake such formal courses and pass such assessment as is prescribed by the Committees.

(3) The progress of a candidate during the period of candidature shall be reviewed at least once annually, and as a result of any such review the Committees may cancel enrolment or take such other action as they consider appropriate.

(4) No candidate shall be awarded the degree until the lapse of four academic sessions from the date of enrolment. The maximum period of candidature shall be twelve academic sessions from the date of enrolment. In special cases an extension of these times may be granted by the Committees.

9220 Master of Legal Studies (MLS)

The Master of Legal Studies is a coursework program offered to professionals with a non-law background. The program is specifically designed to provide an understanding of the law within the area of expertise of the candidate. Courses offered in the MLS program combine a degree of sophistication or technical difficulty in terms of legal content with a substantial consideration of relevant interdisciplinary aspects of the subject matter and a focus on policy. Each course contains a significant research component. All courses are not necessarily available in any one year.

The MLS allows cross-disciplinary study in postgraduate courses from other UNSW faculties enabling students to advance their professional skills while acquiring knowledge of the law. The following compulsory core courses in postgraduate law are mandatory and must be completed prior to enrolment in postgraduate law electives: LAWS4272 Australian Legal System and Process (8 UOC); LAWS4430 Research and Writing in a Legal Environment (4 UOC); LAWS4029 Elements of Contract (4 UOC).

The MLS may be taken full-time in two semesters or part-time in a minimum of three semesters. Students must undertake and satisfactorily complete six single-semester courses or the equivalent. A total of 48 units of credit are required for the award of the degree. Postgraduate law courses are taught in a variety of formats both during the University's formal academic semesters and over the winter teaching break. While many are taught for two hours per week over a teaching semester, in others the class hours are arranged more intensively to permit students to focus fully on a research project. Some courses of particular interest to students in employment are scheduled in a venue situated in the CBD.

A student may apply to the Associate Dean (Postgraduate) for permission to take, as appropriate to the student's overall program, up to 50 per cent of the program from courses offered at postgraduate level by another UNSW faculty, another University or from courses offered by Atax. No student may be permitted to take more than 50 per cent of the program from courses of either type.

Research Thesis Options are not permitted in the MLS other than in exceptional circumstances. Candidates wishing to include a Research Thesis course within their program should consult with the Associate Dean (Postgraduate).

Completion of the MLS by formal coursework will not lead to a professional qualification of legal practice.

Award of the Degree

1. The degree of Master of Legal Studies may be awarded by the Council to a candidate who has satisfactorily completed a program of advanced study.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Faculty Education Committee of the Faculty of Law (hereinafter referred to as the Committee).

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) When the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant, before being permitted to enrol, to undergo such examination or carry out such work as the Committee may prescribe.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the diploma shall be made on the prescribed form which shall be lodged with the Registrar by the advertised due date.

(2) A candidate for the degree shall be required to undertake such formal courses and pass such assessment as is prescribed.

(3) The progress of a candidate shall be subject to the approval of the Associate Dean (Postgraduate) and will be reviewed at least once annually by the Committee. As a result of its review the Committee may cancel enrolment or take such other action as it considers appropriate.

(4) No candidate shall be awarded the degree until the lapse of two academic semesters from the date of enrolment in the case of a full-time candidate or three semesters in the case of a part-time candidate. The maximum period of candidature shall be three academic semesters from the date of enrolment for a full-time candidate and six semesters for a part-time candidate. In special cases an extension of these times may be granted by the Committee.

5740 Graduate Diploma in Law (GradDip)

The Graduate Diploma in Law by formal coursework offers law graduates the opportunity of advanced graduate study in law either generally or within specialised areas without undertaking a full Master of Laws degree.

Most courses within the program are also available to students enrolled in the Master of Laws degree. There is no difference between the Graduate Diploma and the Master of Laws by formal coursework degree in terms of the content and depth with which particular courses are studied – the Graduate Diploma merely requires completion of fewer courses than would be required for a Master of Laws degree. Courses combine a degree of sophistication or technical difficulty in terms of legal content with a substantial consideration of relevant interdisciplinary aspects of the subject matter and a focus on policy.

The Graduate Diploma may be completed in two sessions. Students must undertake and satisfactorily complete four semester-long (single semester) courses or the equivalent. A total of 32 units of credit are required for the award of the diploma. Students may elect to complete a major sequence of courses. All courses will not necessarily be available in any one year.

A student may apply to the Associate Dean (Postgraduate) to complete a research paper of about 30,000 words in place of one year-long course, or one or two research papers of about 15,000 words each in place of one or two semester-long courses.

A student may apply to the Associate Dean (Postgraduate) for permission to take, as appropriate to the student's overall program, up to 50 per cent of the program from courses offered at postgraduate level by another university or from courses offered by Atax. No student may be permitted to take more than 50 per cent of the program from courses of either type.

Specialist Major Sequences

1. Candidates may undertake study incorporating a major sequence in any one of the following specialist areas:

- Asian and Comparative Law
- Comparative Law
- Corporate and Commercial Law
- Corporate, Commercial and Taxation Law
- Criminal Justice
- Financial Services Law
- Human Rights and Social Justice
- International Law
- Media, Communications and Information Technology Law

2. In order to incorporate a major sequence in the degree a student will be required to obtain no less than 24 of the 32 units of credit required for the award of the degree from the courses allocated to that major sequence.

3. From time to time the allocation of courses to major sequences may be altered.

4. The Associate Dean (Postgraduate) may when considering it appropriate authorise the inclusion of a Special Elective within, or the deletion of a Special Elective from among, the courses allocated to a major sequence.

5. The Associate Dean (Postgraduate) may when considering it appropriate approve as part of an individual student's major sequence a course or courses taken by that student on a cross-institutional basis.

6. Where a special case is made, or where an individual student's assessment program for the course concerned is tailored specifically to issues relevant to a major sequence, the Associate Dean (Postgraduate) may approve a course not otherwise allocated to a major sequence as part of that student's major sequence.

7. Research Thesis courses may be counted towards the units of credit required for a major sequence where, in the opinion of the Associate Dean (Postgraduate), the subject matter of the thesis topic concerned is substantially related to the specialist area of the major sequence.

8. When a student completes the Graduate Diploma in Law incorporating a major sequence as above, the student's academic transcript will identify the major sequence and the courses which constitute it and the student's Testamur will contain the words 'Graduate Diploma in Law specialising in... (the major sequence completed)' or words to like effect.

Award of the Degree

1. A Graduate Diploma may be awarded by the Council to a candidate who has satisfactorily completed an approved program of study.

Qualifications

2. (1) A candidate for the Diploma shall have been awarded an appropriate degree of Bachelor of Laws from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution, at a level acceptable to the Faculty Education Committee of the Faculty of Law (hereinafter referred to as the Committee).

(2) An applicant who submits evidence of such other academic and professional attainment, as may be approved by the Committee, may be permitted to enrol for the Diploma.

(3) If the Committee is not satisfied with the qualification submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the diploma shall be made on the prescribed form which shall be lodged with the Registrar by the advertised due date.

(2) A candidate for the diploma shall be required to undertake the courses, and pass any assessment, prescribed.

(3) The progress of a candidate shall be reviewed by the end of two sessions by the Committee and as a result of its review the Committee may cancel the enrolment or take such other action as it considers appropriate.

(4) The normal duration of the program is two academic semesters from the date of enrolment in the case of a full-time candidate or four semesters in the case of a part-time candidate. In special circumstances a variation of these times may be approved by the Head of School.

5750 Graduate Diploma in Legal Studies (GradDipLS)

The Graduate Diploma in Legal Studies by formal coursework offers the opportunity of study in law for non-law professionals.

Most courses within the program are also available to students enrolled in the Master of Legal Studies (MLS). There is no difference between the Graduate Diploma and the MLS degree in terms of the content and depth with which particular courses are studied. The Graduate Diploma merely requires completion of fewer courses than would be required for an MLS degree. Courses combine a degree of sophistication or technical difficulty in terms of legal content with a substantial consideration of relevant interdisciplinary aspects of the subject matter and a focus on policy. Candidates must complete the compulsory core courses prior to enrolment in postgraduate law electives.

The Graduate Diploma may be completed in two semesters. Students must undertake and satisfactorily complete four single- semester courses or the equivalent. A total of 32 units of credit are required for the award of the diploma. All courses will not necessarily be available in any one year.

A student may apply to the Associate Dean (Postgraduate) for permission to take, as appropriate to the student's overall program, up to 50 per cent of the program from courses offered at postgraduate level by another UNSW faculty, another university or from courses offered by Atax. No student may be permitted to take more than 50 per cent of the program from courses of either type.

Research Thesis Options are not permitted in the Graduate Diploma other than in exceptional circumstances. Candidates wishing to include a Research Thesis course within their program should consult with the Associate Dean (Postgraduate).

Completion of the Graduate Diploma by formal coursework will not lead to a professional qualification of legal practice.

Award of the Degree

1. A Graduate Diploma may be awarded by the Council to a candidate who has satisfactorily completed an approved program of study.

Qualifications

2. (1) A candidate for the Diploma shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution, at a level acceptable to the Faculty Education Committee of the Faculty of Law (hereinafter referred to as the Committee).

(2) An applicant who submits evidence of such other academic and professional attainment, as may be approved by the Committee, may be permitted to enrol for the Diploma.

(3) If the Committee is not satisfied with the qualification submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the diploma shall be made on the prescribed form which shall be lodged with the Registrar by the advertised due date.

(2) A candidate for the diploma shall be required to undertake the courses, and pass any assessment, prescribed.

(3) The progress of a candidate shall be subject to the approval of the Associate Dean (Postgraduate) and will be reviewed at the end of two semesters by the Committee. As a result of its review the Committee may cancel enrolment or take such other action as it considers appropriate.

(4) The normal duration of the program is two academic semestsers from the date of enrolment in the case of a full-time candidate or four semesters in the case of part-time candidate. In special circumstances a variation of these times may be approved by the Head of School.

Postgraduate Elective Courses

The following electives are available for credit towards the Master of Laws degree by Coursework, the Doctor of Juridical Science (coursework component), the Master of Law and Management degree, and the Graduate Diploma in Law.

LLM, MLM, SJD, and GradDip Courses

16 unit of credit courses

LAWS4422 Research Thesis: 16 UOC

8 unit of credit courses

LAWS4027 Advanced Debt Capital Markets
LAWS4081 Advanced Issues in International Law
LAWS3049 Advanced Issues in Torts
LAWS4813 Aspects of International Governance
LAWS4271 Australian Legal System
LAWS4026 Banking and Finance Law
LAWS4023 Commercial Contracts: Problems of Performance, Breach and Termination
LAWS4028 Commercial Fraud
LAWS4024 Commercial Litigation
LAWS4025 Commercial Property Transactions
LAWS4291 Comparative Constitutional Law
LAWS3009 Comparative Criminal Justice: Investigations, Prosecutions and Trials
LAWS4019 Competition Law
LAWS4181 Contemporary Issues in Human Rights
LAWS3091 Corporate Control Transactions
LAWS4028 Corporate Governance
LAWS3095 Corporate Insolvency
LAWS9978 Corporate Self-Regulation and Compliance
LAWS3003 Crime Prevention Policy
LAWS3008 The Criminal Justice System
LAWS3052 Current Issues in Law and the Arts
LAWS3037 Data Surveillance and Information Privacy Law
LAWS3033 Defamation, Privacy and the Media
LAWS3093 Derivatives Regulation
LAWS3035 Developing Computer Applications to Law
LAWS3044 Electronic Commerce Law & Practice
LAWS3053 Entertainment Law
LAWS4151 European Union: Institutions and Legal Systems
LAWS4152 European Union: Economic & Trade Law
LAWS9997 Financial Services Law and Compliance
LAWS4022 The Frontiers of Contract
LAWS7003 Global Issues in Competition Policy
LAWS4084 History and Theory of International Law
LAWS4184 Human Rights in International Trade
LAWS4292 Human Rights under the Australian Constitution
LAWS9977 Information Technology: Internet Governance
LAWS3080 Insurance Law
LAWS4182 International Aspects of Social Justice
LAWS9993 International Business Transactions
LAWS7004 International Child Law
LAWS4083 International Commercial Arbitration
LAWS4016 International Context of Intellectual Property
LAWS9991 International Criminal Law
LAWS9119 International Environmental Law
LAWS9995 International Human Rights
LAWS4085 International Organisations
LAWS4052 International Taxation
LAWS9972 International Trade Law
LAWS3040 Internet Content Regulation
LAWS3029 Issues in Broadcasting Regulation
LAWS9190 Issues in Immigration Law
LAWS4021 Issues in Intellectual Property
LAWS4080 Issues in International Law
LAWS4130 Japanese Law and Economics
LAWS4128 Japanese Law and Politics
LAWS4129 Japanese Law and Society
LAWS4127 Japanese Law in Context
LAWS4290 Law, Constitutionalism and Culture
LAWS4034 Law and Finance
LAWS3039 Law and Internet Cultures
LAWS4088 Law of Armed Conflict
LAWS4086 Law of the Sea
LAWS4087 Legal Regulation of the Use of Force
LAWS4431 Legal Research
LAWS4212 Native Title Law, Policy and Practice
LAWS4150 Parliaments, Politics and Legislation
LAWS4082 Peaceful Settlement of International Disputes
LAWS3006 Policing
LAWS3090 Principles of Australian Corporations Law
LAWS4018 Principles of Intellectual Property
LAWS4088 Public Advocacy
LAWS4033 Quantitative Methods in Law
LAWS3094 Regulation of Managed Investments
LAWS4423 Research Thesis: 8 UOC
LAWS3092 Securities and Financial Markets Regulation
LAWS3096 Securities Settlement Systems and Interests in Securities
LAWS3001 Sentencing: Law, Policy and Practice
LAWS3083 Sports Sponsorship and Marketing: Commercial Issues
LAWS3081 Superannuation Law and Compliance
LAWS3051 Telecommunications Competition and Consumers
LAWS4120 Themes in Asian and Comparative Law
LAWS3032 TV, Radio and New Media
LAWS4035 Water Rights Law

4 unit of credit courses

LAWS4183 Aspects of International Governance
LAWS3042 Censorship and Free Speech
LAWS3041 Contempt and the Media
LAWS3082 Risk Management and Insurance in Sport
LAWS3000 Selected Issues in Sentencing

MLS compulsory core courses

LAWS4272 Australian Legal System and Process
LAWS4029 Elements of Contract
LAWS4032 Construction Contract Law for Non-Lawyers
LAWS3089 Corporate Law and Regulation
LAWS4031 Discharge of Contract
LAWS4017 Intellectual Property: Regulation and Policy
LAWS4430 Research and Writing in a Legal Environment

Conditions for the Award of Degrees

Higher Degrees

For the list of postgraduate programs by research and coursework see the table, arranged in faculty order, at the front of this Handbook. For the rules, regulations and conditions of postgraduate coursework programs (Masters, Graduate Diplomas and Graduate Certificates) turn to the program description in this Handbook. The conditions for postgraduate degrees by research follow.

Doctor of Philosophy (PhD)

Refer to Conditions for the Award of Degrees in the Arts & Social Sciences section of this Handbook.

Doctor of Juridical Science (SJD)

Award of the Degree

1. The degree of Doctor of Juridical Science may be awarded by the Council on the recommendation of the Faculty Research Committee of the Faculty of Law (hereinafter referred to as the Committee) to a candidate who after satisfactorily completing a qualifying program comprising 48 units of credit in the LLM by coursework degree has through the submission of a thesis based on his or her research made an original and significant contribution to knowledge in the field of law.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor of Laws from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee, and shall have completed the qualifying program to an approved standard. The standard required is an average of 75% or better in the candidate's qualifying program. In addition, a research proposal must be submitted as soon as feasible after completion the qualifying program. Admission to the SJD will be conditional on the viability of the research proposal.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant, the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe before permitting enrolment.

Enrolment

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar by the advertised due date.

(2) In every case before making the offer of a place the Committee shall be satisfied that initial agreement has been reached between the School and the applicant on the provision of adequate facilities to be prescribed and that these are in accordance with the provisions of the guidelines for promoting postgraduate study within the University.

(3) The candidate shall be enrolled as either a full-time or part-time student.

(4) A full-time candidate will present the thesis for examination no earlier than four academic semesters and no later than six academic semesters from the date of enrolment for the SJD degree (ie after completion of the qualifying program) and a part-time candidate will present the thesis no earlier than six academic semesters and no later than ten academic semesters from the date of enrolment, except with the approval of the committee.

(5) The candidate must complete the qualifying program as an internal student; that is at a campus, or other approved facility with which the University is associated. He or she may undertake the research as an internal student or as an external student who is not in attendance at the University except for such periods as may be prescribed by the Committee.

(6) An internal candidate will normally carry out the research on a campus or at a teaching or research facility of the University except that the Committee may permit a candidate to spend a period in the field, within another institution or elsewhere away from the University provided that the work can be supervised in a manner satisfactory to the Committee. In such instances the Committee shall be satisfied that the location and period of time away from the University are necessary to the research program.

(7) The research shall be supervised by a supervisor and where possible a co-supervisor who are members of the academic staff of the School or under other appropriate supervision arrangements approved by the Committee. Normally an external candidate within another organisation or institution will have a co-supervisor at that institution.

Progression

4. The progress of the candidate shall be considered by the Committee following a report from the School in accordance with the procedures established within the School and previously noted by the Committee.

(1) The progress of a candidate during both the qualifying program and the period of research shall be reviewed at least once annually, and as a result of any such review the Committee may cancel enrolment or take such other action as it considers appropriate.

Thesis

5. (1) On completing the program of study a candidate shall submit a thesis which normally would not exceed 70,000 words and which makes an original and significant contribution in the field of law.

(2) The candidate shall give in writing to the Registrar two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research.

(4) Four copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(5) It shall be understood that the University retains the three copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

6. (1) There shall be not fewer than three examiners of the thesis, appointed by the Committee, at least two of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that:

(a) The thesis merits the award of the degree, *or*

(b) The thesis merits the award of the degree subject to minor corrections as listed being made to the satisfaction of the Head of School, or

(c) The thesis requires further work on matters detailed in the examiner's report. Should performance in this further work be to the satisfaction of the Faculty Research Committee, the thesis would merit the award of the degree, or

(d) The thesis does not merit the award of the degree in its present form and further work as described in the examiner's report is required. The revised thesis should be subject to re-examination, *or*

(e) The thesis does not merit the award of the degree and does not demonstrate that resubmission would be likely to achieve that merit.

(3) If the performance at the further work recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to re-present the same thesis and submit to further examination as determined by the Committee within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the results of any further work, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate be permitted to resubmit the thesis after a further period of study and/or research. If the decision of the Committee results non-award of the SJD the candidate may take out a Master of Laws degree on the basis of the coursework completed before the SJD thesis.

Fees

7. A candidate shall pay such fees as may be determined from time to time by the Council.

Master of Laws by Research (LLM)

Award of the Degree

1. The degree of Master of Laws by Research may be awarded by the Council on the recommendation of the Faculty Research Committee of the Faculty of Law (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor of Laws from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) When the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant, before being permitted to enrol, to undergo such examination or carry out such work as the Committee may prescribe.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar by the advertised due date.

(2) In every case before making the offer of a place the Committee shall be satisfied that initial agreement has been reached between the School and the applicant on the topic area, supervision arrangements, provision of adequate facilities and any coursework to be prescribed and that these are in accordance with the provisions of the guidelines for promoting postgraduate study within the University.

(3) The candidate shall be enrolled as either a full-time or part-time student.

(4) A candidate shall be required to undertake an original investigation on an approved topic. The candidate may also be required to undergo such examination and perform such other work as may be prescribed by the Committee.

(5) The research shall be supervised by a supervisor or supervisors who are members of the academic staff of the School, or under other appropriate supervision arrangements approved by the Committee. Normally an external candidate within another organisation or institution will have a co-supervisor at that institution.

(6) Full-time and part-time candidates for the degree shall submit, within one or two semesters of enrolment respectively, a substantial piece of written work forming part of or relating to the approved topic. If this work is unsatisfactory or not forthcoming, the Committee will review the candidate's enrolment. In any case, the progress of a candidate shall be reviewed annually by the Committee following a report by the candidate, the supervisor and the Associate Dean (Research), and as a result of such review the Committee may cancel enrolment or take such other action as it considers appropriate.

(7) No candidate shall be granted the degree until the lapse of three academic semesters in the case of a full-time candidate or four academic semesters in the case of a part-time candidate from the date of enrolment.

(8) The candidate may undertake the research as an internal student, ie at a campus or other research facility with which the University is associated, or as an external student not in attendance at the University except for periods as may be prescribed by the Committee.

(9) An internal candidate will normally carry out the research on a campus or at a teaching or research facility of the University except that the Committee may permit a candidate to spend a period in the field, within another institution or elsewhere away from the University provided that the work can be supervised in a manner satisfactory to the Committee. In such instances the Committee shall be satisfied that the location and period of time away from the University are necessary to the research program.

Thesis

4. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the original investigation. The thesis normally would not exceed 70,000 words.

(2) The candidate shall give in writing two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree theses.

(5) It shall be understood that the University retains the three copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

5. (1) There shall be not fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the merits of the thesis and shall recommend to the Committee that:

(a) the thesis merits the award of the degree; *or*

(b) the thesis merits the award of the degree subject to minor corrections as listed being made to the satisfaction of the Head of School; *or*

(c) the thesis requires further work on matters detailed in the examiner's report. Should performance in this further work be to the satisfaction of the Faculty Research Committee, the thesis would merit the award of the degree; or

(d) the thesis does not merit the award of the degree in its present form and further work as described in the examiner's report is required. The revised thesis should be subject to re-examination; or

(e) the thesis does not merit the award of the degree and does not demonstrate that resubmission would be likely to achieve that merit.

(3) If the performance at the further examination recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to re-present the same thesis and submit to a further oral, practical or written examination within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the reports of any oral or written or practical examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the Council.

Atax (Australian Taxation Studies Program)

Information and Assistance

Atax delivers tax education across Australia. It aims to educate tax professionals for all sectors of the tax profession – accounting and legal majors, the tax groups of large and medium sized corporations, smaller accounting and law firms and the Australian Taxation Office, State Government Treasury Departments and Revenue Offices. The programs we offer 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
Tel: (02) 9385 9333
Email: atax@unsw.edu.au
Fax: (02) 9385 9380

Postal Address:
Atax
UNSW Sydney NSW 2052
Australia

Academic or general staff contact details may 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, basic grammar and writing skills and advanced tax research and writing skills.

Atax recognises students come to the program from a broad range of backgrounds. We are responsive to the diverse needs of students and provide both formal and informal academic support options.

Two audio conferences are conducted each semester 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 may wish to refer to the *Atax Study Skills Book,* which is included with the package of Study Materials and the Atax Student Guide for Undergraduate students - postgraduate students should contact the Student Services Office to request a copy.

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 for enrolment are usually earlier and students should refer to information distributed by the Atax Student Services Office (e.g. enrolment forms or re-enrolment instructions) and the 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. The Student Guide is a concise, one-stop source of information for the majority of your needs as an Atax student. Information will also be updated by way of the Atax website.

Orientation

Orientation sessions for new students are usually held in most Australian cities 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.

Flexible Delivery

Atax offers a range of study options with courses available by distance, by face-to-face classes in Sydney CBD, and in intensive short courses over 5 days in Sydney.

All students receive a comprehensive, high quality set of Study Materials for each course, an orientation session, access to online portal through Web Course Tools (WebCT), library support and student services support.

Distance

Students can study by distance from anywhere in Australia or overseas without attending campus lectures. Atax has Learning Centres in 22 locations across Australia and our 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 facilities available:

- Learning Centres
- Study Materials
- Audio Conferences
- Web Course Tools (WebCT)
- Regional Classes
- Informal Study Groups

Face-to-face Sydney CBD Evening Classes

Atax offers face-to-face evening classes in Sydney's CBD for a selection of postgraduate courses. The classes are offered at AGSM, Level 6, 1 O'Connell Street, Sydney between 6.00 pm and 8.00 pm on a weekday evening (depending on course selected).

Courses can be studied as part of the Master of Taxation, Master of Applied Taxation and Graduate Diploma in Advanced Taxation programs, as well as on Non-Award (Single Course) basis and Continuing Education basis. Class sizes are limited, so students are assured of a quality educational experience.

Students enrolling via this mode are provided with Study Materials, but do not attend audio conferences or regional classes. Students studying via the face-to-face mode are required to maintain a minimum 80% attendance rate.

Further information on the courses on offer in this mode is available on the Atax website: **www.atax.unsw.edu.au/study/sydneycbd.htm**

Intensive Short Courses

From Session 2 2003, Atax also offers intensive short courses conducted over 5 days at Atax, UNSW Coogee Campus, 45 Beach Street, Coogee. Courses can be studied as part of the Master of Taxation, Master of Applied Taxation and Graduate Diploma in Advanced Taxation programs, on Non-Award (Single Course) basis and Continuing Education basis. All students enrolled in this mode of delivery receive Study Materials for the course.

Further information concerning the courses on offer in this mode is available on the Atax website.

Library Services

Information may be found in the *Atax Student Guide* in the 'Library Guide' section. Also refer 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: 9250
Program Title: Master of Taxation
Qualification Abbreviation: MTax

Code No: 9260
Program Title: Master of Applied Taxation
Qualification Abbreviation: MAppTax

Code No: 5540
Program Title: Graduate Diploma in Advanced Taxation
Qualification Abbreviation: GradDipAdvTax

Code No: 5541
Program Title: Graduate Diploma in Taxation Studies
Qualification Abbreviation: GradDipTaxStud

Code No: 6066
Program Title: Postgraduate Non-Award Course (Single Course Study)

Code No: 6067
Program Title: Postgraduate Cross-Institutional Course

Code No: 6256
Program Title: Postgraduate Non-Award Course (Single Course Study) – ATO Sponsored

Code No: 6258
Program Title: Postgraduate Cross-Institutional Course – ATO Sponsored

Code No: 6894
Program Title: Postgraduate Qualifying

Code No: 1745
Program Title: Doctor of Philosophy
Qualification Abbreviation: PhD

Course Codes

A course number (identifier) in the UNSW system is formed from two principal elements:

- a four letter prefix indicating the Course Disciplinary Area designated by the code (eg. ATAX)
- a four digit code. The first two numbers indicate the program to which it belongs and the second two numbers indicate the course.

The following is a key to understanding the various course numbering codes used in the following sections on program information:

ATAX01**	Graduate Diploma in Taxation Studies course – parallels some ATAX00**
ATAX03**	Graduate Diploma in Advanced Taxation course – mostly parallels ATAX04** courses
ATAX04**	Master of Taxation course, Master of Applied Taxation course

Course Availability

Prior to the commencement of each semester, course availability is included as part of the enrolment/re-enrolment information pack. Course

descriptions offered in 2004 can be found in alphabetical order by the course code at the back of this Handbook.

Program Completion

There is no University-wide rule requiring students to complete a program within a specified period of time. Atax will not usually recognise courses as part of a degree program where those courses are more than eight years old. Thus a postgraduate program should ordinarily be completed within 8 years of commencement. It is also the accepted practice for the University to notify students if they are not progressing satisfactorily. Please refer to the section on 'Academic Standing' in the *General University Rules and Student Information* section earlier in this Handbook.

Program Information

The postgraduate programs offered by Atax are the Master of Taxation, Master of Applied Taxation, Graduate Diploma in Advanced Taxation and Graduate Diploma in Taxation Studies. A PhD program is also available and requires completion of a supervised thesis (approximately 100,000 words).

Atax serves the whole tax profession. In the context of fundamental changes to the Australian taxation system, experienced practitioners require thorough upgrading of their skills and knowledge, which may be satisfied with rigorous postgraduate studies. It provides taxation education to areas of the country that have been denied access to higher level university tax education, and provides mobility advantages for the many students who move around Australia or overseas in their jobs.

The postgraduate tax programs build on the work of the Bachelor of Taxation and offer advanced education to graduates with other degrees. It offers advanced postgraduate tax programs for existing taxation specialists with degrees in law or commerce and for graduates of the Atax undergraduate tax program. Entrants from other disciplines are offered a Graduate Diploma in Taxation Studies to bring them up to similar standards in core areas, consistent with tight time constraints, as Bachelor of Taxation graduates. The Master of Taxation and Graduate Diploma in Advanced Taxation programs offer exposure to the more advanced aspects of the discipline and a critical understanding of the Australian tax system. The Master of Taxation emphasises skills in sustained self-directed writing, including relevant research skills. The Master of Applied Taxation is designed for Chartered Accountants who are regularly faced with tax issues in their professional work. In addition to developing research skills, the program focuses on specific studies in taxation in a business context.

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). Each semester is 14 weeks in duration. 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.

Program Outlines

9250 Master of Taxation

MTax

Overview

The principal objective of the Master of Taxation degree is to develop an advanced taxation knowledge base and advanced professional skills in taxation. The Master of Taxation can be studied over one full-time year with four courses per semester or two part-time years with two courses per semester.

The Master of Taxation program comprises eight courses, including one compulsory course. The remaining seven courses may be chosen from the prescribed list. Assessment in at least four courses (designated **ATAX04****) includes a research paper entailing sustained application of analytical skills and is assessed at not less than 40% of the marks in each course (weights vary according to particular course, but this is a standard). Assessment in Masters by coursework generally emphasises analysis and sustained writing in current problem areas and constructive contributions to the professional debate on key problems. This requires students to engage in sustained application of analytical skills and writing in their primary areas of advanced work and encourages them to add to the body of knowledge and critical understanding in such areas.

Admission Requirements

Direct entry to the Master of Taxation is normally open to graduates in taxation, law or commerce of equivalent standing and content to corresponding UNSW qualifications. Candidates should be able to demonstrate an average mark of Credit (65%) or better, in their prior taxation, law or commerce degrees.

Candidates for the Master of Taxation with Commerce or Law qualifications which are not at the required level, standard or content, shall complete postgraduate qualifying courses as the Board of Studies in Taxation determines. The program code for the Postgraduate Qualifying program is 6894. This requirement is designed to deal particularly with Commerce graduates who have not completed basic commercial law and company law and Law graduates without basic accounting and economics as part of their undergraduate training. The Board of Studies in Taxation shall determine whether candidates with lower level academic qualifications and/or professional experience in taxation may be admitted directly or with such prerequisites as the Board determines.

All candidates for the Master of Taxation shall have completed a university level program in the basic elements of Australian income taxation or demonstrate equivalent academic and/or practical experience.

Exemptions or credit may be granted for up to 12 units of credit (two courses). Refer to 'Exemptions policy' below.

Assessment Policy

To pass a course candidates for the Master of Taxation must obtain:

1. 50% or more of the total marks available in the course and

2. a minimum of 40% in the final examination in the course

Selection of Courses

Complete the **single compulsory** course:

ATAX0401 Tax Policy

Select **seven elective** courses:

ATAX0403 Taxation of Corporations
ATAX0404 International Comparative Taxation
ATAX0405 Taxation of Trusts
ATAX0406 Current Problems in Tax Decision Making
ATAX0407 Taxation of Corporate Finance
ATAX0408 International Tax: Anti-Avoidance
ATAX0410 Taxation of Superannuation
ATAX0411 Taxation of Capital Gains
ATAX0414 Selected Problems in Stamp Duty
ATAX0415 Taxation of Specific Industries
ATAX0416 Current Research Problems in Taxation
ATAX0418 Complex Corporate Structures
ATAX0420 Principles of Australian International Taxation
ATAX0421 Taxation of Innovative Financial Products
ATAX0422 Goods and Services Tax: Design and Structure
ATAX0423 Principles of Goods and Services Tax Law
ATAX0424 Goods and Services Tax: Complex Issues and Planning
ATAX0425 Taxation of Employee Remuneration
ATAX0426 Tax and Investment Regulation in China
ATAX0455 Taxation of Property Transactions

9260 Master of Applied Taxation

MAppTax

Overview

The principal objective of the Master of Applied Taxation is to provide a taxation study program that meets the developmental requirements of Chartered Accountants in private and government sectors in Australia and throughout the Asia-Pacific region. The program also aims to provide study and research opportunities in respect of taxation and business.

The elective component of the Master of Applied Taxation can be studied on a full-time basis with four courses in one semester or on a part-time basis with two courses per semester. The program consists of four compulsory courses studied in the Graduate Diploma CA program and four electives from the prescribed list. Assessment of the elective courses involves the submission of a research paper and an examination.

Admission Requirements

Direct entry to the Master of Applied Taxation is normally open to graduates in taxation, law or commerce of equivalent standing and content to corresponding UNSW qualifications. Candidates should be able to demonstrate an average mark of Credit (65%) or better, in their prior taxation, law or commerce degrees.

Candidate must also have completed the four compulsory courses of Graduate Diploma CA from the ICAA CA program. In addition, the level of achievement acquired in the Graduate Diploma CA and any other postgraduate courses, and relevant experiences are taken into account.

In certain cases candidates for the Master of Applied Taxation may be regarded as lacking Commerce or Law qualifications which are at the required level, standard or content. In such cases, Atax may require candidates to complete postgraduate qualifying courses. The program code for the Postgraduate Qualifying program is 6894. The requirement of a qualifying program may be imposed even in cases where the candidate holds the Graduate Diploma CA.

Exemptions will not be given for courses in the Master of Applied Taxation. Four Atax courses and the Graduate Diploma CA must be completed for the award of the degree.

To graduate with the Master of Applied Taxation, a candidate must satisfy the requirements for the award of the degree of Graduate Diploma CA and complete the four elective (Atax) courses.

Assessment Policy

Assessment of compulsory courses (Graduate Diploma CA program) – this assessment is governed by the requirements of the Institute of Chartered Accountants.

To pass the elective (Atax) courses, candidates for the Master of Applied Taxation must obtain:

i) 50% or more of the total marks available in the course and,

ii) a minimum of 40% in the final examination in the course

Selection of Courses

The Master of Applied Taxation consists of:

4 compulsory courses

4 elective courses

Four compulsory courses (courses from ICAA program):

ICAA Mod 2 Financial Reporting and Assurance
ICAA Mod 3 Taxation and Financial Reporting
ICAA Mod 4 Strategic Business Management
ICAA Mod 5 Final Integrative

Four elective courses:

ATAX0401 Tax Policy
ATAX0403 Taxation of Corporations
ATAX0404 International Comparative Taxation
ATAX0405 Taxation of Trusts
ATAX0406 Current Problems in Tax Decision Making
ATAX0407 Taxation of Corporate Finance
ATAX0408 International Taxation: Anti-Avoidance
ATAX0410 Taxation of Superannuation
ATAX0411 Taxation of Capital Gains
ATAX0414 Selected Problems in Stamp Duty
ATAX0415 Taxation of Specific Industries
ATAX0418 Complex Corporate Structures
ATAX0420 Principles of Australian International Taxation
ATAX0421 Taxation of Innovative Financial Products
ATAX0422 Goods and Services Tax: Design and Structure
ATAX0423 Principles of GST Law
ATAX0424 GST Complex Issues and Planning
ATAX0425 Taxation of Employee Remuneration
ATAX0426 Tax and Investment Regulation in China
ATAX0455 Taxation of Property Transactions

Articulation of Studies from the Master of Applied Taxation to the Master of Taxation

Students who have commenced but not completed the Master of Applied Taxation can apply to convert to the Master of Taxation.

1. To graduate in the Master of Taxation, students who have articulated are required to complete the balance of the eight courses to fulfill the requirements of the Master of Taxation. This must include a minimum of four courses within the ATAX04** series. These courses must include ATAX0401 Tax Policy.

2. A student wishing to apply to articulate from the Master of Applied Taxation to the Master of Taxation must submit a written application to Atax. This should be done by the HECS Census Date (i.e. 31 March for Semester 1 and 31 August for Semester 2) for the semester in which they would like the transfer to be effective. An Articulation of Studies in Atax Program form must be used.

3. Students who have completed and been awarded the Master of Applied Taxation must apply for the Master of Taxation and will be eligible for exemption for up to two courses, each worth six units of credit. Students must not select courses for the Master of Taxation that have already been completed and credited to the Master of Applied Taxation.

5540 Graduate Diploma in Advanced Taxation

GradDipAdvTax

Overview

The Graduate Diploma in Advanced Taxation, while broadly similar in its objectives and course content to the Master of Taxation, is less onerous in its entry requirements and does not require sustained writing in some courses for completion. It concentrates on advanced specialist professional training in taxation. The Graduate Diploma in Advanced Taxation is based on six courses and can be studied over one full-time year with three courses per semester or 1.5 part-time years with two courses per semester.

While the Graduate Diploma in Advanced Taxation offers many of the same courses as the Master of Taxation, it does not involve the requirement, (part of the Master of Taxation regulations), that assessment in at least four of those courses is based on a project entailing sustained application of analytical skills. Taking this and the lesser number of courses into account, the Graduate Diploma in Advanced Taxation has a different emphasis and involves somewhere in excess of half the work-load of the Master of Taxation.

Courses for the Graduate Diploma in Advanced Taxation, though similar in content to Master of Taxation courses, are separately designated ATAX03** and are assessed in a different way. Typically, Master of Taxation courses require a substantial written paper involving sustained analysis and an examination, while Graduate Diploma in Advanced Taxation courses involve two written assignments and an examination.

Admission Requirements

Direct entry to the Graduate Diploma in Advanced Taxation is normally open to graduates in taxation, law, business, economics or commerce of equivalent standing and content to corresponding UNSW qualifications.

Candidates for the Graduate Diploma in Advanced Taxation with Commerce, Business, Economics or Law qualifications which are not at the required level, standard or content, shall complete postgraduate qualifying courses as the Board of Studies in Taxation determines. The program code for the Postgraduate Qualifying program is 6894. This requirement is designed to deal, particularly, with Law graduates who have not completed basic commercial law and company law and Commerce graduates without basic accounting and economics as part of their undergraduate training. The Board of Studies in Taxation shall determine whether candidates with lower level academic qualifications and/or professional experience in taxation may be admitted directly or with such prerequisites as the Board determines.

Formal entry requirements to the Graduate Diploma in Advanced Taxation are similar to those of the Master of Taxation, though not at the same standard. All candidates for the Graduate Diploma in Advanced Taxation must have completed a university level program in the basic elements of income taxation or equivalent.

Assessment Policy

In order to pass a course, candidates for the Graduate Diploma in Advanced Taxation must obtain:

i) 50% or more of the total marks available in the course and,

ii) a minimum of 40% in the final examination in the course.

Program Requirements

The Graduate Diploma in Advanced Taxation consists of:

6 elective courses from the ATAX03** range of courses.

Selection of Courses

Complete **six** of the following elective courses:

ATAX0301 Tax Policy (restricted entry only)
ATAX0303 Taxation of Corporations
ATAX0304 International Comparative Taxation
ATAX0305 Taxation of Trusts
ATAX0306 Current Problems in Tax Decision Making
ATAX0307 Taxation of Corporate Finance
ATAX0308 International Tax: Anti-Avoidance
ATAX0310 Taxation of Superannuation
ATAX0311 Taxation of Capital Gains
ATAX0314 Selected Problems in Stamp Duty
ATAX0315 Taxation of Specific Industries
ATAX0318 Complex Corporate Structures
ATAX0320 Principles of Australian International Taxation
ATAX0321 Taxation of Innovative Financial Products
ATAX0322 Goods and Services Tax: Design and Structure
ATAX0323 Principles of Goods and Services Tax Law
ATAX0324 Goods and Services Tax: Complex Issues and Planning
ATAX0325 Taxation of Employee Remuneration
ATAX0326 Tax and Investment Regulation in China
ATAX0355 Taxation of Property Transactions

Articulation of Studies from the Graduate Diploma in Advanced Taxation to the Master of Taxation

1. Students who have commenced but not completed the Graduate Diploma in Advanced Taxation and wish to convert to the Master of Taxation, are required to:

(a) complete a minimum of two courses in Graduate Diploma in Advanced Taxation mode;

(b) have achieved an acceptable academic standard as determined by the Board of Studies; this will normally be a mark of at least 65% (Credit) on average in the courses completed but this may vary to suit individual circumstances.

To graduate in the Master of Taxation, students who have articulated are required to complete the balance of the eight courses to fulfill the requirements of the Master of Taxation. This must include a minimum of four courses within the ATAX04** series. These four courses must include ATAX0401 Tax Policy, if it has not already been completed as ATAX0301 Tax Policy. Students may not select courses for the Master of Taxation that they have already completed as Graduate Diploma in Advanced Taxation courses.

2. Students who have fulfilled the requirements for the Graduate Diploma in Advanced Taxation, but have not yet been awarded the Diploma (i.e. graduated) and wish to credit completed courses to the Master of Taxation, are required to:

(a) have achieved an acceptable academic standard as determined by the Board of Studies; this will normally be a mark of at least 65% (Credit) on average in the courses completed but this may vary to suit individual circumstances.

(b) complete ATAX0416 Current Research Problems in Taxation and two additional courses selected from the list of ATAX04** courses. This must include ATAX0401 Tax Policy if it has not already been completed as ATAX0301 Tax Policy.

3. A student wishing to apply to articulate from the Graduate Diploma in Advanced Taxation to the Master of Taxation under rules 1 or 2 above must submit a written application to Atax. This should be done by the HECS Census Date (i.e. 31 March for Semester 1 and 31 August for Semester 2) for the semester in which they would like the transfer to be effective. An 'Articulation of Studies in Atax Program' form must be used.

4. Students who have completed and been awarded the Graduate Diploma in Advanced Taxation must apply for the Master of Taxation and will be eligible for exemption for up to two courses, each worth six units of credit. Students must not select courses for the Master of Taxation that have already been completed and credited to the Graduate Diploma in Advanced Taxation.

Specialist Professional Accreditation

The Master of Taxation and the Graduate Diploma in Advanced Taxation have been approved by CPA Australia for specialist taxation accreditation.

Students who are members of CPA Australia, The Institute of Chartered Accountants in Australia (ICAA), and qualified lawyers may have both Award and Non-Award study with Atax recognised towards their Continuing Professional Development (CPD), Continuing Professional Education (CPE) and Continuing Legal Education (CLE) membership requirements respectively.

Exemption Policy for Master of Taxation, Master of Applied Taxation and Graduate Diploma in Advanced Taxation

Admission with Advanced Standing

Students accepted for enrolment into the Master of Taxation or the Graduate Diploma in Advanced Taxation, may apply for advanced standing by applying to the Atax Student Services Office. The policy is located at **www.atax.unsw.edu.au/study** Click on the relevant program to locate the appropriate policy statement. No advanced standing for Atax courses is available in the Master of Applied Taxation program.

5541 Graduate Diploma in Taxation Studies

GradDipTaxStud

Overview

The Graduate Diploma in Taxation Studies has two objectives:

1. to prepare graduates from disciplines other than tax, law or commerce for work in the taxation industry by giving them core training in taxation and basic component disciplines. It is not designed to gain professional accounting admission.

2. to prepare students for admission to the Master of Taxation (if they attain suitable grades) or the Graduate Diploma in Advanced Taxation.

The Graduate Diploma in Taxation Studies offers students courses similar to those in the Bachelor of Taxation. It is designed to cover only core aspects of taxation, accounting, economics and law. The Graduate Diploma in Taxation Studies consists of ten courses studied over 2.5 part-time years or 1.5 full-time years.

Courses are similar in content to courses offered for the Bachelor of Taxation. They are separately designated so that, in appropriate cases, the content and method of assessment in courses may be varied by the Board of Studies in Taxation.

In no case shall a student gain a Graduate Diploma in Taxation Studies by completing fewer than eight courses. Where the student is granted three or more credits for courses completed for other degrees, the student shall be required to choose additional courses towards credit for the degree, as approved by the Board of Studies in Taxation, from a list of Bachelor of Taxation and Graduate Diploma in Advanced Taxation courses.

Admission Requirements

Entry to the Graduate Diploma in Taxation Studies is open to students holding an Australian Bachelors degree, or overseas equivalent, in any discipline. Students with degrees in commerce or law are likely to find the Master of Taxation or the Graduate Diploma in Advanced Taxation more appropriate programs of study. Entry to the program is competitive, based purely on merit.

Assessment Policy

In order to pass a course, candidates for the Graduate Diploma in Taxation Studies must obtain:

i) 50% or more of the total marks available in the course and,

ii) a minimum of 40% in the final examination in the course.

Program Structure

The Graduate Diploma in Taxation Studies consists of 10 compulsory courses:

ATAX0100 Principles of Australian Taxation Law
ATAX0103 Microeconomics and the Australian Tax System
ATAX0104 Framework of Commercial Law
ATAX0105 Accounting 1
ATAX0106 Tax Administration
ATAX0108 Principles of Capital Gains Taxation
ATAX0113 Taxation of Companies Trusts and Partnerships
ATAX0116 Critical Perspectives and Ethics
ATAX0117 Tax Accounting Systems
ATAX0123 Principles of Goods and Services Tax Law

Please note that, where courses are run in tandem with the Bachelor of Taxation (ATAX00**), the prerequisites and corequisites applying to parallel Bachelor of Taxation courses do not apply to the Graduate Diploma in Taxation Studies courses.

Exemption Policy

Admission with Advanced Standing

Students accepted for enrolment into the Graduate Diploma in Taxation Studies, may apply for advanced standing by writing to the Atax Office. The policy is located at **www.atax.unsw.edu.au/study** Click on the relevant program to locate the appropriate policy statement.

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 (usually) 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 to the effect 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 would have to 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 would be 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 the 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 in the Faculty and I are delighted that you have chosen to continue your studies with us.

UNSW offers a 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 within our scholarly community. These are times of unprecedented change in higher education, medical research and health care. The finances in tertiary education, biomedical, public health and health services research have gone through major changes in recent years. The need for excellence in education and research programs remains a clarion call for institutions of higher learning across the globe. 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 a strong foundation made 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.

The Faculty offers many excellent postgraduate programs both in course work and research, tailored to give our students every opportunity to continue to develop their professional careers.

I look forward to welcoming you to the University of New South Wales and anticipate that our paths will cross many times during your stay.

S. Bruce Dowton
Dean
Faculty of Medicine

Faculty of Medicine

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Faculty Information and Assistance

Some People Who Can Help You

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:

Postgraduate
Ms Petrina Choong
Postgraduate Student Programs
Office of the Dean
Faculty of Medicine
Tel: (02) 9385 2457
Fax: (02) 9385 1874
Email: postgrad@med.unsw.edu.au

General Enquiries
Office of Dean
Faculty of Medicine
Tel: (02) 9385 8765
Fax: (02) 9385 1874
Email: info@notes.med.unsw.edu.au

Faculty of Medicine Website

www.med.unsw.edu.au

The Faculty of Medicine 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.

Course Descriptions

Course descriptions offered in 2004 can be found in alphabetical order by the course code at the back of this Handbook. For a full list of courses offered by the University can be found in the Virtual Handbook via the Student Gateway **www.student.unsw.edu.au**

The Faculty

The Faculty of Medicine was established when the New South Wales 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 New South Wales 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.

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.

Schools of the Faculty

School of Public Health and Community Medicine

This dynamic and multidisciplinary school covers all aspects of public health and health systems. It contains research groups focusing on primary care and community medicine, aged and extended care, international health, clinical governance, health informatics, indigenous health, multicultural health, training and education of health professionals, equity, health promotion and physical fitness, HIV/AIDS and drugs and alcohol, and ethics, among others. The School staff have both Australian and international interests and draw on both qualitative and quantitative approaches. Research and teaching draw strongly on one another. Partnerships with other groups are actively promoted.

School of Medical Sciences

The School of Medical Sciences brings together the research and teaching resources of the Departments of Anatomy, Pathology and Physiology & Pharmacology. The School has an outstanding reputation for academic excellence and provides a highly productive academic environment in which to work. Links with other institutes ensure the School's position at the forefront of international and national research efforts. The School enjoys a reputation as one of Australia's leading medical and research facilities.

School of Women's and Children's Health

The School of Women's and Children's Health includes the disciplines of obstetrics and gynaecology and paediatrics. It is located on a number of campuses, namely Sydney Children's Hospital and The Royal Hospital for Women, which are adjacent to the campus of The University of New South Wales, and at St George and Liverpool Hospitals. The School has links with other teaching hospitals of the University as well as with community centres in Sydney and rural centres in New South Wales, which enable it to draw on the expertise of clinicians and community health workers for its teaching and research programs

School of Psychiatry

The School is located at the main Kensington campus (Department of Human Behaviour); the University's teaching hospitals at Prince of Wales, St Vincent's, St George and Liverpool; associated teaching hospitals at Bankstown, Campbelltown and Sutherland; hospitals associated through the School of Rural Health; and the Corrections Health Service. The School has a long-standing tradition of productive and internationally highly respected research achievements. Senior academic staff in the School have interests in anxiety and mood disorders, neuropsychiatry, psychogeriatrics, child and adolescent psychiatry, psychopharmacology, schizophrenia, liaison psychiatry, post-natal disorders, community psychiatry, genetics, brain imaging, forensic psychiatry, refugee mental health, psycho-immunology, social psychiatry, epidemiology, and psychiatry in primary practice. Further details are available at **http://psych.med.unsw.edu.au/**

Clinical Schools

St George Clinical School

The St George Hospital Clinical School is on the St George Hospital campus and has been affiliated with the University of New South Wales since 1964. A major redevelopment program during the 1990s has provided a state-of-the-art hospital covering 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 major research enterprise.

St Vincent's Clinical School

St Vincent's Clinical School is part of the St Vincent's Hospital Campus, a principal campus of the Sisters of Charity Health Care Service. Specialty services at the Hospital include cardiac transplantation, bone marrow transplantation, a comprehensive HIV/AIDS service, a cancer service which provides an integrated approach to the management of malignancy, and a palliative care service in the Sacred Heart Hospice. Extensive primary and secondary care is also provided to meet the needs of the local community and these include medical, surgical, geriatric and drug and alcohol services. Sophisticated diagnostic departments, which include all branches of pathology, radiology and nuclear medicine, support the clinicians of the Hospital. Research is undertaken in a variety of organisations within the Hospital, including the professorial departments, the Centre for Immunology, the Department of Clinical Pharmacology and the Anxiety Disorders Unit. St Vincent's Hospital is affiliated with the Garvan Institute of Medical Research, the Victor Chang Cardiac Research Institute and the National Centre for HIV Epidemiology and Clinical Research. Further information is available on the website **http://stvcs.med.unsw.edu.au/**

The South Western Sydney Clinical School

The South Western Sydney Clinical School was established in 1990. The School has access to hospital and community health centres serving approximately 800,000 people living in the south-west of Sydney – Sydney's fastest growing area of population. The School is centred at Liverpool Hospital (600 beds), a principal tertiary referral hospital for the South Western Sydney Area Health Service (SWSAHS). Bankstown-Lidcombe Hospital (400 beds) is the other principal referral hospital in SWSAHS. The Clinical School has a presence 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.

Prince of Wales Clinical School

Prince of Wales Clinical School is located at the Prince of Wales Hospital, adjacent to the University of New South Wales, and provides a unique clinical and scientific environment. The Prince of Wales Hospital currently covers 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.

School of Rural Health

The School of Rural Health was the first rural based clinical school in Australia, established by UNSW in 1999 under a funding agreement with the Commonwealth Government through the Department of Health and Ageing. This agreement stipulated that 25% of all medical students (HECS students) are required to spend half their clinical training in a rural or regional centre.

It has two divisions – Greater Murray and Mid North Coast. The School is centred in Wagga Wagga with other campuses in Albury/Wodonga, Griffith, Coffs Harbour, Kempsey and Port Macquarie. The Greater Murray Area Health Service and the Mid North Coast Area Health Service are also major stakeholders in the School. The School aims to provide a community and regional hospital-based learning environment, offering diversified educational experience in rural health and medical practice. The School operates within the syllabus of the Faculty and provides a supportive medical academic environment which will enable its students to follow any career they may eventually select.

Enquiries relating to postgraduate studies should be made to the Director.

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 an Australian Major Research Facility following a recent survey commissioned by the Commonwealth Department of Industry, Science and Resources (now DEST). The BMSF also acts as a node of the Australian Proteome Analysis Facility under a Major National Research Facility Grant. 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 ageing 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. More information on the BMSF can be obtained at **www.bmsf.unsw.edu.au**

The Centre for Health Informatics

The Centre for Health Informatics (CHI) is a collaborative venture of the Faculty of Medicine and the School of Electrical Engineering and Telecommunications. 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 examines methods and technologies for providing clinicians with up-to-date information online.
- Clinical Communications seeks to understand how information is disseminated, and how communication, and communication pathways, may be improved.
- The Evaluation team offers evaluation services for information and communication technology projects in health, assessing the effectiveness of new information and communication technologies in improving health outcomes and delivery.
- Home Telecare uses information, communications, measurement and monitoring technologies to evaluate health status and deliver health care services to patients at home to improve clinical outcomes and allow the elderly and the chronically ill to stay at home longer.

Postgraduate subjects in Health Informatics are offered within the Masters degrees in the School of Public Health & Community Medicine. The subjects will be 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 (CVR)

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 Schools. Details of the Centre, structure, group leaders, research directions and opportunities for postgraduate and undergraduate 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, University of New South Wales. The Institute was established in 1976 and occupies a five-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 the 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. Website: **www.garvan.org.au**

National Centre in HIV Epidemiology and Clinical Research

The National Centre in HIV Epidemiology and Clinical Research (NCHECR) is recognised worldwide as a leader in HIV/AIDS research. The NCHECR undertakes research into HIV/AIDS that focuses on epidemiology, clinical research and clinical trials, in collaboration with other research centres, government departments, the pharmaceutical industry, community groups, health clinics and general practitioners. The priorities of the NCHECR include surveillance and monitoring of HIV infection and AIDS, epidemiological studies of transmission and disease progression, identification of social and behavioural factors affecting HIV disease and the establishment of Australia as a primary site for clinical trials of HIV therapy. As an extension of its role in HIV/AIDS, the Centre also carries out epidemiological and clinical research into other blood borne viruses, particularly Hepatitis C and sexually transmitted infections. Another significant area is the NCHECR's contribution to international clinical research and provision of research expertise and training to countries of the Asia-Pacific region. Recently the Centre has increased its role in the development and testing of novel vaccines for HIV.

More information can be obtained from the Centre's website **www.med.unsw.edu.au/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 and to conduct teaching and research in perinatal and reproductive health.

National Drug and Alcohol Research Centre

The National Drug and Alcohol Research Centre (NDARC) was established as a Centre of Excellence at the University of New South Wales in May 1986. It is funded by the Commonwealth Department of Health and Aged Care.

The overall mission of NDARC is to undertake research and related activities that contribute to a more effective and efficient Australian treatment response to alcohol and other drug-related problems.

It undertakes this work in collaboration with the Schools of Public Health & Community Medicine and Psychology in the University, with centres in other States and Territories, and through international collaboration.

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 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 3.0T MRI System. 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 our 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 and 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 the University of NSW 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; 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 students;
- 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, e.g. 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, e.g. workshops;
- Organising the urban component of the rural curriculum;
- Conducting a research program on a number of rural medical education subjects supporting the School of Rural Health, which will increase the opportunities for rural clinical learning; running two postgraduate courses: CMED9608, Needs Assessments in Rural Areas and CMED 9620, Project Management and Evaluation in Rural Areas.

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.

Admission into the Faculty

Admission to Coursework Programs – Masters, Graduate Diploma, Graduate Certificate

(a) For Masters by coursework and Graduate Diplomas requiring a medical degree (MMed, MSpMed, MPM, Graduate Diplomas in Sports Medicine, Geriatric Medicine, Paediatrics), a candidate for the degree shall have been awarded a Bachelor of Medicine and Bachelor of Surgery from the University of NSW or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Higher Degree Committee of the Faculty of Medicine AND shall have had at least one year's full-time experience in the practice of medicine. Additional prerequisites may be specified by the program authority.

(b) For other Masters by coursework and Graduate Diploma programs, a candidate for the degree shall have been awarded an appropriate degree of Bachelor of four full-time years duration (or the part-time equivalent) from the University of NSW or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Higher Degree Committee of the Faculty of Medicine OR shall have been awarded an appropriate degree of Bachelor of three full-time years' duration (or the part-time equivalent) and have had at least three years' relevant experience. Additional prerequisites may be specified by the program authority.

(c) For Graduate Certificates requiring a medical degree (Sports Medicine and Geriatric Medicine), a candidate for the degree shall have been awarded a Bachelor of Medicine and Bachelor of Surgery from the University of NSW or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Higher Degree Committee of the Faculty of Medicine. Additional prerequisites may be specified by the program authority.

(d) For other Graduate Certificate programs, a candidate for the degree shall have been awarded an appropriate degree of Bachelor of three full-time years' duration (or the part-time equivalent) from the University of NSW or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Higher Degree Committee of the Faculty of Medicine. Additional prerequisites may be specified by the program authority.

Admission to Research Programs – Doctor of Philosophy, Masters

For detailed information about individual programs, please refer to the section on 'Conditions for the Award of Degrees'. Eligibility for admission to postgraduate research programs is determined by the Higher Degree Committee of the Faculty of Medicine.

(a) Candidates with an Honours degree (at least Class 2 Division 1) in a relevant discipline, or with an MB BS from an Australian or New Zealand university, are in general considered eligible for admission to a PhD program.

(b) Candidates with Honours below Class 2 Division 1, or who have not been awarded an Honours degree, need to demonstrate appropriate research experience and are in general considered eligible for admission to a PhD program if able to provide evidence of first authorship on at least one refereed paper in a journal of sufficient standing. The eligibility of all such candidates is determined on a case-by-case basis.

(c) Candidates with an MB BS or other medical degree from another country need to demonstrate outstanding academic performance, relevant experience or other qualifications to enrol in a PhD, but are in general considered to be eligible to enrol in a Masters by research.

(d) Candidates with a Bachelor's degree (not an Honours degree) and experience in a research laboratory, but no first author publications in refereed journals of sufficient standing, are in the first instance considered to be eligible to enrol in a qualifying program, subject to availability of a place. Those applying for a PhD will usually be advised to enrol for an MSc, with later upgrade to a PhD if appropriate.

Admission to Research Programs – Doctor of Medicine, Master of Surgery

For detailed information about individual programs, please refer to the section on 'Conditions for the Award of Degrees'.

Postgraduate Enrolment Procedures

All students enrolling or re-enrolling in postgraduate programs should contact their School Office for information on enrolment. School Offices

will provide detailed information on enrolment procedures and fees, enrolment in miscellaneous courses, locations and hours of cashiers and late enrolment details. Students interested in undertaking a postgraduate program should consult the appropriate Head of School or the Postgraduate Administrative Officer, Office of the Dean.

Advice to Graduate Students on Computing Requirements

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[1]
- A Java 1.1 capable Web browser that supports HTML 2.0[1]
- Software to enable file transfer using the FTP protocol[1]
- Networking software to enable TCP/IP connection (e.g. via a modem using PPP)[1]
- Email software able to link to a popserver
- Anti-virus software[1]

[1]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.

The Faculty of Medicine provides support for computers owned by UNSW that are being used by graduate students. To access support graduate students must get approval from their supervisor and then call the Helpdesk on 9385 1333.

All official email from the Faculty of Medicine will be sent to student's UNSW email account. It is expected at all UNSW students will either routinely check their UNSW email account or have their UNSW email account forwarded to another email address. Information about managing your UNSW email account can be obtained from **www.disconnect.unsw.edu.au**

Criminal Record Checks

The NSW Department of Health has a policy that all students who require access in any capacity to facilities operated by the Department 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**

Students who fail to satisfy the requirements of this check at any point during their enrolment in postgraduate programs accessing NSW Health facilities will be excluded from the program. Depending upon the circumstances at the time, students may be eligible to transfer to another program at 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.

Any student who is a 'Prohibited Person' at any point during their enrolment in a postgraduate program will be excluded from the program. Depending upon the circumstances at the time, students may be eligible to transfer to another program at the University.

Students with Blood-borne Viruses and Immunisation for Students.

In order to be enrolled in a UNSW Faculty of Medicine postgraduate program, students must agree to comply with the Faculty's Immunisation and Blood-borne Viruses Policy, which aims to minimise the risk of students contracting or spreading an infectious disease or blood-borne virus, such as HIV, and Hepatitis B or C. Students 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. A 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 postgraduate program. 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 could be required to sign a statement indicating that they have read and agree to comply with this policy at the time of enrolment.

Program and Course Information

Postgraduate Programs

At the postgraduate level, study may be undertaken for the award of the following:

Doctorates

Doctor of Medicine (MD)
Doctor of Philosophy (PhD)

Masters

Master of Clinical Education (MClinEd)
Master of Medical Science in Drug Development (MMedSc)
Master of Health Administration (MHA)
Master of Health Services Management (MHSM)
Master of Health Professions Education (MHPEd)
Master of Medicine (MMed)
Master of Medicine in Geriatrics (MMed)
Master of Public Health (MPH)
Master of Science (MSc)
Master of Sports Medicine (MSpMed)
Master of Surgery (MS)

Graduate Diplomas

Graduate Diploma in Clinical Education (GradDipClinEd)
Graduate Diploma in Drug Development (GradDipDD)
Graduate Diploma in Geriatric Medicine (GradDip)
Graduate Diploma in Paediatrics (DipPaed)
Graduate Diploma in Public Health (GradDipPH)
Graduate Diploma in Sports Medicine (GradDipSpMed)

Graduate Certificates

Graduate Certificate in Clinical Education (GradCert)
Graduate Certificate in Drug Development (GradCertDD)
Graduate Certificate in Geriatric Medicine (GradCert)
Graduate Certificate in Health Services Management (GradCertHSM)
Graduate Certificate in Public Health (GradCertPH)
Graduate Certificate in Sports Medicine (GradCertSpMed)
Graduate Certificate in University Learning and Teaching (GradCert)

Full details of the conditions of the award of research degrees are shown in this Handbook under 'Conditions for the Award of Degrees'.

Faculty Research Degrees

Doctor of Medicine
Doctor of Philosophy
Master of Science
Master of Medicine
Master of Surgery

Doctor of Medicine MD

This degree is a research program requiring a candidate to make an original and meritorious contribution to some branch of medicine. The program may be completed by:

- thesis with supervision,
- thesis without supervision, or
- published work.

Doctor of Philosophy PhD

This is a degree requiring an original and significant contribution to knowledge in an approved area.

Master of Science MSc

This is the main Masters level research program for postgraduate students in the Faculty of Medicine. Candidates must demonstrate ability to undertake research by the submission of a thesis embodying the results of an original investigation. The program may be undertaken either with or without supervision.

Master of Medicine MMed

This is a Masters level research program for postgraduate medical students in the Faculty of Medicine. Candidates must demonstrate ability to undertake research by the submission of a thesis embodying the results of an original investigation. The program may be undertaken either with or without supervision.

Master of Surgery MS

This is a Masters level research program for postgraduate medical students in the Faculty of Medicine. The degree of Master of Surgery may be awarded to a candidate who has made an original contribution to knowledge in some field related to surgery.

Other research degrees are offered by schools of the Faculty.

School of Public Health and Community Medicine

The School offers programs of study leading to the award of the following degrees:

- Masters of Medicine in Geriatrics by Coursework
- Graduate Diploma in Geriatric Medicine
- Graduate Certificate in Geriatric Medicine
- Master of Health Administration by Research
- Master of Health Administration by Coursework
- Master of Health Services Management
- Master of Commerce – Health Informatics
- Graduate Certificate in Health Services Management
- Master of Health Professions Education by Research
- Master of Clinical Education by Distance Education
- Graduate Diploma in Clinical Education by Distance Education
- Graduate Certificate in Clinical Education by Distance Education
- Graduate Certificate in University Learning and Teaching
- Master of Public Health by Research
- Master of Public Health by Coursework
- Graduate Diploma in Public Health
- Graduate Certificate in Public Health

Please note: Programs and courses offered by the School of Public Health and Community Medicine are under review. Course prefixes are also under review and will alter in 2004. Please check our website (**http://sphcm.med.unsw.edu.au**) for further information.

Programs in Geriatric Medicine*

*** These programs are under review and are not available to new students in 2004**

These programs are offered by means of a distance/flexible education package. In order to undertake the programs, candidates require a computer with the following specifications: 486 DX or Macintosh LC75 (minimum); 16 MB RAM (minimum); sound card and speakers; CD-ROM; modem (fast); Internet access, web browser and word-processing package. Basic computer skills are assumed. Upon enrolment, candidates are invited to attend a part day seminar (non-compulsory) held in association with the UNSW Biomedical Library. During this seminar, students will learn the necessary skills to use the Internet effectively, and to access a number of medical databases, online medical journals and document delivery systems.

9025 Master of Medicine in Geriatrics by Coursework*

MMed

Prerequisite: MB BS (or equivalent) and clinical experience (3 years relevant experience for full-time students, 1 year for part-time students who are engaged in relevant clinical experience during the program).

The Master of Medicine in Geriatrics program is designed for medical practitioners who wish to upgrade their skills and knowledge in the area of aged care medicine. Candidates require basic computer skills.

The Master of Medicine in Geriatrics program requires completion of one year of full-time coursework, plus a further six months for a major project and supervised clinical experience. The program may be undertaken on a part-time basis.

Coursework: The bulk of the coursework is supplied to candidates by mail, in printed form. Some courses have an accompanying CD-ROM. Students liaise with lecturers, access assessment activities and submit work via the Internet. Each six units of credit course provides candidates with the equivalent of 3 hours of lecture material weekly for a 14 week semester.

Students are required to satisfactorily complete the following courses:

		UOC
CMED9548	Clinical Geriatrics 1	6
CMED9549	Clinical Geriatrics 2	6
CMED9550	Clinical Examination	*
CMED9539	Psychiatry of Old Age	6
CMED9543	Organisation and Delivery of Services for Older People	6
CMED9544	Gerontology	6
CMED9540	Pharmacology	6
CMED9541	Rehabilitation	6
CMED9542	Healthy Ageing	6
CMED9547	Clinical Experience	8
CMED9546	Major Research Project	16
	Total	**72**

** Units of credit to be determined.*

These courses may be offered in first and/or second semester depending on demand. Assessment is undertaken through a combination of multiple choice and short answer questions, clinical case scenarios and assignments. At the conclusion of the coursework, students must also be successful in a clinical exam (oral) which is held in Sydney (CMED9550).

140 hours of supervised clinical experience is required at geriatrics units approved by the School. These placements will be arranged in association with the candidates. Overseas candidates are required to undertake their clinical attachments in Sydney. Candidates must maintain a logbook documenting clinical cases seen, and this logbook forms the basis of the assessment of clinical experience.

Candidates are required to submit a major project on an approved topic.

5506 Graduate Diploma in Geriatric Medicine*

GradDip

Prerequisite: MB BS (or equivalent) and clinical experience (3 years relevant experience for full-time students, 1 year for part-time students who are engaged in relevant clinical experience during the program).

The Graduate Diploma in Geriatric Medicine is designed for medical practitioners who wish to upgrade their skills and knowledge in the area of aged care medicine. The bulk of the coursework is supplied to candidates, by mail, in printed form. Some courses have an accompanying CD-ROM. Students liaise with lecturers, access assessment activities and submit work via the Internet. Each 6 units of credit course provides candidates with the equivalent of 3 hours of lecture material weekly for a 14 week semester.

Students are required to satisfactorily complete the following courses:

		UOC
CMED9548	Clinical Geriatrics 1	6
CMED9549	Clinical Geriatrics 2	6
CMED9550	Clinical Examination	*
CMED9539	Psychiatry of Old Age	6
CMED9543	Organisation and Delivery of Services for Older People	6
CMED9544	Gerontology	6
CMED9540	Pharmacology	6
CMED9541	Rehabilitation	6
CMED9542	Healthy Ageing	6
	Total	**48**

** Units of credit to be determined.*

These courses may be offered in the first and/or second semester depending on demand. Assessment will be undertaken through a combination of multiple choice and short answer questions, clinical case scenarios and assignments. At the conclusion of the coursework, candidates must also be successful in a clinical exam (oral) which is held in Sydney, (CMED9550).

Candidates awarded the Graduate Diploma in Geriatric Medicine are eligible to undertake further study for the Master of Medicine in Geriatrics by coursework.

7364 Graduate Certificate in Geriatric Medicine*

GradCert

Prerequisite: MB BS (or equivalent) and clinical experience (3 years relevant experience for full-time students, 1 year for part-time students who are engaged in relevant clinical experience during the program).

The Graduate Certificate in Geriatric Medicine is designed for medical practitioners who wish to upgrade their skills and knowledge in the area of aged care medicine. The bulk of the coursework is supplied to candidates, by mail, in printed form. Some courses have an accompanying CD-ROM. Students liaise with lecturers, access assessment activities and submit work via the Internet. Each 6 units of credit course provides candidates with the equivalent of 3 hours of lecture material weekly for a 14 week semester.

Students are required to satisfactorily complete the following courses:

		UOC
CMED9548	Clinical Geriatrics 1	6
CMED9549	Clinical Geriatrics 2	6
CMED9550	Clinical Examination	*
CMED9539	Psychiatry of Old Age	6

and one only of the following:

CMED9543	Organisation and Delivery of Services for Older People	6
CMED9544	Gerontology	6
CMED9540	Pharmacology	6
CMED9541	Rehabilitation	6
CMED9542	Healthy Ageing	6
	Total	**24**

** Units of credit to be determined.*

These courses may be offered in Session 1 and/or Session 2 depending on demand. Assessment will be undertaken through a combination of multiple choice and short answer questions, clinical case scenarios and assignments. At the conclusion of the coursework, candidates must also be successful in a clinical exam (oral) which is held in Sydney, (CMED9550).

Candidates awarded the Graduate Certificate in Geriatric Medicine are eligible to undertake further study for the Graduate Diploma in Geriatric Medicine or the Master of Medicine in Geriatrics by coursework.

2960 Master of Health Administration by Research

MHA

Facilities are available in the School for students to undertake research studies leading to the degree of Master of Health Administration, as either full-time internal students, part-time internal students, or part-time students external to the University. Students are required to have a suitable first degree and are normally expected to have a minimum of three years' experience in their proposed field of study within the health or hospital services.

Enquiries should be directed to the Research Coordinator,
Dr Mary-Louise McLaws
Tel: (02) 9385 2591
Email: m.mclaws@unsw.edu.au

8900 Master of Health Administration by Formal Coursework

MHA

The degree program has been designed to provide students with the essential knowledge required for senior managerial and planning work in the health services. The objective of the program is to develop graduates who are:

1. competent general and financial managers,
2. competent planners,
3. knowledgeable about public health (the health status of the Australian and other communities) and the structure, organisation and financing of health care systems,
4. knowledgeable about society, law and ethics,
5. competent in quantitative skills.

The degree is awarded on the successful completion of the program outlined below. The program may be taken on a full-time or part-time basis, internal basis or external basis (including compulsory residential schools) or on a distributed basis (mixture of full-time, part-time and external).

The normal time for completion of the full-time program is three academic sessions, however, students may be allowed to complete the degree in two academic sessions provided they have a four year undergraduate degree (or equivalent) and in excess of three years' experience in the health field. The maximum time for completion of the program is eight academic sessions.

The normal time for completion of the program for part-time internal and external students is six academic sessions (three calendar years). Students must successfully complete 12 courses or the equivalent to a total of 60 units of credit.

Applicants are required to have completed a minimum three year degree and to have a minimum of three years postgraduate experience preferably in a health-related field.

Program Structure

The program is divided into two components, for a total of 60 units of credit. These components are:

Core courses	(6)	36 units of credit
Elective courses	(6)	24 units of credit

In selecting electives, students can choose courses relating to their expected field of work, can choose to undertake advanced study in a particular discipline (e.g. Health Policy and Management) and/or can take electives relevant to their own interests and needs.

Core Courses

This compulsory component comprises the six core courses of 6 units of credit each. Students must successfully complete the following six courses as a requirement for graduation. Exemptions can only be granted by the Postgraduate Program Coordinator on the basis of demonstrated equivalent masters level coursework previously undertaken.

		UOC
HEAL9011	Statistics and Epidemiology	6
HEAL9041	Health Care Systems	6
HEAL9071	Health Care Financial Management 1	6
HEAL9351	Health Economics 1	6
HEAL9421	Public Health and Epidemiology	6
HEAL9711	Management of Organisations	6
	Total	**36**

8941 Master of Health Services Management

MHSM

The program is designed to provide students from countries with developing economies and health systems with the knowledge and skills to be competent health service planners, policy makers and managers. For students from developed health systems involved in international health, this program will enable them to focus and develop relevant planning and management knowledge from within a development framework.

The degree is awarded on the successful completion of the program outlined below. The program may be taken full-time or part-time on an internal basis.

The normal time for completion of the full-time program is two academic sessions. The maximum time for completion of the program is eight academic sessions. The normal time for completion of the program for part-time internal and external students is four academic sessions (two calendar years).

Students must complete 9 courses, or the equivalent, to a total of 48 units of credit.

Applicants are required to have completed an appropriate undergraduate degree or approved equivalent and to have a minimum of three years' postgraduate experience preferably in a health-related field.

Electives are chosen by the student in consultation with the Director of the Graduate Health Services Management Programs from graduate courses offered within the University or by another tertiary institution. The approval of the Director of Graduate Programs is required to undertake an elective offered outside the School of Public Health & Community Medicine. Requests for exemption and substitution for previous postgraduate courses taken will be considered subject to approval of the Director of Graduate Programs.

Program Structure

The program is divided into two components, for a total of 48 units of credit. These components are:

Core courses	(6)	36 units of credit
Elective courses	(3)	12 units of credit

In selecting elective courses students can choose from a wide range of courses relating to their expected field of work; can choose to undertake advanced study in a particular discipline (e.g. Health Policy and Management) and/or can take elective courses relevant to their own interests and needs.

Core Courses

This compulsory component comprises six core courses of 6 units of credit each. Students must successfully complete the following six courses as a requirement for graduation. Exemptions can only be granted by the relevant Director of Graduate Programs on the basis of demonstrated equivalent Masters level coursework previously undertaken.

		UOC
HEAL9441	Health Care Economics and Financial Management	6
HEAL9422	Population Health, Epidemiology and Statistics	6
HEAL9442	Health Resources Planning and Development	6
HEAL9471	Comparative Health Care Systems	6
HEAL9711	Management of Organisations	6
MEED9015	Health Services Development and Implementation	6
	Electives (3)	12
	Total	**48**

Elective Courses

There are a large number of courses available to choose from in each academic session. These courses are provided for illustrative purposes.

		UOC
HEAL9111	Quality Assurance	4
HEAL9381	Policy Studies	4
HEAL9811	Sociology, Ethics and Health	4
HEAL9750	Clinical Governance for Clinician Managers	4
MEED9010	Community Development	4
MEED9108	Program Evaluation and Planned Change	4
MEED9140	Project Design and Monitoring in International Health	4

7360 Graduate Certificate in Health Services Management

GradCertHSM

The Graduate Certificate provides recognition to students who are limited to study for one session or one year only. It will be awarded to a candidate who has satisfactorily completed the program of study outlined below. If students make satisfactory progress they may apply, on a competitive basis, to enter the MHA or MHSM. Should students be successful in obtaining entry to the MHA or MHSM program they will be expected to successfully complete the remaining Masters courses required before they can be awarded a Master degree.

The Graduate Certificate program may be taken on a full-time or part-time basis, internal or external basis (including compulsory residential schools). Applications based on difficulty of travel will be considered.

Program Structure

Candidates are required to successfully complete a minimum of four courses or the equivalent to a total of 20 units of credit from the courses offered by the School of Public Health & Community Medicine.

Hong Kong Program

The MHA, MHSM and GradCert programs are registered in Hong Kong through the School of Continuing Studies and the Chinese University of Hong Kong for UNSW students to enrol in *part-time distant learning* mode. Students attend a one-week residential school each session after which they work through the distance learning material the University provides.

Enquiries should be directed to the Hong Kong Program Director, Dr Mary-Louise McLaws, Tel: (+61 2) 9385 2591, email: m.mclaws@unsw.edu.au or Australian Education Council Ltd email: info@aecl.com.hk.

Qualifications for Admission

1. Candidates will have been awarded a Bachelor's degree in an appropriate discipline from a recognised tertiary institution, and

2. Candidates will have a minimum of three years' experience in health services of a kind acceptable to the Faculty Higher Degree Committee.

In exceptional cases an applicant who submits evidence of such other academic and professional qualifications may be admitted. No credits, exemptions or advanced standing are granted for the Graduate Certificate. Exceptions can only be granted by the relevant Director of Graduate Programs.

Non-Award Students

Non-Award students enrolled on an external basis in courses of the MHA, MHSM or MPH degree programs are required to meet all the conditions for the completion of each course, including attendance at lectures in the course at a residential school.

2885 Master of Health Professions Education by Research

MHPEd

This program is designed for teachers and/or educational administrators in the health professions who wish to develop their research skills by undertaking studies leading to the award of the degree of Master of Health Personnel Education, either as full-time or part-time internal students or as students external to the University. The latter are required to spend a minimum of 14 weeks in the School during the program.

An original investigation under the direction of a supervisor for a minimum period of three academic sessions in the case of a full-time candidate, or a minimum of four academic sessions in the case of a part-time or external candidate, is required.

The candidate is required to submit a thesis embodying the results of this original investigation.

9050 Master of Clinical Education by Distance Education

MClinEd

The program aims to provide a multidisciplinary program of study of clinical education for practising clinicians with teaching responsibilities. The program requires clinical educators to study the knowledge, reasoning, practical activities and skills within the environment of the ward and other clinical settings, to observe and document clinical teaching and learning, and to undertake research in its improvement.

The program also aims to foster a rational and rigorous approach to understanding clinical reasoning and decision making, and to ensure its effective learning. Three levels of attainment are proposed to accommodate the differing needs among clinical teachers.

The degree of Master of Clinical Education will be awarded after satisfactory completion of a program of advanced study of 48 units of credit and submission of a satisfactory major project based on at least one session of applied development or research in clinical education.

Courses to be offered within the distance education programs are:

		UOC
MEED9302	Learning in Small Groups	4
MEED9303	Clinical Practice as a Discipline	4
MEED9304	Learning Clinical Reasoning	6
MEED9306	Clinical Supervision	4
MEED9307	Exploring Clinical Ethics	4
MEED9308	Learning Clinical Decision Making	4
MEED9309	Assessment of Clinical Performance	4
MEED9312	Research into Clinical Education	6
MEED9314	The Ward (or Office) as a Social and Learning Environment	4
MEED9315	Clinical Teaching	6
MEED9316	Learning Consulting Skills	6
MEED9317	Clinicians as Managers	4
MEED9013	Influencing Health Beliefs and Behaviours	4
MEED9125	Designing Short Courses and Workshops*	4
MEED9351	Independent Study (2 units)	2
MEED9352	Independent Study (4 units)	4
MEED9353	Independent Study (6 units)	6
MEED9354	Independent Study (8 units)	8
MEED9360	Major Project	24

** This course is available only as an intensive workshop.*

5501 Graduate Diploma in Clinical Education by Distance Education

GradDipClinEd

The Graduate Diploma in Clinical Education will be awarded after satisfactory completion of advanced study of 40 units of credit together with 100 hours of clinical teaching practice.

7376 Graduate Certificate in Clinical Education by Distance Education

GradCert

The Graduate Certificate program aims to provide a multidisciplinary program of study of clinical education for practising clinicians with teaching responsibilities. The program requires clinical educators to study the knowledge, practical activities and skills within the environment of the ward and other clinical settings, to observe and document clinical teaching and learning.

This Graduate Certificate program will be suitable for those clinical teachers who wish to upgrade their educational skills and obtain recognition for their faculty and professional development, but who would not wish to engage in a full masters program.

The Graduate Certificate in Clinical Education will be awarded after satisfactory completion of advanced study of 20 units of credit.

Course to be offered within the distance education program are:

		UOC
MEED9302	Learning in Small Groups	4
MEED9315	Clinical Teaching	6
MEED9316	Learning Consulting Skills	6
And one from		
MEED9306	Clinical Supervision	4
MEED9307	Exploring Clinical Ethics	4
MEED9309	Assessment of Clinical Performance	4
MEED9314	The Ward (or Office) as a Social and Learning Environment	4
	Total	**20**

7375 Graduate Certificate in University Learning and Teaching

GradCert

The Graduate Certificate will be awarded after satisfactory completion of 16 units of credit. These will usually be taken over at least three semesters.

This program is designed to assist University teachers to understand the theory and practice of effective learning and teaching in higher education. The program will prepare new teachers and support current teachers in enhancing their teaching practice. The process of reflection on the experience of actual teaching will provide a foundation for further exploration in higher education and for individual professional teaching development. This program is designed to meet the needs of busy teachers from diverse teaching settings.

Courses will be offered on campus in a mix of classroom/laboratory online and structured self study. Courses will include application to actual teaching practice.

Courses to be offered within this program are:

		UOC
MEED9401	Introduction to University Learning and Teaching	4
MEED9402	Student Learning in Higher Education	4
Elective courses **choose two from:**		
MEED9403	Teaching Strategies for Effective Learning	4
MEED9404	Course Planning and Assessment	4
MEED9405	Innovations in Education	4
MEED9406	Educational Technology in Learning and Teaching	4
	Total	**16**

All candidates are expected to be actively engaged in teaching in higher education.

2845 Master of Public Health by Research

MPH

Students applying for admission to the MPH by research are required to have a suitable first degree and are normally expected to have considerable experience in their proposed field of study within the health or hospital services. The program can be undertaken full-time or part-time; through internal or external mode.

9045 Master of Public Health by Coursework

MPH

The Master of Public Health program provides preparation for education, research and service in all aspects of public health. The program includes study in epidemiology, quantitative and qualitative research methods, health services management, health promotion, development and education in health, as well as a systematic review of topical public health issues. It is designed to address the continuing education needs of specialists in public health as well as providing a general orientation to public health issues and methods for the health professions.

Applicants are required to have completed a Bachelor's degree in a health-related discipline and at least three years' experience in a health or health-related field.

Program Structure

The MPH program is offered in full-time, part-time and external modes.

The program is divided into three components, for a total of 60 units of credit. These components are:

Core courses	28 units of credit
Elective courses	20 units of credit
and either	
Option A: Project	12 units of credit
or	
Option B: Electives	12 units of credit (electives from a specific category of electives designed to strengthen research skills)
Total	**60 units of credit**

The program articulates with the Graduate Diploma in Public Health (GradDipPH 5507) and the Graduate Certificate in Public Health (GradCertPH 7368). Credit for courses completed as part of the GradDipPH and the GradCertPH may be transferred to the Masters program.

Core Courses

Students must complete the following six courses as a foundation for further study. These core courses are prerequisites for enrolment in many of the electives.

		UOC
*CMED9500	Epidemiology	6
*CMED9516	Introduction to Public Health	4
*MEED9012	Health Promotion	4
*CMED9502	Statistics for Public Health	6
*HEAL9751	Management for Public Health	4
*MEED9131	Research Skills for Public Health	4

** These courses are available in external mode.*

Electives

There is a great variety of electives offered, enabling students to focus on areas of interest and professional relevance. In addition, students may enrol in electives which are offered by other schools and academic units within UNSW, as well as courses offered in the Department of Public Health and Community Medicine at the University of Sydney. Students may elect to undertake independent studies across selected areas of concentration, to learn about a particular area or course matter of special interest which is not offered in the formal program (CMED9100/1/2/4, HEAL9921/31/41, MEED9001/2/3/4).

The following electives are offered in 2004:

		UOC
CMED9517	Advanced Biostatistics and Statistical Computing	4
*CMED9604	Alcohol and Other Drug Issues	4
*CMED9627	Audit and Quality Assurance in Primary Care	4
CMED9518	Case Studies in Epidemiology	4
HEAL9748	Clinical Governance	4
*MEED9010	Community Development	4
HEAL9471	Comparative Health Care Systems	4
*HEAL9501	Computing techniques for Health Services Management	4
MEED9136	Culture, Health and Illness	4
*HEAL9661	Current Issues in Health	4

CMED9615	Delivery of Health Services in the Community	4
CMED9519	Demography	4
MEED9125	Designing Short Courses and Workshops	4
*CMED9612	Environmental Health	4
*CMED9619	Evaluation of Primary Healthcare Services	4
*HEAL9441	Health Care Economics and Financial Management	6
*HEAL9071	Health Care Financial Management 1	6
*HEAL9081	Health Care Financial Management 2	4
*HEAL9041	Health Care Systems	6
*HEAL9351	Health Economics	6
CMED9605	Health in Developing Countries	4
HEAL9442	Health Resources Planning and Development	6
*HEAL9331	Health Related Law & Ethics (Australia)	4
MEED9015	Health Services Development and Implementation	6
*HEAL9301	Health Services Planning 1	4
*HEAL9391	Health Services Strategic Management and Planning	4
CMED9621	HIV/AIDS Challenging and Changing Health Care Systems	4
CMED9626	Inequalities and Health	4
*MEED9013	Influencing Health Beliefs and Health Behaviours	4
CMED9633	International Tobacco Control	4
*HEAL9431	Interpersonal communication in organisations	4
*HEAL9743	Introduction to Casemix	4
*MEED9133	Learning, Teaching and Assessment	4
*HEAL9741	Management of Health Services	4
*HEAL9711	Management of Organisations	6
*HEAL9701	Managing Human Resources in Health	6
*HEAL9121	Measurement of Quality of Life, Health Status and Patient Satisfaction	4
MEED9122	Primary Health Care: Programs, Policies and Perspectives	4
MEED9129	Primary Health Care: Issues in Implementation	4
*MEED9108	Program Evaluation and Planned Change	4
*MEED9140	Project Design and Monitoring in International Health	4
*CMED9620	Project Management and Evaluation in Rural Areas	4
*CMED9618	Public Health Law and Ethics	4
MEED9120	Qualitative Research Methods	4
*HEAL9111	Quality Assurance for Health Administrators	4
*CMED9608	Rural Health	4
*HEAL9811	Sociology, Ethics and Health	4

** These courses are also available in distance education mode.*

Project

The project comprises an in-depth study of a contemporary public health issue. Students are expected to demonstrate their ability to apply knowledge and skills gained in the program. The project may be in the form of a small-scale research study, a case study, a program evaluation or a report on a field placement. It is normally undertaken after completion of all core and elective courses. Students are required to develop a research proposal in consultation with an academic supervisor from the School.

5507 Graduate Diploma in Public Health

GradDipPH

The Graduate Diploma in Public Health comprises the following courses:

		UOC
CMED9516	Introduction to Public Health	4
CMED9502	Statistics for Public Health	6
CMED9500	Epidemiology	6
HEAL9751	Management for Public Health	4
MEED9012	Health Promotion	4
	Electives	16
	Total	**40**

7368 Graduate Certificate in Public Health

GradCertPH

The Graduate Certificate in Public Health comprises the following courses:

		UOC
CMED9516	Introduction to Public Health	4
CMED9500	Epidemiology	6
	Electives	12
	Total	**22**

School of Women's and Children's Health

The School offers programs of study leading to the award of the following degrees:

- Graduate Diploma in Paediatrics

5500 Graduate Diploma in Paediatrics

DipPaed

The program is taken over one year on a part-time basis. Candidates attend a program of lectures and grand rounds (approximately four and one-half hours per week). This degree is likely to appeal to doctors interested in a career in general practice or who are in the early stages of training for a specialty career in paediatrics.

The Graduate Diploma is awarded after satisfying the examiners in written and clinical examinations at the end of the program.

The Graduate Diploma of Paediatrics is intended for postgraduates who have medical degrees registrable in Australia and who are able to secure a paediatric appointment, salaried or otherwise, in a teaching hospital recognised by the University of New South Wales. The School takes no responsibility for making such arrangements.

Candidates who have completed 12 months experience in Clinical Paediatrics under supervisors acceptable to the University may be exempt from the clinical experience requirement.

		UOC
PAED9101	General Paediatrics and Child Health 1	8
PAED9102	General Paediatrics and Child Health 2	8
PAED9106	Clinical and Technical Skills 1	4
PAED9107	Clinical and Technical Skills 2	4
PAED9108	Clinical Paediatric Experience 1	*
PAED9109	Clinical Paediatric Experience 2	*
	Total	**24**

**Units of credit to be determined*

Students should note that if they have to repeat the year due to failure in one or more course, they must re-enrol in and satisfactorily complete all courses in order to qualify for the Graduate Diploma.

School of Medical Sciences

The School offers programs of study leading to the award of the following degrees:

- Master of Sports Medicine
- Graduate Diploma in Sports Medicine
- Graduate Certificate in Sports Medicine
- Master of Science in Biopharmaceuticals (in conjunction with the School of Biotechnology) by Coursework or by Distance Education
- Master of Medical Science in Drug Development by Distance Education
- Graduate Diploma in Drug Development by Distance Education
- Graduate Certificate in Drug Development by Distance Education

9055 Master of Sports Medicine

MSpMed

The programs aim to equip medical practitioners with a rigorous understanding of the theory and practice of sports medicine in meeting the medical demands of people engaged in individual or team performance-related sporting activities and with the medical demands of people involved in health-related physical activities for the purposes of primary, secondary or tertiary prevention of disease processes.

The degree of Master of Sports Medicine will be awarded after the satisfactory completion of a program of advanced study of courses (including clinical activities as prescribed) which totals 60 units of credit.

54 units of credit will accrue from nine courses.

6 units of credit will accrue from the completion of a Research Project and Report.

Other requirements include the completion of a Sports Medicine Practicum, requiring attendance over two 5 day clinical training periods (special arrangements can be made for overseas students), and the satisfactory completion of a final clinical examination.

Courses for MSpMed are as follows:

		UOC
PHPH5413	Sports Injuries 1	6
PHPH5423	Sports Injuries 2	6
PHPH5433	Medical Applications of Exercise 1	6
PHPH5443	Medical Applications of Exercise 2	6
PHPH5414	Sports Science	6
PHPH5426	Applied Sports Medicine	6
PHPH5416	Sports Nutrition/Sports Pharmacology	6
PHPH5417	Sports Psychology/Clinical Biomechanics	6
PHPH5424	Research Methods	6
PHPH5445	Research Project and Report	6
	Sports Medicine Practicum	*
	Total	**60**

**Units of credit to be determined*

5503 Graduate Diploma in Sports Medicine

GradDipSpMed

The Graduate Diploma in Sports Medicine will be awarded after the satisfactory completion of a program of advanced study of courses (including clinical activities as prescribed) which total 48 units of credit from eight courses.

Other requirements include the completion of a Sports Medicine Practicum, requiring attendance over two 5 day clinical training periods (special arrangements can be made for overseas students), and the satisfactory completion of a final clinical examination.

Courses for the GradDipSpMed are as follows:

		UOC
PHPH5513	Sports Injuries 1	6
PHPH5523	Sports Injuries 2	6
PHPH5533	Medical Application of Exercise 1	6
PHPH5543	Medical Application of Exercise 2	6
PHPH5514	Sports Science	6
PHPH5526	Applied Sports Medicine	6
PHPH5516	Sports Nutrition/Sports Pharmacology	6
PHPH5517	Sports Psychology/Clinical Biomechanics	6
	Sports Medicine Practicum	*
	Total	**48**

**Units of credit to be determined*

7378 Graduate Certificate in Sports Medicine

GradCertSpMed

The Graduate Certificate in Sports Medicine will be awarded after the satisfactory completion of a program of advanced study of courses (including clinical activities as prescribed) which totals 24 units of credit from four courses. There are no core courses.

Other requirements include the completion of a Sports Medicine Practicum, requiring attendance over two 5 day clinical training periods (special arrangements can be made for overseas students).

Courses to choose from for the GradCertSPMed are as follows:

		UOC
PHPH5613	Sports Injuries 1	6
PHPH5623	Sports Injuries 2	6
PHPH5633	Medical Application of Exercise 1	6
PHPH5643	Medical Application of Exercise 2	6
	Sports Science	6
	Applied Sports Medicine	6
	Sports Nutrition/Sports Pharmacology	6
	Sports Psychology/Clinical Biomechanics	6
	Sports Medicine Practicum	*
	Total	**24**

**Units of credit to be determined*

8049 Master of Science in Biopharmaceuticals (Coursework)

Staff Contact: Professor S Mahler

This is an interdisciplinary program designed for graduates with backgrounds in either pharmacology or biotechnology who wish to obtain advanced training in both areas in order to gain expertise necessary for the development and use of the new generation of biopharmaceuticals which have been developed by, or result from, the application of molecular biology. It is open to graduates with a four year degree in a related discipline or who have, in the opinion of the Higher Degree Committee, acquired equivalent qualifications or experience. Prior study of biochemistry is required for the program. The program teaches the scientific bases underscoring the development of recombinant biopharmaceuticals, combined with aspects of clinical trials, regulatory considerations, patent issues and licensing. The program content is incorporated in courses that can be delivered either in distance or on campus mode, and comprises written text containing program materials, demonstrations and self-testing exercises. Several days of intensive face-to-face teaching is provided per course for all students, whether enrolled in distance or on campus mode. In addition, there is access to the course coordinators by phone, email and teleconferencing facilities and tutorials for on campus students.

The Masters program calls for the completion of eight courses that is equivalent to 48 units of credit. The program is run in two by twenty week sessions and can be completed in one year full-time. Part-time students can enrol in two courses per session, one course running consecutively with the other, allowing the program to be completed in two years part-time. Students enrolled to do the program on campus can elect to do six of the below courses and, in addition, complete PHPH5491 (Pharmacology Project) or BIOT7060 (Biotechnology project). Students enrolled in the program by distance will need to complete eight of the courses for the Masters program.

Courses (modules)		**UOC**
BIOT7160	Genomics and Proteomics	6
BIOT7070	Recombinant Protein Expression Systems	6
BIOT7170	Therapeutic Modalities of Biopharmaceuticals	6
BIOT7080	Biopharmaceutical Production Processes	6
BIOT7090	Monoclonal Antibody Technique	6
BIOT7120	Regulatory Considerations, Patent Issues and Licensing	6
PHPH9101	Principles of Drug Action	6
PHPH9100	Discovery and Development of Medicines	6
PHPH9120	Clinical Development of Medicines	6
PHPH5521	Techniques for Drug Development	6
Project		
BIOT7060	Biotechnology Project	12
or		
PHPH5491	Pharmacology Project	12
	Units of Credit to total	**48**

9060 Master of Medical Science in Drug Development by Distance Education

MMedSc

The discovery, development and marketing of medicines has become a highly organised interdisciplinary team activity. Members of such teams need to be literate in all aspects of drug development ranging from procedures for identifying lead compounds through to the full development of the product including preclinical studies, clinical trials and the legal, regulatory and ethical issues relevant to marketing and on-going vigilance of the medicine. The aim of this course is to enable people working in the field of developing and using pharmaceutical substances to obtain such expertise by providing core and elective materials in a mainly distance-learning format. Since interchange of ideas is an essential part of any educational activity, the course will include interactive assignments with specific tutors and group discussions where students come together for tutorials, workshops and practice sessions, and generally to interchange ideas.

The educational principle governing the program's teaching approach is to streamline the provision of information and to concentrate on application. Thus, students are issued with a manual for each course. The manual contains, typically, about 200-300 pages of lecture notes plus 200-250 pages of attachments from the literature (relevant chapters from textbooks, published papers, Australian and overseas government regulatory and policy documents etc.).

The Master of Medical Science in Drug Development will be awarded to students who successfully complete the coursework identified below. The program consists of six core and six elective courses, delivered mainly by distance learning with some on-campus workshops. It may be taken part-time or full-time, and takes a minimum of either three sessions (full-time) or six sessions (part-time) to complete. The elective courses shall be selected from those that are available in the particular session, provided prerequisite and timetabling constraints are met. Because of this limitation, the choice of electives is more restricted for full-time students than it is for part-time students. The program is designed for persons wishing to pursue careers that relate to the development and safe use of medicines. Career opportunities exist in the pharmaceutical

manufacturing industry, government and in research institutions such as universities. Health care professionals interested in developing new medicines and improving the use of existing medicines will find the course of value. The extensive range of electives enables the candidate to specialise in particular areas such as the discovery of new medicines, regulatory affairs, clinical trials, clinical pharmacology, therapeutics, market development, medical department administration, preclinical studies, etc.

Below is a list of core and elective courses for the Master of Medical Science in Drug Development. Generally students must take all core courses and sufficient electives to give a total of 72 units of credit. The program proceeds in three stages, which correspond to Years 1 to 3 for part-time students proceeding in the minimum time.

The structure of the program is as follows:

Year 1 (part-time)

Session 1		**UOC**
PHPH9101	Principles of Drug Action*	6
PHPH9100	Discovery and Development of Medicines*	6
Session 2		
PHPH9120	Clinical Development of Medicines*	6
PHPH9104	Law, Ethics and the Regulation of Medicines*	6

Year 2 (part-time)

Session 1		
PHPH9102	Pharmaceutical Development of Medicines*	6
PHPH9121	Postmarketing Development of Medicines*	6
Session 2		
Elective		6
Elective		6

Year 3 (part-time)

Session 1		
Elective		6
Elective		6
Session 2		
Elective		6
Elective		6
Total		**72**

**core courses*

Electives may be chosen from the following:

		UOC
PHPH9107	Therapeutics and the Molecular Basis of Disease 1	6
PHPH9108	Therapeutic Basis of Drug Use and Development 1	6
PHPH9109	Therapeutic Basis of Drug Use and Development 2	6
PHPH9111	Pharmaceutical Formulation 2	6
PHPH9112	Advanced Pharmacokinetics	6
PHPH9113	Advanced Regulatory Affairs	6
PHPH9114	Pharmacoeconomics	6
PHPH9116	Advanced Clinical Trials Management	6
PHPH9118	Therapeutics and the Molecular Basis of Disease 2	6
PHPH9119	Providing Independent Drug Information for General Practice	6
PHPH9122	Quality Use of Medicines - Best Practice in Prescribing	6
BIOT7070	Recombinant Protein Expression Systems	6
BIOT7080	Biopharmaceutical Production Processes	6
BIOT7160	Genomics and Proteomics	6
BIOT7170	Therapeutic Modalities of Biopharmaceuticals	6

5504 Graduate Diploma in Drug Development by Distance Education

GradDipDD

The Graduate Diploma in Drug Development will be awarded to students who successfully complete the following program. The program is offered as a part-time distance learning program and takes a minimum of two years to complete. The program is designed for persons wishing to pursue careers that relate to the development and safe use of medicines. Career opportunities exist in the pharmaceutical manufacturing industry, government and in research institutions such as universities. Health care professionals interested in developing new medicines and improving the use of existing medicines will find the program of value. The extensive range of electives enables the candidate to specialise in particular areas such as the discovery of new medicines; regulatory affairs; clinical trials; market development; medical department administration; preclinical studies, etc.

The educational principle governing the program's teaching approach is to streamline the provision of information and to concentrate on application. Thus, students are issued with a manual for each course. The manual contains, typically, about 200-300 pages of lecture notes plus 200–250 pages of attachments from the literature (relevant chapters from textbooks, published papers, Australian and overseas government regulatory and policy documents, etc.).

To fulfil the program requirements, students must satisfactorily complete all of the core courses as well as electives totaling 12 units of credit.

The structure of the Graduate Diploma program is as follows:

Year 1

Session 1		**UOC**
PHPH9101	Principles of Drug Action*	6
PHPH9100	Discovery and Development of Medicines*	6
Session 2		
PHPH9120	Clinical Development of Medicines*	6
PHPH9104	Law, Ethics and the Regulation of Medicines*	6

Year 2

Session 1		
PHPH9102	Pharmaceutical Development of Medicines*	6
PHPH9121	Postmarketing Development of Medicines*	6
Session 2		
Elective		6
Elective		6
Total		**48**

**core courses*

Electives may be chosen from the following:

		UOC
PHPH9107	Therapeutics and the Molecular Basis of Disease 1	6
PHPH9108	Therapeutic Basis of Drug Use and Development 1	6
PHPH9109	Therapeutic Basis of Drug Use and Development 2	6
PHPH9111	Pharmaceutical Formulation 2	6
PHPH9112	Advanced Pharmacokinetics	6
PHPH9113	Advanced Regulatory Affairs	6
PHPH9114	Pharmacoeconomics	6
PHPH9116	Advanced Clinical Trials Management	6
PHPH9118	Therapeutics and the Molecular Basis of Disease 2	6
PHPH9119	Providing Independent Drug Information for General Practice	6
PHPH9122	Quality of Medicines-Best Practice in Prescribing	6

7370 Graduate Certificate in Drug Development by Distance Education

GradCertDD

The Graduate Certificate in Drug Development will be awarded to students who successfully complete the following course work. This program has similar format and objectives to the Graduate Diploma but is designed for those people who wish to obtain a limited competency in the areas described. The program is offered as a part-time distance learning program and will take a minimum of one year to complete.

The educational principle governing the program's teaching approach is to streamline the provision of information and to concentrate on application. Thus, students are issued with a manual for each course. The manual contains, typically, about 200-300 pages of lecture notes plus 200-250 pages of attachments from the literature (relevant chapters from textbooks, published papers, Australian and overseas government regulatory and policy documents, etc.).

Year 1		**UOC**
Session 1		
PHPH9101	Principles of Drug Action*	6
PHPH9100	Discovery and Development of Medicines*	6
Session 2		
PHPH9120	Clinical Development of Medicines*	6
PHPH9104	Law, Ethics and the Regulation of Medicines*	6
Total		**24**

**core courses*

Conditions for the Award of Degrees

For the list of postgraduate programs by research and coursework see the table, arranged in Faculty order, at the front of this Handbook. For the rules, regulations and conditions of postgraduate coursework programs (Masters, Graduate Diplomas and Graduate Certificates) turn to the program description in this section. The conditions for postgraduate degrees by research follow:

Doctor of Medicine (MD) *by published work**

1. The degree of Doctor of Medicine by published work may be awarded by the Council on the recommendation of the Higher Degree Committee of the Faculty of Medicine (hereinafter referred to as the Committee) to a candidate who has made an original and meritorious contribution to some branch of medicine.

Qualification

2. A candidate for the degree shall:

(1) hold the degrees of Bachelor of Medicine and Bachelor of Surgery from the University of New South Wales of at least five years standing;

or

(2) hold the degrees of Bachelor of Medicine and Bachelor of Surgery or a qualification considered equivalent from a university other than the University of New South Wales with at least five years' standing and have been associated with the University of New South Wales or one of its teaching hospitals for a period of at least four years.

Enrolment and Progression

3. A candidate for the degree on the basis of published work shall lodge with the Registrar an application together with:

(1) four copies (if possible) of the published work;

(2) any additional work, published or unpublished, that a candidate may wish to submit in support of the application;

(3) a declaration indicating those sections of the work, if any, that have been submitted previously for a university degree or other similar award.

4. Every candidate in submitting published work and such unpublished work as is deemed appropriate shall submit a short discourse describing the research activities embodied in the submission. The discourse shall make clear the extent of the originality of the work and the candidate's part in any collaborative effort including hypothesis generation, design and execution of experiments, supervision of others doing experiments, analysis of results, and contribution to meetings of the research team.

Examination

5. There shall normally be three examiners of the work, appointed by the Committee, at least two of whom shall be external to the University.

6. Before the work referred to in 3. (1), (2) above is submitted to the examiners the head of the appropriate school** shall certify that it is prima facie worthy of examination.

7. At the conclusion of the examination each examiner shall submit a concise report to the Committee on the merits of the published work and a recommendation as to whether the degree should be awarded. The examiners may require the candidate to answer orally or in writing any questions concerning the work.

Fees

8. A candidate shall be required to pay such fees as may be determined from time to time by the Council.

** In these rules, the term 'published work' shall mean printed as a book or in a periodical or as a pamphlet readily available to the public. The purpose of requiring publication is to ensure that the work submitted has been available for criticism. The examiners may disregard any of the work submitted if, in their opinion, it has not been available for criticism.*

*** 'School' is used here and elsewhere in these conditions to mean any teaching unit authorised to enrol research students and includes a department where that department is not within a school, or schools or departments where the research is being undertaken in more than one school or department; a centre given approval by the Academic Board to enrol students; and an interdisciplinary unit within a faculty and under the control of the Dean of the Faculty. Enrolment is permitted in more than one such teaching unit.*

Doctor of Medicine (MD) *by thesis*

1. The degree of Doctor of Medicine by thesis may be awarded by the Council on the recommendation of the Higher Degree Committee of the Faculty of Medicine (hereinafter referred to as the Committee) to a candidate who has made an original and meritorious contribution to some branch of medicine.

Qualifications

2. (1) A candidate for the degree shall:

(a) hold the degrees of Bachelor of Medicine and Bachelor of Surgery from the University of New South Wales at a level acceptable to the Committee;

or

(b) hold the degrees of Bachelor of Medicine and Bachelor of Surgery or a qualification considered equivalent from a university other than the University of New South Wales at a level acceptable to the Committee;

or

(c) in exceptional cases, submit such evidence of academic and professional attainments in support of the candidature as may be approved by the Committee.

(2) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such examination or carry out such work as the Committee may prescribe, before permitting enrolment.

(3) A candidate enrolled under 2. (1)(a) or (b) above shall not submit a thesis for the degree until the lapse of five years from the date of the award of the degrees mentioned therein.

(4) A candidate enrolled under 2. (1)(c) above shall not submit a thesis for the degree until such period of time has elapsed since enrolment as the Committee shall decide at the time of approving enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree by thesis shall be made on the prescribed form which shall be lodged with the Registrar at least one calendar month before the commencement of the session in which enrolment is to begin.

(2) In every case, before permitting a candidate to enrol, the Committee shall be satisfied that adequate supervision and facilities are available.

(3) An approved applicant shall be enrolled in one of the following categories:

(a) full-time candidature: a candidate who is fully engaged in advanced study and research at the University or at one of its teaching hospitals;

(b) part-time candidature: a candidate whose occupation leaves the candidate substantially free to pursue a program of advanced study and research at the University or at one of its teaching hospitals;

(c) external candidature: a candidate who is engaged in advanced study and research away from the University or one of its teaching hospitals.

(4) A candidate shall be required to undertake an original investigation on a topic approved by the Committee. The candidate may also be required to undergo such examination and perform such other work as may be prescribed by the Committee.

(5) The work shall be carried out under the direction of a supervisor appointed by the Committee from the full-time academic members of the University staff.

(6) The progress of a candidate shall be reviewed annually by the Committee following a report by the candidate, the supervisor and the head of the school in which the candidate is enrolled and as a result of such review the Committee may cancel enrolment or take such other action as it considers appropriate.

(7) No candidate shall be awarded the degree until the lapse of six academic sessions in the case of a full-time candidate or eight academic sessions in the case of a part-time or external candidate from the date of enrolment. In the case of a candidate who has been awarded the degrees of Bachelor of Medicine and Bachelor of Surgery with Honours or who has had previous research experience the Committee may approve remission of up to two sessions for a full-time candidate and four sessions for a part-time or external candidate.

(8) A full-time candidate for the degree shall present for examination not later than ten academic sessions from the date of enrolment. A part-time or external candidate shall present for examination not later than twelve academic sessions from the date of enrolment. In special cases an extension of these times may be granted by the Committee.

Thesis

4. (1) A candidate shall submit a thesis embodying the results of the investigation.

(2) If a candidate for the degree is not a graduate of the University of New South Wales the greater proportion of the work described must have been carried out in the University or in one of its teaching hospitals.

In special cases, the Committee may permit a candidate to conduct the work at other places where special facilities not possessed by the University may be available or where the subject of the research is uniquely located but only if the candidate spends such period of time within the University, and under such supervision, as may be determined by the Committee.

(3) A candidate shall give in writing to the Registrar two months notice of intention to submit the thesis.

(4) The thesis shall comply with the following requirements.

(a) it must be an original and meritorious contribution to knowledge of the subject;

(b) it must be written in English and reach a satisfactory standard of expression and presentation;

(c) it must consist of the candidate's own account of the research; in special cases work done conjointly with other persons may be accepted provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(5) A candidate may not submit as the main content of the thesis any work or material which has previously been submitted for a university degree or other similar award but may submit any work otherwise previously published, whether or not it is related to the thesis.

(6) The thesis shall contain a certificate signed by the candidate indicating specifically the extent to which the work embodied in the thesis is directly attributable to the candidate's own research and the extent to which the thesis has benefited from collaboration with persons other than the supervisor.

(7) Four copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree theses.

(8) It shall be understood that the University retains the four copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis, in whole or in part, in photostat or microfilm or other copying medium.

Examination

5. (1) There shall be not fewer than three examiners of the thesis, appointed by the Committee, at least two of whom shall be external to the University.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that;

(a) the candidate be awarded the degree without further examination; *or*

(b) the candidate be awarded the degree without further examination subject to minor corrections as listed being made to the satisfaction of the Head of School;

or

(c) the candidate be awarded the degree subject to a further examination on questions posed in the report, performance in this further examination being to the satisfaction of the Committee;

or

(d) the candidate be not awarded the degree but be permitted to resubmit the thesis in a revised form after a further period of study and/or research; *or*

(e) the candidate be not awarded the degree and be not permitted to resubmit the thesis.

(3) if the performance at the further examination recommended under (2)(c) above is not to the satisfaction of the Committee it may permit the candidate to represent the same thesis and submit to further examination as determined by the Committee within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the results of any further examination, recommend whether or not the candidate may be awarded the degree.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the Council.

Doctor of Medicine (MD) *by thesis without supervision*

1. The degree of Doctor of Medicine by thesis without supervision may be awarded by the Council on the recommendation of the Higher Degree Committee of the Faculty of Medicine (hereinafter referred to as the Committee) to a candidate who has made an original and meritorious contribution to some branch of medicine.

Qualifications

2. A candidate for the degree shall hold the degrees of Bachelor of Medicine and Bachelor of Surgery from the University of New South Wales with at least five years standing at a level acceptable to the Committee.

Enrolment and Progression

3. An application to enrol as a candidate for the degree by thesis without supervision shall be made on the prescribed form which shall be lodged with the Registrar not less than six months before the intended date of submission of the thesis. A graduate who intends to apply in this way should, in his or her own interest, at an early stage seek the advice of the appropriate school* with regard to the adequacy of the subject matter and its presentation for the degree. A synopsis of the work should be available.

Thesis

4. (1) A candidate shall submit a thesis embodying the results of the investigation.

(2) A candidate shall give in writing to the Registrar two months notice of intention to submit the thesis.

(3) The thesis shall comply with the following requirements:

(a) it must be an original and meritorious contribution to knowledge of the subject;

(b) it must be written in English and reach a satisfactory standard of expression and presentation;

(c) it must consist of the candidate's own account of the research; in special cases work done conjointly with other persons may be accepted provided the Committee is satisfied with the candidate's part in the joint research.

(4) A candidate may not submit as the main content of the thesis any work or material which has previously been submitted for a university degree or other similar award but may submit any work otherwise previously published, whether or not related to the thesis.

(5) The thesis shall contain a certificate signed by the candidate indicating specifically the extent to which the work embodied in the thesis is directly attributable to the candidate's own research and the extent to which the thesis has benefited from the collaboration with other persons.

(6) Four copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree theses. The candidate may also submit any work previously published whether or not such work is related to the thesis.

(7) It shall be understood that the University retains the four copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis, in whole or in part, in photostat or microfilm or other copying medium.

Examination

5. (1) There shall normally be three examiners of the thesis, appointed by the Committee, at least two of whom shall be external to the University.

(2) Before the thesis is submitted to the examiners the head of the school in which the candidate is enrolled shall certify that it is prima facie worthy of examination.

(3) After examining the thesis each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that:

(a) the candidate be awarded the degree without further examination; *or*

(b) the candidate be awarded the degree without further examination subject to minor corrections as listed being made to the satisfaction of the Head of School;

or

(c) the candidate be awarded the degree subject to a further examination on questions posed in the report, performance in this further examination being to the satisfaction of the Committee;

or

(d) the candidate be not awarded the degree but be permitted to resubmit the thesis in a revised form after a further period of study and/or research;
or

(e) the candidate be not awarded the degree and be not permitted to resubmit the thesis.

(4) If the performance at the further examination recommended under (3)(c) above is not to the satisfaction of the Committee it may permit the candidate to represent the same thesis and submit to further examination as determined by the Committee within a period specified by it but not exceeding eighteen months.

(5) The Committee shall, after consideration of the examiners' reports and the results of any further examination, recommend whether or not the candidate may be awarded the degree.

Fees

6. A candidate shall be required to pay such fees as may be determined from time to time by the Council.

**'School' is used here and elsewhere in these conditions to mean any teaching unit authorised to enrol research students and includes a department where that department is not within a school, or schools or departments where the research is being undertaken in more than one school or department; a centre given approval by the Academic Board to enrol students; and an interdisciplinary unit within a faculty and under the control of the Dean of the Faculty. Enrolment is permitted in more than one such teaching unit.*

Doctor of Philosophy (PhD)

Refer to Conditions for the Award of Degrees under Faculty of Arts & Social Sciences section of this Handbook.

Master of Health Administration (MHA) *by Research*

1. The degree of Master of Health Administration by research may be awarded by the Council on the recommendation of the Higher Degree Committee of the Faculty of Medicine (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation or design.

Qualifications

2. (1) A candidate for the degree shall:

(a) have been awarded an appropriate degree of Bachelor of four full-time years duration (or the part-time equivalent) from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee;
or

(b)(i) have been awarded an appropriate degree of Bachelor of three full-time years duration (or the part-time equivalent) from the University of New South Wales or qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee, *and*

(ii) have had at least three years experience in the health services of a kind acceptable to the Committee.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) When the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant, before being permitted to enrol, to undergo such examination or carry out such work as the Committee may prescribe.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least one calendar month before the commencement of the session in which enrolment is to begin.

(2) In every case, before permitting a candidate to enrol, the Head of the School of Health Administration (hereinafter referred to as the head of the school) shall be satisfied that adequate supervision and facilities are available.

(3) An approved candidate shall be enrolled in one of the following categories:

(a) full-time attendance at the University;

(b) part-time attendance at the University;

(c) external – not in regular attendance at the University and using research facilities external to the University.

(4) A candidate shall be required to undertake an original investigation or design on an approved topic. The candidate may also be required to undergo such examination and perform such other work as may be prescribed by the Committee.

(5) The work shall be carried out under the direction of a supervisor appointed from the full-time members of the University staff.

(6) The progress of a candidate shall be reviewed annually by the Committee following a report by the candidate, the supervisor and the head of the school and as a result of such review the Committee may cancel enrolment or take such other action as it considers appropriate.

(7) No candidate shall be granted the degree until the lapse of three academic sessions in the case of a full-time candidate or four academic sessions in the case of a part-time or external candidate from the date of enrolment. In the case of a candidate who has been awarded the degree of Bachelor with Honours or who has had previous research experience the Committee may approve remission of up to one session for a full-time candidate and two sessions for a part-time or external candidate.

(8) A full-time candidate for the degree shall present for examination not later than six academic sessions from the date of enrolment. A part-time or external candidate for the degree shall present for examination not later than ten academic sessions from the date of enrolment. In special cases an extension of these times may be granted by the Committee.

Thesis

4. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the original investigation or design.

(2) The candidate shall give in writing two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree theses.

(6) It shall be understood that the University retains the three copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

5. (1) There shall be not fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the merits of the thesis and shall recommend to the Committee that:

(a) the candidate be awarded the degree without further examination;
or

(b) the candidate be awarded the degree without further examination subject to minor corrections as listed being made to the satisfaction of the Head of the School;

or

(c) the candidate be awarded the degree subject to a further examination on questions posed in the report, performance in this further examination being to the satisfaction of the Committee;

or

(d) the candidate be not awarded the degree but be permitted to resubmit the thesis in a revised form after a further period of study and/or research;
or

(e) the candidate be not awarded the degree and be not permitted to resubmit the thesis.

(3) If the performance at the further examination recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to represent the same thesis and submit to a further oral, practical or written examination within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the reports of any oral or written or practical examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the Council.

Master of Health Professions Education (MHPEd) *by Research*

1. The degree of Master of Health Professions Education by research may be awarded by the Council on the recommendation of the Higher Degree Committee of the Faculty of Medicine (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation.

Qualifications

2. (1) A candidate for the degree shall:

(a) have been awarded an appropriate degree of Bachelor of four full-time years duration (or the part-time equivalent) from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee, and

(b) have had the equivalent of at least two years full-time teaching and/or administrative experience of a kind acceptable to the Committee.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least one calendar month before the commencement of the session in which enrolment is to begin.

(2) In every case before making the offer of a place the Committee shall be satisfied that initial agreement has been reached between the School of Medical Education and the applicant on the topic area, supervision arrangements, provision of adequate facilities and any coursework to be prescribed and that these are in accordance with the provisions of the guidelines for promoting postgraduate study within the University.

(3) The candidate shall be enrolled as either a full-time or part-time student.

(4) A candidate shall be required to undertake an original investigation on an approved topic. The candidate may also be required to undergo such assessment and perform such other work as may be prescribed by the Committee.

(5) The candidate may undertake the research as an internal student i.e. at a campus, teaching hospital, or other research facility with which the University is associated, or as an external student not in attendance at the University except for periods as may be prescribed by the Committee.

(6) An internal candidate will normally carry out the research on a campus or at a teaching or research facility of the University. The Committee may permit a candidate to spend a period in the field, within another institution or elsewhere away from the University provided that the work can be supervised in a manner satisfactory to the Committee. In such instances the Committee shall be satisfied that the location and period of time away from the University are necessary to the research program.

(7) The research shall be supervised by a supervisor or supervisors who are members of the academic staff of the School or under other appropriate supervision arrangements approved by the Committee. Normally an external candidate within another organisation or institution will have a co-supervisor at that institution.

(8) No candidate shall be awarded the degree until the lapse of three academic sessions from the date of enrolment in the case of a full-time candidate or four academic sessions in the case of a part-time or external candidate. In the case of a candidate who has been awarded the degree of Bachelor with Honours or who has had previous research experience the Committee may approve remission of up to one session for a full-time candidate and two sessions for a part-time or external candidate.

(9) A full-time candidate for the degree shall present for examination not later than six academic sessions from the date of enrolment. A part-time or external candidate for the degree shall present for examination not later than eight academic sessions from the date of enrolment. In special cases an extension of these times may be granted by the Committee.

Progression

4. The progress of the candidate shall be considered by the Committee following report from the School in accordance with the procedures established within the School and previously noted by the Committee.

(i) The research proposal will be reviewed as soon as feasible after enrolment. For a full-time student this will normally be during the first year of study, or immediately following a period of prescribed coursework. This review will focus on the viability of the research proposal.

(ii) Progress in the course will be reviewed within twelve months of the first review. As a result of either review the Committee may cancel enrolment or take such other action as it considers appropriate. Thereafter, the progress of the candidate will be reviewed annually.

Thesis

5. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the investigation.

(2) The candidate shall give in writing to the Registrar two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(6) It shall be understood that the University retains the three copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

6. (1) There shall be not fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that:

(a) The thesis merits the award of the degree.

(b) The thesis merits the award of the degree subject to minor corrections as listed being made to the satisfaction of the Head of School.

(c) The thesis requires further work on matters detailed in the report. Should performance in this further work be to the satisfaction of the Higher Degree Committee, the thesis would merit the award of the degree.

(d) The thesis does not merit the award of the degree in its present form and further work as described in the examiner's reportis required. The revised thesis should be subject to reexamination.

(e) The thesis does not merit the award of the degree and does not demonstrate that resubmission would be likely to achieve that merit.

(3) If the performance at the further examination recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to represent the same thesis and submit to further examination as determined by the Committee within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the results of any further examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

7. A candidate shall pay such fees as may be determined from time to time by the Council.

Master of Medicine (MMed) by Research *with Supervision*

1. The degree of Master of Medicine by research may be awarded by the Council on the recommendation of the Higher Degree Committee of the Faculty of Medicine (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation.

Qualifications

2. (1) A candidate for the degree shall have been awarded Bachelor of Medicine and Bachelor of Surgery from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Higher Degree Committee of the Faculty of Medicine. It must be noted that the Master of Medicine is intended for postgraduates who have medical degrees registrable in Australia and who are able to secure an appropriate appointment, salaried or otherwise, in a teaching hospital recognised by the University of New South Wales.

(2) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant, before being permitted to enrol, to undergo such examination or carry out such work as the Committee may prescribe.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least one calendar month before the commencement of the session in which enrolment is to begin.

(2) In every case, before permitting a candidate to enrol, the Head of School shall be satisfied that adequate supervision and facilities are available.

(3) An approved candidate shall be enrolled in one of the following categories:

(a) full-time attendance at the University;

(b) part-time attendance at the University;

(c) external not in regular attendance at the University and using research facilities external to the University

(4) A candidate shall be required to undertake an original investigation on an approved topic. The candidate may also be required to undergo such examination and perform such other work as may be prescribed by the Committee.

(5) The work shall be carried out under the direction of a supervisor appointed from the full-time members of the University staff.

(6) The progress of a candidate shall be reviewed annually by the Committee following a report by the candidate, the supervisor and the Head of School or his/her delegate and as a result of such review the Committee may cancel enrolment or take such other action as it considers appropriate.

(7) No candidate shall be granted the degree until the lapse of three academic sessions in the case of a full-time candidate or four academic sessions in the case of a part-time or external candidate from the date of enrolment. In the case of a candidate who has been awarded the degree of Bachelor with Honours or who has had previous research experience the Committee may approve remission of up to one session for a full-time candidate and two sessions for a part-time or external candidate.

(8) A full-time candidate for the degree shall present for examination not later than six academic sessions from the date of enrolment. A part-time or external candidate for the degree shall present for examination not later than ten academic sessions from the date of enrolment. In special cases an extension of these times may be granted by the Committee.

Thesis

4. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the original investigation.

(2) The candidate shall give, in writing, two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree theses.

(6) It shall be understood that the University retains the three copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

5. (1) There shall be not fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the merits of the thesis and shall recommend to the Committee that:

(a) the candidate be awarded the degree without further examination;

or

(b) the candidate be awarded the degree without further examination subject to minor corrections as listed being made to the satisfaction of the Head of the School;

or

(c) the candidate be awarded the degree subject to a further examination on questions posed in the report, performance in this further examination being to the satisfaction of the Committee;

or

(d) the candidate be not awarded the degree but be permitted to resubmit the thesis in a revised form after a further period of study and/or research;

or

(e) the candidate be not awarded the degree and be not permitted to resubmit the thesis.

(3) If the performance at the further examination recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to re-present the same thesis and submit to a further oral, practical or written examination within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the reports of any oral or written or practical examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the Council.

Master of Medicine (MMed) by Research *without supervision*

1. The degree of Master of Medicine by research without supervision may be awarded by the Council on the recommendation of the Higher Degree Committee of the Faculty of Medicine (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation.

Qualifications

2. A candidate for the degree shall have been awarded an appropriate degree of Bachelor of Medicine and Bachelor of Surgery from the University of New South Wales with at least three years relevant standing or other equivalent qualifications.

Enrolment and Progression

3. An application to enrol as a candidate for the degree without supervision shall be made on the prescribed form which shall be lodged with the Registrar not less than six months before the intended date of submission of the thesis. A graduate who intends to apply in this way should, in his or her own interests, seek at an early stage the advice of the Head of School or his/her delegate with regard to the adequacy of the subject matter and its presentation for the degree. A synopsis of the work should be available.

Thesis

4. (1) A candidate shall submit a thesis embodying the results of the investigation.

(2) The candidate shall give in writing to the Registrar two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(6) It shall be understood that the University retain the three copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

5. (1) There shall be not fewer than two examiners of the thesis, appointment by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) Before the thesis is submitted to the examiners the Head of School shall certify that it is prima facie worthy of examination.

(3) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that:

(a) the candidate be awarded the degree without further examination;
or

(b) the candidate be awarded the degree without further examination subject to minor corrections as listed being made to the satisfaction of the Head of the School;

or

(c) the candidate be awarded the degree subject to a further examination on questions posed in the report, performance in this further examination being to the satisfaction of the Committee;

or

(d) the candidate be not awarded the degree but be permitted to resubmit the thesis in a revised form after a further period of study and/or research;
or

(e) the candidate be not awarded the degree and be not permitted to resubmit the thesis.

(4) If the performance at the further examination recommended under (3)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to re-present the same thesis and submit to further examination as determined by the Committee within a period specified by it but not exceeding eighteen months.

(5) The Committee shall, after consideration of the examiners' reports and the results of any further examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate may be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the council.

Master of Public Health (MPH) *by Research*

1. The degree of Master of Public Health by Research may be awarded by the Council on the recommendation of the Higher Degree Committee of the appropriate faculty (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation or design.

Qualifications

2. (1) A candidate for the degree shall:

(a) have been awarded an appropriate degree of Bachelor of four full-time years duration (or the part-time equivalent) from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee,
or

(b)(i) have been awarded an appropriate degree of Bachelor of three full-time years duration (or the part-time equivalent) from the University of New South Wales or qualifications considered equivalent from another university or tertiary institution at a level acceptable to the Committee
and

(ii) have had the equivalent of at least three years experience in the health services of a kind acceptable to the Committee

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such examination or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least one calendar month before the commencement of the session in which enrolment is to begin.

(2) In every case before making the offer of a place the Committee shall be satisfied that initial agreement has been reached between the School of Medical Education and the applicant on the topic area, supervision arrangements, provision of adequate facilities and any coursework to be prescribed and that these are in accordance with the provisions of the guidelines for promoting postgraduate study within the University.

(3) The candidate shall be enrolled as either a full-time or part-time student.

(4) A candidate shall be required to undertake an original investigation or design on an approved topic. The candidate may also be required to undergo such examination and perform such other work as may be prescribed by the Committee.

(5) The candidate may undertake the research as an internal student i.e. at a campus, teaching hospital, or other research facility with which the University is associated, or as an external student not in attendance at the University except for periods as may be prescribed by the Committee.

(6) An internal candidate will normally carry out the research on a campus or at a teaching or research facility of the University. The Committee may permit a candidate to spend a period in the field, within another institution or elsewhere away from the University provided that the work can be supervised in a manner satisfactory to the Committee. In such instances the Committee shall be satisfied that the location and period of time away from the University are necessary to the research program.

(7) The research shall be supervised by a supervisor or supervisors who are members of the academic staff of the School or under other appropriate supervision arrangements approved by the Committee. Normally an external candidate within another organisation or institution will have a co-supervisor at that institution.

(8) No candidate shall be awarded the degree until the lapse of three academic sessions from the date of enrolment in the case of a full-time candidate or four academic sessions in the case of a part-time or external candidate. In the case of a candidate who has been awarded the degree of Bachelor with Honours or who has had previous research experience the Committees may approve remission of up to one session for a full-time candidate and two sessions for a part-time or external candidate.

(9) A full-time candidate for the degree shall present for examination not later than six academic sessions from the date of enrolment. A part-time or external candidate for the degree shall present for examination not later than ten academic sessions from the date of enrolment. In special cases an extension of these times may be granted by the Committee.

Progression

4. The progress of the candidate shall be considered by the Committee following report from the School in accordance with the procedures established within the School and previously noted by the Committee.

(i) The research proposal will be reviewed as soon as feasible after enrolment. For a full-time student this will normally be during the first year of study, or immediately following a period of prescribed coursework. This review will focus on the viability of the research proposal.

(ii) Progress in the course will be reviewed within twelve months of the first review. As a result of either review the Committee may cancel enrolment or take such other action as it considers appropriate. Thereafter, the progress of the candidate will be reviewed annually.

Thesis

5. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the investigation or design.

(2) The candidate shall give in writing to the Registrar two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(6) It shall be understood that the University retains the three copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

6. (1) There shall be not fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the merits of the thesis and shall recommend to the Committee that:

(a) The thesis merits the award of the degree.

(b) The thesis merits the award of the degree subject to minor corrections as listed being made to the satisfaction of the Head of School.

(c) The thesis requires further work on matters detailed in the report. Should performance in this further work be to the satisfaction of the Higher Degree Committee, the thesis would merit the award of the degree.

(d) The thesis does not merit the award of the degree in its present form and further work as described in the examiner's reportis required. The revised thesis should be subject to reexamination.

(e) The thesis does not merit the award of the degree and does not demonstrate that resubmission would be likely to achieve that merit.

(3) If the performance at the further examination recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to represent the same thesis and submit to further examination as determined by the Committee within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the results of any further examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

7. A candidate shall pay such fees as may be determined from time to time by the Council

Master of Science (MSc)

1. The degree of Master of Science by research may be awarded by the Council on the recommendation of the Higher Degree Committee of the appropriate faculty (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee.

(2) An applicant who submits evidence of such other academic or professional attainments as may be approved by the Committee may be permitted to enrol for the degree.

(3) When the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant, before being permitted to enrol, to undergo such examination or carry out such work as the Committee may prescribe.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least one calendar month before the commencement of the session in which enrolment is to begin.

(2) In every case, before permitting a candidate to enrol, the head of the school* in which the candidate intents to enrol shall be satisfied that adequate supervision and facilities are available.

(3) An approved candidate shall be enrolled in one of the following categories:

(a) full-time attendance at the University;

(b) part-time attendance at the University;

(c) external not in regular attendance at the University and using research facilities external to the University.

(4) A candidate shall be required to undertake an original investigation on an approved topic. The candidate may also be required to undergo such examination and perform such other work as may be prescribed by the Committee.

(5) The work shall be carried out under the direction of a supervisor appointed from the full-time members of the University staff.

(6) The progress of a candidate shall be reviewed annually by the Committee following a report by the candidate, the supervisor and the head of the school in which the candidate is enrolled and as a result of such review the Committee may cancel enrolment or take such other action as it considers appropriate.

(7) No candidate shall be granted the degree until the lapse of three academic sessions in the case of a full-time candidate or four academic sessions in the case of a part-time or external candidate from the date of enrolment. In the case of a candidate who has been awarded the degree of Bachelor with Honours or who has had previous research experience the Committee may approve remission of up to one session for a full-time candidate and two sessions for a part-time or external candidate

(8) A full-time candidate for the degree shall present for examination not later than six academic sessions from the date of enrolment. A part-time or external candidate for the degree shall present for examination not later than ten academic sessions from the date of enrolment. In special cases an extension of these times may be granted by the Committee.

Thesis

4. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the original investigation.

(2) The candidate shall give in writing two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree theses.

(6) It shall be understood that the University retains the three copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

5. (1) There shall be not fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the merits of the thesis and shall recommend to the Committee that:

(a) the candidate be awarded the degree without further examination;

or

(b) the candidate be awarded the degree without further examination subject to minor corrections as listed being made to the satisfaction of the Head of the School*;

or

(c) the candidate be awarded the degree subject to a further examination on questions posed in the report, performance in this further examination being to the satisfaction of the Committee;

or

(d) the candidate be not awarded the degree but be permitted to resubmit the thesis in a revised form after a further period of study and/or research;

or

(e) the candidate be not awarded the degree and be not permitted to resubmit the thesis.

(3) If the performance at the further examination recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to represent the same thesis and submit to a further oral, practical or written examination within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the reports of any oral or written or practical examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the Council.

** 'School' is used here and elsewhere in these conditions to mean any teaching unit authorised to enrol research students and includes a department where that department is not within a school, or schools or departments where the research is being undertaken in more than one school or department; a centre given approval by the Academic Board to enrol students; and an interdisciplinary unit within a faculty and under the control of the Dean of the Faculty. Enrolment is permitted in more than one such teaching unit.*

Master of Science (MSc) *without supervision*

1. The degree of Master of Science without supervision may be awarded by the Council on the recommendation of the Higher Degree Committee of the appropriate faculty (hereinafter referred to as the Committee) to a candidate who of has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation.

Qualifications

2. A candidate for the degree shall have been awarded an appropriate degree of Bachelor from the University of New South Wales with at least three years relevant standing in the case of Honours graduates and four years relevant standing in the case of Pass graduates, and at a level acceptable to the Committee.

Enrolment and Progression

3. An application to enrol as a candidate for the degree without supervision shall be made on the prescribed form which shall be lodged with the Registrar not less than six months before the intended date of submission of the thesis. A graduate who intends to apply in this way should in his or her own interest, seek at an early stage the advice of the appropriate Head of School with regard to the adequacy of the subject matter and its presentation for the degree. A synopsis of the work should be available.

Thesis

4. (1) A candidate shall submit a thesis embodying the results of the investigation.

(2) The candidate shall give in writing to the Registrar two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(6) It shall be understood that the University retains the three copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

5. (1) There shall be not fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) Before the thesis is submitted to the examiners the head of the school* in which the candidate is enrolled shall certify that it is prima facie worthy of examination.

(3) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that:

(a) the candidate be awarded the degree without further examination;

or

(b) the candidate be awarded the degree without further examination subject to minor corrections as listed being made to the satisfaction of the head of the school*;

or

(c) the candidate be awarded the degree subject to a further examination on questions posed in the report, performance in this further examination being to the satisfaction of the Committee;

or

(d) the candidate be not awarded the degree but be permitted to resubmit the thesis in a revised form after a further period of study and/or research;

or

(e) the candidate be not awarded the degree and be not permitted to resubmit the thesis.

(4) If the performance at the further examination recommended under (3)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to represent the same thesis and submit to further examination as determined by the Committee within a period specified by it but not exceeding eighteen months.

(5) The Committee shall, after consideration of the examiners' reports and the results of any further examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the Council.

** 'School' is used here and elsewhere in these conditions to mean any teaching unit authorised to enrol research students and includes a department where that department is not within a school, or schools or departments where the research is being undertaken in more than one school or department; a centre given approval by the Academic Board to enrol students; and an interdisciplinary unit within a faculty and under the control of the Dean of the Faculty. Enrolment is permitted in more than one such teaching unit.*

Master of Surgery (MS)

1. The degree of Master of Surgery by research may be awarded by the Council on the recommendation of the Higher Degree Committee of the Faculty of Medicine (hereinafter referred to as the Committee) to a candidate who has made an original contribution to knowledge in some field related to surgery.

Qualifications

2. (1) A candidate for the degree shall have been awarded the degrees of Bachelor of Medicine and Bachelor of Surgery from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee. It must be noted that the Master of Surgery is intended for postgraduates who have medical degrees registrable in Australia and who are able to secure an appropriate appointment, salaried or otherwise, in a teaching hospital recognised by the University of New South Wales.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least one calendar month before the commencement of the session in which enrolment is to begin.

(2) In every case before making the offer of a place the Committee shall be satisfied that initial agreement has been reached between the School and the applicant on the topic area, supervision arrangements, provision of adequate facilities and any coursework to be prescribed and that these are in accordance with the provisions of the guidelines for promoting postgraduate study within the University.

(3) An approved candidate shall be enrolled in one of the following categories:

(a) full-time candidature: a candidate who is fully engaged in advanced study and research at the University or at one of its teaching hospitals;

(b) part-time candidate: a candidate whose occupation leaves the candidate substantially free to pursue a program of advanced study and research at the University or at one of its teaching hospitals;

(c) external candidature: a candidate who is engaged in advanced study and research away from the University or one of its teaching hospitals.

(4) A candidate shall be required to undertake an original investigation on an approved topic. The candidate may also be required to undergo such assessment and perform such other work as may be prescribed by the Committee.

(5) The research shall be supervised by a supervisor or supervisors who are members of the academic staff of the School or under other appropriate supervision arrangements approved by the Committee. Normally an external candidate within another organisation or institution will have a co-supervisor at that institution.

(6) No candidate shall be awarded the degree until the lapse of four academic sessions from the date of enrolment in the case of a full-time candidate or six academic sessions in the case of a part-time or external candidate. In the case of a candidate who has had previous research experience the Committee may approve remission of up to two sessions for a full-time candidate and three sessions for a part-time or external candidate.

(7) A full-time candidate for the degree shall present for examination not later than eight academic sessions from the date of enrolment. A part-time or external candidate for the degree shall present for examination not later than ten academic sessions from the date of enrolment. In special cases an extension of these times may be granted by the Committee.

Progression

4. The progress of the candidate shall be considered by the Committee following report from the School in accordance with the procedures established within the School and previously noted by the Committee.

(i) The research proposal will be reviewed as soon as feasible after enrolment. For a full-time student this will normally be during the first year of study, or immediately following a period of prescribed coursework. This review will focus on the viability of the research proposal.

(ii) Progress in the course will be reviewed within twelve months of the first review. As a result of either review the Committee may cancel enrolment or take such other action as it considers appropriate. Thereafter, the progress of the candidate will be reviewed annually.

Thesis

5. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the investigation.

(2) The candidate shall give in writing to the Registrar two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Four copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(6) It shall be understood that the University retains the four copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

6. (1) There shall be not fewer than three examiners of the thesis, appointed by the Committee, at least two of whom shall be external to the University.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that:

(a) The thesis merits the award of the degree.

(b) The thesis merits the award of the degree subject to minor corrections as listed being made to the satisfaction of the Head of School.

(c) The thesis requires further work on matters detailed in the report. Should performance in this further work be to the satisfaction of the Higher Degree Committee, the thesis would merit the award of the degree.

(d) The thesis does not merit the award of the degree in its present form and further work as described in the examiner's reportis required. The revised thesis should be subject to reexamination.

(e) The thesis does not merit the award of the degree and does not demonstrate that resubmission would be likely to achieve that merit.

(3) If the performance at the further examination recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to represent the same thesis and submit to further examination as determined by the Committee within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the results of any further examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

7. A candidate shall pay such fees as may be determined from time to time by the Council.

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 an 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 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.

At UNSW, we offer a wide range of coursework and research programs in both traditional and innovative areas of science, from Graduate Certificate and Diploma courses, to Masters degrees and Doctorates. The key to many programs is their flexibility, enabling students to gain specific skills and yet broaden their academic base, such as to fulfill personal aspirations. Whichever program you choose, a scientific qualification from UNSW is ranked highly both in Australia and internationally.

A degree in science provides a pathway to an enormous range of career opportunities. You will acquire a knowledge base that can be built upon through life-long learning. You will acquire skills that will be useful not only in a scientific environment but also in many other professions. Creativity and critical thinking are valued attributes in many contexts, thus the interest of financial institutions in the recruitment of physicists. Science is also pervasive of many other disciplines, underpinning as it does new developments in engineering, information technology, medicine, psychology and optometry. In many other less obvious areas, such as legal practice, a sound knowledge of molecular biology and materials science can provide a powerful competitive edge for the individual, with implications for leadership and business development internationally.

We invite you to contact us with your questions about university study and look forward to welcoming you to UNSW, Australia's leading international university.

Aldo Bagnara
Acting Dean
Faculty of Science

Faculty of Science

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Faculty Information and Assistance

Coursework and research postgraduate programs in this part of the Handbook are divided into sections and are identified by School. All programs are offered within the Faculty of Science. These programs incorporate the Schools of Biological, Earth and Environmental Sciences (which includes the former schools of Biological Science, Geography and Geology); Biotechnology and Biomolecular Sciences (which includes the former schools of Biochemistry and Molecular Genetics, Microbiology and Immunology, and the Department of Biotechnology); Chemical Sciences (which includes the former schools of Chemistry and the Department of Food Science and Technology); Materials Science and Engineering; Mathematics; Optometry and Vision Science; Physics; Psychology; Safety Science; the Centre for Marine and Coastal Studies and the Department of Aviation.

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.

For information and advice about course content and requirements, contact the appropriate schools/teaching units as indicated in the course descriptions. The web addresses of the various schools have been listed.

For other general enquiries contact the Science Student Centre, Rm128, Robert Webster Bldg: tel: (02) 9385 6125, fax: (02) 9385 6127 or email: SSO@unsw.edu.au. The office is staffed during teaching weeks between 9am and 5pm from Monday to Fridays. This may vary during non-teaching sessions

The Faculty of Science Website

Please refer to the Faculty website for further information: **www.science.unsw.edu.au**

Admission Requirements

Graduates are advised to consult the Program Authority or Head of School or Department before making formal application for registration in any programs offered by the above Schools.

For admission to all Masters degree programs (except Master of Statistics), candidates must have completed one of the following:

1. An approved degree of Bachelor with Honours.

2. An approved three year program leading to the award of the degree of Bachelor plus an approved qualifying program. Suitable professional and/or research experience may be accepted in lieu of the qualifying program.

3. An approved four year program leading to the award of the degree of Bachelor.

For admission to Graduate Diploma and Graduate Certificate programs, candidates must have completed one of the following:

1. An approved degree of Bachelor.

2. Academic and professional attainments as approved by the Postgraduate Coursework Committee of the Faculty.

The conditions governing these higher degrees are set out later in this Handbook.

In many cases there are articulated programs whereby a student who performs satisfactorily in a Graduate Certificate or Graduate Diploma may be permitted to upgrade to a MScTech or Masters program in the same discipline. For further details students should consult their Director of Graduate Studies or Postgraduate Studies Coordinator.

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 provide email access to all students.

Many of the schools also use computing extensively in research and postgraduate education. This is provided through local and often specialised facilities, and through access to regional and national centres. The systems accessible range is 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.

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

Students are advised to consult with the program authority or relevant school for enrolment information and procedures. Entrance for students for whom English is their second language will be dependent upon achieving an adequate standard of written and spoken English.

The academic year for UNSW consists of two sessions, commencing in late February – early March and mid-July, respectively. It is preferred that new students arrive 2–3 weeks prior to the beginning of the session, so that they can undertake orientation prior to the commencement of formal teaching.

Program and Course Information

Postgraduate Programs in Science

Graduate Certificates are offered in Aviation Management, Chemical Analysis and Laboratory Management, Environmental Science, Environmental Management, Ergonomics, Food Science and Technology, Industrial Safety, Occupational Rehabilitation, Occupational Health and Safety Management, Optometry, Photonics and Optoelectronics, Risk Management and Safety Science.

Graduate Diplomas are offered in Aviation Management, Biochemistry, Biological Science, Biotechnology, Chemical Analysis and Laboratory Management, Computation, Environmental Science, Environmental Management, Ergonomics, Fire and Explosion Safety Management, Food Technology, Medical Physics, Microbiology and Immunology, Occupational Medicine, Optometry, Photonics and Optoelectronics, Physics Research Techniques, Psychology, Remote Sensing, Risk Management, Safety Science and Statistics.

Graduate Diplomas by Research are offered in Physical Oceanography and Physics.

Master of Science and Technology is offered in Aviation, Chemical Analysis and Laboratory Management, Computation, Corrosion Engineering*, Engineering Materials, Environmental Science, Ergonomics, Fire and Explosion Safety Management, Geographic Information Systems, Groundwater Studies, Industrial Safety, Mathematics, Occupational Health and Safety, Occupational Medicine, Optometry, Photonics and Optoelectronics, Remote Sensing, Risk Management.

** Not offered to commencing students in 2004.*

Master of Science: by coursework is offered in Biopharmaceuticals, Biotechnology, Food Science and Technology and Psychology.

The degrees Master of Optometry, Master of Marine Science, Master of Safety Science, Master of Psychology (Clinical, Forensic and Organisational), Master of Statistics and Master of Environmental Management are also offered.

Graduates are advised to consult the Head of School or Department before making formal application for registration in any of the above programs.

Programs leading to degrees of Master by research and PhD are available in all schools. A combined PhD/Masters coursework program is offered in Psychology (1404 – Clinical; 1405 – Forensic; 1406 – Organisational). Graduates are advised to contact the relevant Head of School to obtain advice on entry requirements.

Brief descriptions of the programs currently offered within Science follow.

Department of Aviation

Head of Department: Professor J Middleton
Postgraduate Coursework Coordinator: Mr R Robertson
Website: www.aviation.unsw.edu.au

Aviation Management

7448 Graduate Certificate in Aviation Management

The Graduate Certificate in Aviation Management is designed for students who do not have tertiary qualifications but do have at least four years of relevant professional experience or two years experience and two years of advanced training (e.g. holder of an ATPL). Three courses will be completed to a total of 18 units of credit. A credit average must be achieved to continue on to the Graduate Diploma level. The Graduate Certificate is offered through distance education and designed with industry input for professionals and managers working in aviation related environments. The program can be part-time or full-time and can be completed over 2 to 3 sessions. The program is further described at **www.aviation.unsw.edu.au**

Available Courses		UOC
AVIA5001	Law and Regulation in Aviation	6
AVIA5003	Aviation and Security	6
AVIA5004	Aviation Safety and Accident Prevention	6
AVIA5005	Airline Operational Management	6
AVIA5006	Airport Planning	6
AVIA5007	Airport Operations Management	6
AVIA5008	Air Traffic Management	6
AVIA5009	Airline Corporate Management	6
AVIA5018	Aviation Human Factors	6
AVIA5022	Aircraft Accident Investigation Techniques	6
AVIA5023	Management of Incidents and Accidents	6
AVIA5311	Inflight Services Management	3
AVIA5312	Airline Incident Investigation	3
AVIA5313	Aviation Ground Safety Investigation	3
AVIA5314	Aviation System Safety	3

5678 Graduate Diploma in Aviation Management

The Graduate Diploma in Aviation Management is designed for students who have an approved diploma from a recognised tertiary institution as well as two years of relevant professional experience. Six courses will be completed to a total of 36 UOC. A credit average must be achieved to continue on to the Masters program. The Graduate Diploma is offered through distance education and designed with industry input for professionals and managers working in aviation related environments. The program can be part-time or full-time and can be completed over 2 to 6 sessions. The program is further described at **www.aviation.unsw.edu.au**

Available courses as for the Graduate Certificate

8738 Master of Science and Technology in Aviation

The Master of Science and Technology in Aviation is a program designed for students who have a degree or equivalent qualification from a recognised university and relevant industry experience. Students are required to gain a total of 48 units of credit (UOC) from the courses within the MScTech in Aviation program in order to complete the Masters degree. At least 6 courses (36 UOC) must be AVIA5000 courses and a research project is compulsory. The MScTech in Aviation is offered

through distance education and designed with industry input for professionals and managers working in aviation related environments.

Available courses as for Graduate Certificate, plus compulsory course:

		UOC
AVIA5020	Aviation Research Project	6

School of Biological, Earth and Environmental Sciences

(Comprises the former Schools of Biological Science, Geography and Geology)

Head of School: Associate Professor P Greenaway
Web address: www.bees.unsw.edu.au
School Office: (02) 9385 2067

Biological Science

5350 Graduate Diploma by Research in Biological Science Full-time or Part-time

This program is designed to meet the needs and objectives of individual students building on students' competence and experience. It includes a formal coursework component and a research project, which is carried out under the supervision of a member of the academic staff. Students receive advanced formal training to provide them with research and presentation skills relevant to their research project.

The School has a wide range of interests, and training and research are offered in both plant and animal sciences. Areas of biology in which facilities and appropriate supervision are available include: ecology, taxonomy, environmental physiology, marine and fisheries biology, genetics and evolution, mycology, ultra structure, comparative physiology, mammalian studies.

Remote Sensing

The Graduate Diploma and Masters programs in Remote Sensing are offered in both the Faculty of Science and the Faculty of Engineering. Entry into either faculty depends on the background of the applicant and the orientation of the proposed program.

5693 Graduate Diploma in Remote Sensing

Entry qualifications

Three year degree from an approved university or qualifications deemed appropriate by the Faculty Postgraduate Coursework Committee.

Program requirements

Candidates are required to complete a program totalling 36 UOC made up of 4 compulsory courses (24 UOC) and 2 elective courses (12 UOC). Compulsory courses not offered in a particular year may be substituted by an approved equivalent course.

The program will normally comprise one year of full-time study or two years part-time study.

Compulsory courses – 24 UOC		**UOC**
GEOS9012	Remote Sensing Applications	6
GEOS9021	Image Analysis in Remote Sensing	6
GMAT9600	Principles of Remote Sensing	6
GMAT9606	Microwave Remote Sensing	6

Elective courses – 12 UOC

From the following (or as approved by the relevant Faculty):

CVEN9861	Environmental and Engineering Geophysics	6
CVEN9875	Hydrological Processes	6
GEOS9013	Directed Problems in Remote Sensing	6
GEOH9014	Computer Mapping and Data Display	6
GEOS9016	Principles of Geographic Information Systems	6
GEOS9017	Advanced Geographic Information Systems	6
GEOH9018	Transportation Applications of Geographic Information Systems	6
GEOL0360	Remote Sensing Applications in Geoscience	6
GEOL9060	Environmental Geology	6
GMAT9211	Introduction to Geodesy	6
GMAT9532	Data Acquisition and Terrain Modelling	6
GMAT9604	Land Information Systems	6

8713 Master of Science and Technology in Remote Sensing

Entry qualifications

Four year degree of appropriate standard in engineering, geography, geology, geomatic engineering, or in a relevant environmental science.

Program requirements

Candidates are required to complete a program totalling 48 units of credit, made up of 3 compulsory courses, 3 electives, and a project. Compulsory courses not offered in a particular year may be substituted by an equivalent course, approved by the appropriate Director of Graduate Studies. The degree will normally comprise one year of full-time study or two years of part-time study.

Compulsory Courses – 30 UOC		**UOC**
GEOS9012	Remote Sensing Applications	6
GEOS9021	Image Analysis in Remote Sensing	6
GMAT9600	Principles of Remote Sensing	6
and either		
GEOH/S9530	Project	12
or		
GEOL0114	Project	12

Elective courses – 18 UOC

GEOG9011	Environmental Impact Assessment	6
GEOS9013	Directed Problems in Remote Sensing	6
GEOH9014	Computer Mapping and Data Display	6
GEOS9016	Principles of Geographic Information Systems	6
GEOS9017	Advanced Geographical Information Systems	6
GEOH/S9019	Special Topic	6
GEOS9020	Applications and Management of GIS	6
GEOL0310	Image Processing of Spatial Data Sets	6
GEOL0360	Remote Sensing Applications in Geoscience	6
GMAT9532	Data Acquisitions and Terrain Modelling	6
GMAT9606	Microwave Remote Sensing	6

Note: Other courses may be substituted for those listed with permission of the Director of Graduate Studies to suit the specific needs of individual students.

Geographic Information Systems

8711 Master of Science and Technology in Geographic Information Systems

Entry qualifications

Four year Honours degree of appropriate standard in Geography, Geology, Geomatic Engineering, or a relevant environmental science.

Program requirements

Candidates are required to complete a program totalling 48 UOC made up of 3 compulsory courses, 3 elective courses and a project. The degree will normally comprise one year of full-time study or two years of part-time study.

Compulsory Courses – 30 UOC		**UOC**
GEOS9016	Principles of Geographic Information Systems	6
GEOS9017	Advanced Geographical Information Systems	6
GEOH/S9530	Project	12
and either		
GEOS9020*	Applications and Management of GIS	6
or		
GMAT9604*	Land Information Systems	6

Elective courses – 18 UOC

COMP9311	Introduction to Data Base Systems	6
GEOS9012	Remote Sensing Applications	6
GEOH9014	Computer Mapping and Data Display	6
GEOH9018	Transportation Applications of Geographical Information Systems	6
GEOH/S9019	Special Topic	6
GEOS9021	Image Analysis in Remote Sensing	6
GEOL0360	Remote Sensing Applications in Geoscience	6
GMAT9532	Data Acquisition and Terrain Modelling	6
GMAT9600	Principles of Remote Sensing	6

Note: Other courses may be substituted for those listed with permission of the Director of Graduate Studies to suit the specific needs of individual students.

**Students wishing to include both of these courses should take one as an elective.*

Groundwater Studies

8702 Master of Science and Technology in Groundwater Studies

Program Director: Dr J Jankowski

The Master of Science and Technology Program in Groundwater Studies is designed to give advanced training in this developing specialisation within the geological profession. The program is structured specifically for candidates from industry to take on a part-time basis.

This program is coordinated through the UNSW Groundwater Centre. Candidates are required to complete 48 units of credit, made up of core and elective courses, and may include a project. The degree may be taken internally on a full-time (normally 2 sessions) or a part-time (normally 4 sessions) basis.

Core courses		**UOC**
GEOL9011	Groundwater Environments	3
GEOL9053	Hydrogeochemistry	3
GEOL9054	Analysis and Interpretation of Hydrochemical Data	3
GEOL9055	Hydrogeochemical Modelling	3
GEOL9112	Investigation and Management of Salinity	3
GEOL9252	Groundwater Quality and Protection	3
CVEN7807	Groundwater Hydrology	3
CVEN7808	Investigation of Groundwater Resources	3
CVEN7809	Geophysical Techniques in Groundwater Studies	3
CVEN7823	Applied Groundwater Modelling	3
CVEN7830	Physical Aspects of Contaminated Ground Water	3
CVEN7831	Chemical and Biological Aspects of Contaminated Ground Water	3
Project		
GEOL9124	Groundwater Project	12
Elective courses		
GEOL0360	Remote Sensing Applications in Geoscience	6
CVEN7800	Urban Hydrology & Storm Water	3
CVEN7805	Coastal Zone Management	3
CVEN7806	Catchment and Water Quality Management	3
CVEN7810	Electrical Methods in Groundwater Investigation	3
CVEN7817	Water in Mining Engineering	3
CVEN7819	Hydrological Processes	3
CVEN7824	Risk Analysis in Water Engineering	3
CVEN7825	Aquatic Chemistry for Engineering	3

School of Biotechnology and Biomolecular Sciences

(Comprises the former Schools of Biochemistry and Molecular Genetics, Microbiology and Immunology and the Department of Biotechnology)

Head of School: Professor Peter Little
Website: www.babs.unsw.edu.au

Biotechnology

5015 Graduate Diploma in Biotechnology Full-time or Part-time

The Graduate Diploma program provides the opportunity for graduates with no previous tuition in biotechnology to undertake training in this discipline.

A degree in a science-based program is required for admission. If the degree program has not included a biology component, the candidate is required to undertake some basic biology training as a prerequisite or corequisite. Under normal circumstances, students whose previous training has included a substantial component of biotechnology are not admitted to the program.

The program comprises study of undergraduate and graduate formal courses, plus extensive laboratory training in biotechnology.

The diploma is awarded after one year's full-time study or two years part-time study. The program includes the listed obligatory courses plus sufficient listed elective courses to meet the **36 UOC** required. The electives include courses necessary for students without previous tuition in biochemistry and or microbiology, as well as alternatives for those with previous tuition in these disciplines. The choice of electives in each individual case is subject to approval by the Head of School.

Compulsory courses		**UOC**
BIOT5013	Practical Biotechnology	12
Elective courses		
BIOT7051	Applied Genetics	6
BIOT7061	Peptide and Protein Technology	6
BIOT7071	Biochemical Engineering	6
BIOT7081	Environmental Biotechnology	6
BIOT7091	Applied Cell Culture	6
BIOT7110	Bioengineering Principles	6

8048 Master of Science in Biotechnology

Staff Contact: School Office

The 48 UOC program includes advanced treatments of all areas of biotechnology. It is open to graduates with a four year degree in biotechnology or a related discipline, or who have, in the opinion of the Faculty Postgraduate Coursework Committee, acquired equivalent qualifications or experience.

The program consists of lectures, tutorials, practical sessions, case history studies and a supervised project.

The minimum period of registration before the award of the degree is two sessions for full-time students and four sessions for part-time students.

Courses offered		**UOC**
BIOT7051	Applied Genetics	6
BIOT7061	Peptide and Protein Technology	6
BIOT7071	Biochemical Engineering	6
BIOT7081	Environmental Biotechnology	6
BIOT7091	Applied Cell Culture	6
BIOT7110	Bioengineering Principles	6
BIOT7123	Biotechnology Project Minor	12
Total		**48**

Students may be able to replace one of the above courses (6 UOC) with an equivalent size course in another department or school.

Elective components

Elective courses may be selected from those offered by the School, or from those offered by other schools in the University subject to approval.

Each individual program would comprise:

1. A major strand of related material comprising approximately 75% of the total program, including a project comprising not more than 25% of the program.

2. A minor strand of broader based material comprising up to 25% of the total program.

3. At least 60% of the non-project component must be taken in Biotechnology unless otherwise approved by the Head of School. The remainder, subject to approval and availability, may be undertaken elsewhere in the University.

Biochemistry

5345 Graduate Diploma by Research in Biochemistry Full-time or Part-time

Staff Contact: Dr D Lee

This 48 UOC program is tailored according to the background and requirements of the individual student. In most cases it would include advanced formal undergraduate training, including lectures in general and medical biochemistry, training in the use of modern biochemical techniques, eg scintillation counting, gas liquid chromatography (GLC), high performance liquid chromatography (HPLC), molecular biology, spectrophotometry, nuclear magnetic resonance (NMR) spectroscopy, and animal and plant cell culture. The student would also carry out a research project (or projects) in the laboratory of an academic member of staff and write a report on the project.

The School of Biotechnology and Biomolecular Sciences has a wide range of interests and can offer research projects in most areas of biochemistry. Specialised areas of research are molecular biology, marine biochemistry, parasite biochemistry and plant biochemistry.

Microbiology And Immunology

5355 Graduate Diploma by Research in Microbiology and Immunology Full-time or Part-time

Staff Contact: Associate Professor A Collins

The structure of this 48 UOC program is decided after discussions with students, taking into account their particular background, interest and career goals. Usually students will attend one or more of the advanced

third year courses in either microbial genetics, microbial physiology, environmental microbiology, immunology, medical bacteriology or virology. The rest of the year will be spent carrying out a research project supervised by a member of academic staff.

The School of Biotechnology and Biomolecular Sciences has a number of research teams working on a range of well-funded projects in microbiology, molecular biology and immunology. The diverse research interests of the School can be grouped into the areas of *Helicobacter pylori* and gastroduodenal disease, immunology of allergic responses, environmental microbiology and remediation, microbiology of extremophiles, water-borne viral pathogens, probiotics, molecular microbiology and genomics, bacterial communication systems, marine microbiology and biotechnology.

Biopharmaceuticals

8049 Master of Science in Biopharmaceuticals (Coursework)

Staff Contact: Dr S Mahler

This is an interdisciplinary program designed for graduates with backgrounds in either pharmacology or biotechnology who wish to obtain advanced training in both areas in order to gain expertise necessary for the development and use of the new generation of biopharmaceuticals which have been developed by, or result from, the application of molecular biology. It is open to graduates with a four-year degree in a related discipline or who have, in the opinion of the Higher Degree Committee, acquired equivalent qualifications or experience. Prior study of biochemistry is required for the program. The program teaches the scientific bases underscoring the development of recombinant biopharmaceuticals, combined with aspects of clinical trials, regulatory considerations, patent issues and licensing. The program content is incorporated in courses (modules) that can be delivered either in distance or on campus mode, and is comprised of written text containing program materials, demonstrations and self-testing exercises. Several days of intensive face-to-face teaching is provided per course for all students, whether enrolled in distance or on campus mode. In addition, there is access to the course coordinators by phone, email and teleconferencing facilities and tutorials for on campus students.

The Master's program calls for the completion of eight courses (modules) that is equivalent to 48 units of credit. The program is run in two by twenty week sessions and can be completed in one year full-time. Part-time students can enrol in two courses per session, one course running consecutively to the other, allowing the program to be completed in two years part-time. Students enrolled to do the program on campus can elect to do six of the below courses, and, in addition, complete PHPH5491 (Pharmacology Project) or BIOT7060 (Biotechnology project). Students enrolled in the program by distance will need to complete eight of the below courses for the Masters program.

Courses		**UOC**
BIOT7160	Genomics and Proteomics	6
BIOT7070	Recombinant Protein Expression Systems	6
BIOT7170	Therapeutic Modalities of Biopharmaceuticals	6
BIOT7080	Biopharmaceutical Production Processes	6
BIOT7090	Monoclonal Antibody Technique	6
BIOT7120	Regulatory Considerations, Patent Issues and Licensing	6
PHPH9101	Principles of Drug Action	6
PHPH9100	Discovery and Development of Medicines	6
PHPH9120	Clinical Development of Medicines	6
PHPH5521	Techniques for Drug Development	6
Project		
BIOT7060	Biotechnology Project	12
or		
PHPH5491	Pharmacology Project	12
	Units of credit to total	**48**

School of Chemical Sciences

(Comprises the former School of Chemistry and the Department of Food Science and Technology)

Head of School: Professor R Lamb
Director of Graduate Studies: Professor DB Hibbert (contactable via Chemical Sciences Student Office)
For further details contact: Chemical Sciences Student Office, email chemistry@unsw.edu.au

Chemical Analysis and Laboratory Management

These programs offer training in advanced chemical analysis techniques and associated management issues. They allow students to select from a series of courses covering all aspects of modern chemical analysis, safety and occupational health issues, and people management. They are particularly suited to new graduates or laboratory chemists and managers who wish to upgrade their qualification in and knowledge of chemical analysis and related topics.

7428 Graduate Certificate in Chemical Analysis and Laboratory Management

The GradCert program will normally be completed within one year on a part-time basis. This is the first stage in a fully articulated program of Graduate Certificate, Graduate Diploma and Master of Science and Technology in Chemical Analysis and Laboratory Management.

Entry Qualifications

BSc degree with a major in Chemistry or equivalent qualification.

Course Requirements

Candidates are required to complete a total of 18 UOC selected from the following offerings with at least 6 UOC being selected from the analysis courses and at least 6 UOC from the management courses:

Analysis Courses		**UOC**	**HPW**	**S1/S2**
CHEM7112	Analysis of Biological and Organic Materials	6	3	2
CHEM7113	Elemental Analysis	6	3	1
CHEM7114	Chromatography	6	3	2
CHEM7115	Treatment of Analytical Data	6	3	1
CHEM7116	Chromatography/Mass Spectrometry	6	3	1
CHEM7117	Molecular Analysis	6	3	2
CHEM7118	Surface Analysis of Materials	6	3	1
Management Courses				
CHEM7111	Quality Assurance and Laboratory Practice	6	3	2
IROB5700	Management, Work and Organisation	6	3	1*or*2
IROB5946	Managing Occupational Health and Saftey	6	3	3
SESC9020	Occupational Health and Safety Law 1	3	2	2
SESC9810	Toxicology	3	1.5	1*or*2
SESC9820	Chemical Safety and Toxicology	3	1.5	1*or*2
SESC9850	Management of Dangerous Materials	3	1.5	1*or*2

5648 Graduate Diploma in Chemical Analysis and Laboratory Management

The GradDip program will normally be completed within one year on a full-time basis, or over two years part-time. This is the second stage in a fully articulated program of Graduate Certificate, Graduate Diploma and Master of Science and Technology in Chemical Analysis and Laboratory Management.

Entry Qualifications

BSc degree with a major in Chemistry or equivalent qualification.

Program Requirements

Candidates are required to complete a total of 36 UOC selected from the available courses with at least 6 UOC being selected from the analysis courses and at least 6 UOC from the management courses. Available courses are as listed for the Graduate Certificate.

8708 Master of Science and Technology in Chemical Analysis and Laboratory Management

The MScTech program will normally be completed within one year on a full-time basis, or over two years part-time.

Entry Qualifications

A four year BSc degree with a major in Chemistry or equivalent qualification *or* a three year BSc degree with at least one year of relevant experience in a laboratory-based career *or* a three year BSc degree and completion of the units of credit required by the Graduate Diploma in Chemical Analysis and Laboratory Management with at least a credit (65%) average mark and no failures.

Students who have completed and been awarded the Graduate Diploma in Chemical Analysis and Laboratory Management (with a credit average

and no failures) and who wish to return to complete the MScTech will normally be granted 30 UOC advanced standing in the MScTech program. Students applying to return after completing and being awarded the Graduate Certificate can apply for advanced standing of up to 12 UOC in the MScTech.

Program Requirements

Candidates are required to complete a total of 48 UOC selected from the available offerings with at least 6 UOC being selected from the management courses and at least 6 units of credit from the analysis courses. Available courses are as listed for the Graduate Certificate program.

Food Science and Technology

www.foodscience.unsw.edu.au

From 2004, programs in Food Science and Technology will be administered by the Faculty of Engineering.

7310 Graduate Certificate in Food Science and Technology
Full-time or Part-time

This program provides the opportunity to obtain a Graduate Certificate qualification after successful completion of postgraduate courses totalling 18 UOC. Generally, this will require three courses, each 6 UOC. The Graduate Certificate program will suit practicing food science/technology graduates or other graduates, wishing to upgrade their knowledge and skills in particular areas of the field (e.g. nutrition, food microbiology, food safety, food processing, product development, quality assurance).

Entry to the program generally requires a three year degree in a science based program, but subject to the approval by the Head of School, those with less formal tertiary qualifications but with relevant work experience, may be admitted. Please refer to our website for further details

5020 Graduate Diploma in Food Technology
Full time or Part time

The Graduate Diploma program is designed to provide professional training at an advanced level for graduates in Science, Science and Technology or Engineering who have not had previous training in Food Technology.

Requirements are a first degree and, in some cases, the successful completion of assignments or examinations as directed by the Program Coordinator.

The program is a blend of formal lectures and laboratory work. The Graduate Diploma is awarded on the successful completion of one year of full-time study (at least 36 UOC) or two years of part-time study (18 UOC per year). It involves the following program:

Compulsory courses		**UOC**
FOOD1577	Food Processing Principles	6
FOOD1587	Food Preservation: Principles and Applications	6
FOOD1597	Unit Operations in Food Processing	6
FOOD2627	Food Microbiology	6
FOOD2637	Quality Assurance and Control	6

Students who have previously studied compulsory courses or their equivalent at an acceptable level may be granted an exemption by the Program Coordinator but the equivalent number of units of credit must be completed by taking other approved courses.

Elective courses

The elective courses making up the remainder of the units of credit may be selected from those offered by the School of Chemical Sciences, or from those offered by other schools in the University subject to approval by the Program Coordinator. Only graduate courses will count towards units of credit.

8033 Master of Science in Food Science

The MSc coursework degree programs in Food Science provide a comprehensive study of theoretical and applied aspects of the science, technology and engineering of foods. The programs are elective in nature providing an opportunity for graduates to apply their basic skills in areas relevant to those fields of science and technology in which the School has developed special expertise. Intending candidates are invited to contact the Program Coordinator for advice and recommendations.

Graduate programs are available for Master of Science by Coursework degrees in the following areas:

Food Technology Program	FOODFS8033
Food Microbiology Program	FOODBS8033
Food Engineering Program	FOODAS8033
Food Science and Nutrition Program	FOODDS8033

Entry qualifications

A four year Bachelor degree, Honours degree or equivalent (e.g. three year degree plus relevant employment experience) is the minimum requirement for admission to the programs.

Study programs

Students are required to complete a program of study totalling 48 UOC made up of compulsory courses, a compulsory project and elective courses. Students who have previously studied compulsory courses or their equivalent may be granted an exemption by the Head of School but the equivalent number of units of credit must be completed by taking other approved courses. The degree will comprise one year of full-time study (normally two sessions of 24 UOC each), or two years of part-time study (normally four sessions of 12 UOC each), and would comprise:

1. A major strand of related material comprising approximately 75% of the total program, including a project comprising not less than 12.5% nor more than 25% of the program.

2. A minor strand of broader based material comprising up to 25% of the total program.

3. Undergraduate material may be included in one or both strands but will not be included in units of credit.

4. At least 60% of the non-project component must be taken in the School of Chemical Sciences unless otherwise approved by the Program Coordinator. The remainder, subject to approval and availability, may be undertaken elsewhere in the University.

8033 Master of Science in Food Technology

The MSc by Coursework program in Food Technology is designed for graduates in Science, Applied Science, Biochemistry, Microbiology or Biotechnology or related disciplines, who seek specialised knowledge of the science and technology of foods. The program provides advanced training in various aspects of food science and technology that can be tailored to the background of the candidate.

Compulsory courses		**UOC***
FOOD1577	Food Processing Principles	6
FOOD1587	Food Preservation: Principles and Applications	6
FOOD1597	Unit Operations in Food Processing	6
FOOD1677	Product Design and Development	6
either		
FOOD5117	Minor Project	6
or		
FOOD5127	Research Project	12

Elective courses

FOOD1787	Forensic Food Science	6
FOOD2627	Food Microbiology	6
FOOD2637	Quality Assurance and Control	6
FOOD2647	Food Safety	6

or other courses as approved by the Program Coordinator to a total of 48 units of credit.

**Units of credit may be concentrated in one session*

8033 Master of Science in Food Microbiology

The MSc by Coursework program in Food Microbiology is designed for graduates in Food Science, Food Technology, Microbiology, Biochemistry, Biotechnology or related disciplines, who seek specialised knowledge of microorganisms associated with foods. The program provides advanced training in all aspects of food microbiology as well as some fundamental aspects of food science and technology.

A four year Bachelor degree, Honours degree or equivalent (eg three year degree plus sufficient relevant industry experience) involving some basic training in microbiology and biochemistry is the minimum requirement for admission to the program.

Compulsory courses		**UOC***
FOOD2627	Food Microbiology	6
FOOD2637	Quality Assurance and Control	6
FOOD2667	Advanced Food Microbiology	6
either		
FOOD5117	Minor Project	6
or		
FOOD5127	Research Project	12

Elective courses

FOOD1587	Food Preservation: Principles and Applications	6
FOOD1787	Forensic Food Science	6
FOOD2647	Food Safety	6

or other courses as approved by the Program Coordinator to a total of 48 units of credit.

**Units of credit may be concentrated in one session*

8033 Master of Science in Food Engineering

The MSc by Coursework in Food Engineering is designed for graduates in Engineering or related disciplines who have an interest in the processing of biological resources for human consumption. The formal components of the program provide professional training at an advanced level in food engineering and food science. The studies in food engineering are designed to strengthen and broaden the engineering background of candidates and emphasise the use of fundamental principles in solving problems associated with food processing. Problem solving skills in engineering are developed further in a research project devoted to an area of food engineering.

Compulsory courses		**UOC***
FOOD1577	Food Processing Principles	6
FOOD1587	Food Preservation: Principles and Applications	6
FOOD1597	Unit Operations in Food Processing	6
FOOD4617	Advanced Food Engineering	6
either		
FOOD5117	Minor Project	6
or		
FOOD5127	Research Project	12

Elective courses

FOOD1787	Forensic Food Science	6
FOOD2637	Quality Assurance and Control	6
FOOD2647	Food Safety	6

or other courses as approved by the Program Coordinator to a total of 48 units of credit.

**Units of credit may be concentrated in one session.*

8033 Master of Science in Food Science and Nutrition

The MSc by Coursework in Food Science and Nutrition is designed for graduates in Science, Food Science and Food Technology with principal interests in chemistry, biochemistry, physiology and human nutrition. The program is comprised of a core component (including a project) and an elective component that allows for reasonable flexibility and a choice of courses in human nutrition and food science and technology based on the candidate's background.

Compulsory courses		**UOC***
FOOD1587	Food Preservation: Principles and Applications	6
or		
FOOD1697	Advanced Food Chemistry	6
FOOD2647	Food Safety	6
FOOD3567	Nutrition	6
FOOD3577	Advanced and Applied Nutrition	6
FOOD5117	Minor Project	6
or		
FOOD5127	Research Project	12

Elective courses

CMED9500	Epidemiology for Public Health	6
CMED9516	Introduction to Public Health	4
CMED9605	Health in Developing Countries	4
CMED9610	Food and Nutrition Policy Studies	4
HEAL9371	Research and Evaluation Methods	4

or other courses as approved by the Program Coordinator to a total of 48 UOC.

**Units of credit may be concentrated in one session.*

Centre for Marine and Coastal Studies

Presiding Member of Management Committee: Professor JH Middleton
Director: Professor J Benzie
Masters Program Coordinator: E Johnston
Website: www.marine.unsw.edu.au

Marine Science

8265 Master of Marine Science MMarSc

The Master of Marine Science is intended primarily as an advanced training program for:

- Graduates who require specialised training in marine science but do not wish to undertake a research degree.
- Graduates, especially from overseas universities, who do not meet the requirements for entry to the MSc (Research degree).
- Science graduates who wish to update their qualifications or obtain a qualification in an area other than their initial award.

Entry Requirements

This program is available to graduates with a four year degree in Science. Others may be admitted based on evidence of academic and/or professional attainment subject to the approval by the Faculty Postgraduate Coursework Committee. Applicants with other qualifications may be admitted after completion of a qualifying program approved by the appropriate faculty.

Program Structure

The program is multidisciplinary in approach and includes advanced treatments of all areas of marine science with provision for specialisation. It consists of lectures, tutorials, practical sessions, case history and a supervised project.

The program is 48 units of credit and is comprised of the following:

MSCI5001	Marine Environmental Monitoring and Assessment	6
MSCI5002	Management of Marine Resources	3
MSCI5003	Experimental Design and Analysis	3
MSCI5004	Oceanographic Processes	6
MSCI5005	Topics in Marine Science	12
MSCI5006	Graduate Seminars in Marine Science	6
MSCI5007	Marine Science Project	12
MSCI5008	Special topic*	6

**If a student has previous relevant experience in one of the courses designated, a special topic may be substituted in consultation with the program director.*

School of Materials Science and Engineering

Head of School: Professor DJ Young
Postgraduate Coordinator: Professor CC Sorrell
Website: www.materials.unsw.edu.au

Programs involving formal coursework and a research component are available leading to the award of Master of Science and Technology in Engineering Materials (Program 8715) or in Corrosion Engineering (Program 8716), although the latter is not offered in 2004.

Engineering Materials

8715 Master of Science and Technology in Engineering Materials

The MScTech program in Engineering Materials provides a comprehensive yet flexible study of the full range of materials, including ceramics, composites, metals, and polymers. It is designed for graduates wishing to acquire expertise in the design, selection, use, and performance of modern materials. The program is designed for several types of postgraduate students:

1. Graduates with Science, Engineering, Technology, or related backgrounds who seek to broaden their ranges of expertise

2. Graduates with Materials Science or Materials Engineering backgrounds who seek to extend specific aspects of their expertise

3. Graduates with Materials Science or Materials Engineering backgrounds who seek to update their expertise

The program consists of one year of full-time study (two sessions) or two years of part-time study (four sessions). This comprises 36 UOC of formal coursework plus 12 UOC of experimental and/or design project work (MATS6695 Materials Project). Initial enrolment in Session 1 is preferred, although entrance in Session 2 is permitted. All formal coursework is taught during work hours, although the project work may be undertaken with considerable flexibility in terms of time and location. Enrolment in formal coursework offered by schools other than the School of Materials Science and Engineering is permitted, subject to the approval of the Head of School.

Course Selection		UOC
MATS6605	Professional Communication and Presentation	6
MATS6615	Materials Design	6
MATS6625	Materials Processing	6
MATS6635	Materials Properties and Behaviour	6
MATS6645	Materials Characterisation	6
MATS6655	Advanced Materials Characterisation	6
MATS6665	Materials Applications and Performance	6
MATS6675	Materials Modelling	6
MATS6685	Management	6
MATS6695	Materials Project	12

Students must enrol in MATS6605 Professional Communication and Presentation (6 UOC), MATS6695 Materials Project (12 UOC), plus a balance of 30 UOC of formal coursework, consisting of five of the above remaining eight courses (or selected offerings from the School of Materials Science and Engineering and/or other schools if desired).

School of Mathematics

Head of School: Professor M G Cowling
Director of Graduate Studies: Associate Professor J Du
Website: www.maths.unsw.edu.au

Physical Oceanography

5528 Graduate Diploma in Physical Oceanography (Research)

Staff Contact: Dr John Middleton

This Graduate Diploma is intended to train graduates in the physical sciences or engineering in the basic techniques of physical oceanography particularly in preparation for further study at postgraduate level. The program may be taken over one year full-time or two years part-time.

It is intended to develop student skills in planning and execution of oceanographic experiments, in the theory of oceanographic fluid mechanics, the applications and limitations of oceanographic equipment and of commonly used data analysis techniques.

Recent rapid developments in marine science coupled with the relative scarcity of persons able to take up support positions demonstrate the need for skilled persons who will be able to assist oceanographic research with minimum training. This program is aimed at providing such skilled graduates.

Basic entry qualifications for this program are a degree in engineering or in science with major studies in mathematics or physics.

The program, requiring 48 UOC for completion, consists of a major project OCEA5115 (worth 24 UOC), two compulsory courses (totaling 12 UOC) and elective courses (totalling 12 UOC) as indicated below.

Compulsory Courses		UOC
OCEA5115	Experimental Project	24
OCEA5125	Geophysical Fluid Dynamics	6
OCEA5145	Applied Time Series Analysis	6
Elective Courses		
GEOG9021	Image Analysis in Remote Sensing	6
GMAT9606	Microwave Remote Sensing	6
CVEN9835	Coastal Engineering 1	6
CVEN9836	Coastal Engineering 2	6
CVEN9863	Estuarine Hydraulics	6
GEOG9012	Remote Sensing Applications	6
OCEA5155	Theoretical Project	12
MATH5285	Ocean Modelling	6

or appropriate courses within mathematics, physics or engineering chosen on the basis of individual background.

Computation

The School offers an articulated program in computational mathematics, consisting of the Graduate Diploma in Computation and the Master of Science and Technology in Computation.

5645 Graduate Diploma in Computation

Staff Contact: Dr P Blennerhasset

This Graduate Diploma will provide thorough training in modern computational techniques in the areas of computational fluid mechanics and environmental modelling.

Admission to the Graduate Diploma program requires the student to have at least a Pass degree in science, engineering or other mathematically based discipline. The program can be completed in one year of full-time study, or over two years for part-time students.

Students are required to complete two compulsory courses and four elective courses, chosen from the list below, to give a total of 36 UOC. All the courses below are worth 6 UOC each. With the approval of the Director of Graduate Studies, a student may take graduate level courses, up to 12 UOC, which are not on the list below. The student's proposed program requires the approval of the Director of Graduate Studies.

Compulsory Courses – 12 UOC

MATH5305 Computational Mathematics
MATH5315 High Performance Numerical Computing

Elective Courses – 36 UOC

(Not all courses are necessarily offered every year.)

MATH5115 Analysis of the Finite Element Method
MATH5245 Methods for Computational Fluid Dynamics
MATH5275 Applied Data Analysis
MATH5285 Ocean Modelling
MATH5295 Atmospheric Modelling
MATH5325 Computational Mesh Generation and Data Visualization
MECH9610 Advanced Fluid Dynamics
MECH9620 Computational Fluid Dynamics
MECH9730 Multiphase Flow
MECH9750 Industrial Applications of Heat Transfer

A student may upgrade to the MScTech program in Computation, following the Faculty articulation rules.

8705 Master of Science and Technology in Computation

The MScTech degree program in Computation will provide thorough training in modern computational techniques in the areas of computational fluid mechanics and environmental modelling through coursework and a focused project in the major field. Admission to the program requires the equivalent of a 4 year degree in science, engineering or other mathematically based discipline at a satisfactory level. Candidates must have adequate higher-level language (preferably Fortran) programming skills. The program can be completed in one year of full-time study or two years of part-time study.

Students are required to complete a small research project, worth 12 UOC, two compulsory courses and four elective courses, chosen from the list provided. A total of 48 UOC are required for the completion of the degree. All the courses are worth 6 UOC each. With the approval of the Director of Graduate Studies, a student may take graduate level courses, up to 12 units of credit, which are not on the list below. The project will be supervised by academic members of the Faculty of Science or academic members of the Faculty of Engineering. The student's proposed program requires the approval of the Director of Graduate Studies.

Available courses are as listed for the Graduate Diploma

Statistics

5659 Graduate Diploma in Statistics

Staff Contact: Dr B Goldys

This Graduate Diploma is intended for statistics graduates wishing to further develop their knowledge and skills in statistical science. In particular, it provides an opportunity for advanced training in topics relevant to medical statistics and financial mathematics.

Basic entry qualifications for this program are a degree in Statistics or Econometrics or a degree in Commerce with a major in Business Statistics or an approved equivalent. The program consists of eight courses from the MStats program (excluding MATH5925 and MATH5935). At most two courses offered by other departments or schools within the University may be selected.

The program may be taken over one year full-time or on a part-time basis. The total number of UOC is 48, six for each course.

8750 Master of Statistics

The Master of Statistics Program covers a wide range of statistical theory and practice and provides advanced training for practising statisticians. The program may be completed in three sessions of full-time or three years of part-time study, and it is available to graduates with a pass degree in statistics or an Honours degree in a related field (commonly

mathematics) with supporting studies in statistics. Honours graduates in statistics may be exempted from up to 30 UOC.

The academic requirement for the degree is 72 UOC. Unless otherwise noted, all courses listed below are 6 UOC each, while courses offered by other schools may vary in value. The project, worth 12 UOC, is a compulsory component of the program.

The Head of the School must approve each candidate's program of study.

Compulsory Courses (offered every year)

MATH5835 Stochastic Processes
MATH5905 Statistical Inference
MATH5925 Project (12 UOC)
MATH5935 Statistical Consultancy

Elective Courses

(not all courses are necessarily offered every year)

MATH5806 Applied Regression Analysis
MATH5815 Experimental Design 1
MATH5816 Mathematics of Security Markets 2 (*Prerequisite:* MATH5965)
MATH5826 Statistical Methods in Epidemiology
MATH5836 Data Mining
MATH5845 Time Series
MATH5855 Multivariate Analysis 1
MATH5865 Multivariate Analysis 2
MATH5875 Sample Survey Design
MATH5885 Longitudinal Data Analysis
MATH5895 Nonparametric Methods
MATH5915 Medical Statistics
MATH5945 Categorical Data Analysis
MATH5955 Statistical Quality Control
MATH5965 Mathematics of Security Markets 1
MATH5995 Financial Statistics

Up to 24 UOC may be taken in graduate courses offered by other departments or schools within the University, subject to the approval of the Head of School.

Mathematics

8718 Master of Science and Technology in Mathematics

The Master of Science and Technology in Mathematics degree program is intended for suitably qualified graduates in applied mathematics, pure mathematics or statistics, but others may be admitted after completing a qualifying program. The program may be completed in one year of full-time or two years of part-time study. The program may be taken as a preliminary step towards enrolment in the PhD program in mathematics. It also provides advanced training for persons specialising in the teaching of mathematics in tertiary institutions. In addition, an appropriate program may provide training for those employed or seeking employment in the area of industrial mathematics.

The program consists of seven approved lecture courses, each worth 6 UOC and a compulsory project also worth six UOC. The total number of units of credit required for the program is 48. With the approval of the Head of the School of Mathematics a student may substitute one or more of the lecture courses for a reading course supervised by a member of staff. Again with this approval a student may substitute for at most three of the graduate courses offered in a relevant discipline outside the School of Mathematics. The project consists of either a critical review of the literature in a specific field of mathematics, or a short research project supervised by a staff member. Students are also required to participate in relevant departmental seminars. There are no compulsory courses and students may choose from a wide variety of courses within the School of Mathematics or elsewhere within the University. The courses to be offered in 2004 will be described on the School's web site: **www.maths.unsw.edu.au**. Each candidate's proposed program of study requires the approval of the Head of the School of Mathematics.

School of Optometry and Vision Science

Head of School: Associate Professor S Dain
Postgraduate Studies Coordinator: Dr C Suttle
Website: www.optom.unsw.edu.au/

The postgraduate programs in Optometry and Vision Science provide advanced training in clinical and theoretical aspects of optometry and vision science, with opportunities for specialisation in fields such as contact lenses, occupational optometry and behavioural optometry. In 2001, a new system was introduced in which courses are available in smaller units than those offered in previous years, with the intention of creating a flexible program, which is more accessible to practising optometrists.

All courses offered will only be conducted if there is sufficient demand. For information on which courses are being run contact: pgrad@unsw.edu.au

7435 Graduate Certificate in Optometry

The Graduate Certificate in Optometry program consists of courses from the selection listed below. Up to 6 UOC may be taken from elsewhere in the University, subject to the approval of the Head of School. Courses comprise 3, 6 or 12 UOC, which count towards the total of 18 UOC required for this graduate award. A number of the courses have prerequisites, corequisites or exclusions, as indicated in the course descriptions. The program may be completed in one session of full-time study, or in two or more sessions of part-time study.

On successful completion of the GradCert, the student may decide to continue with postgraduate study at a higher level. Some or all of the units of credit achieved in the GradCert program may be counted towards a GradDip or MOptom degree. The student may use all 18 units of credit in this way if the GradCert is not awarded, or 12 units of credit if the degree is awarded. The introduction of the GradCert and GradDip programs in Optometry is intended to allow the postgraduate student to take progressive steps towards a higher degree at a level of their choice and to appeal to practising optometrists with time constraints.

Course ID	Course Name	UOC
OPTM7102	Visual Function	6
OPTM7103	Behavioural Optometry 1	6
OPTM7203	Behavioural Optometry 2	6
OPTM7104	Advanced Contact Lens Studies 1	6
OPTM7204	Advanced Contact Lens Studies 2	6
OPTM7105	Advanced Contact Lens Practice	6
OPTM7106	Occupational Optometry 1	6
OPTM7206	Occupational Optometry 2	6
OPTM7108	Small Research Project	6
OPTM7110	Public Health Optometry	6
OPTM7111	Pathophysiology of Ocular Disease 1	3
OPTM7112	Pathophysiology of Ocular Disease 2	3
OPTM7211	Pathophysiology of Ocular Disease 3	3
OPTM7212	Pathophysiology of Ocular Disease 4	3
OPTM7113	Human Visual Development	6
OPTM7114	Rehabilitation of the Partially Sighted	6
OPTM7115	Visual Neuroscience	6
OPTM7301	Advanced Clinical Optometry	12
OPTM7307	Clinical Imaging	6
OPTM7308	Research Project	12
OPTM7309	Ocular Therapy	12

5665 Graduate Diploma in Optometry

The Graduate Diploma in Optometry program consists of courses from the selection listed above. Up to 12 UOC may be taken from elsewhere in the University, subject to the approval of the Head of School. Courses comprise 3, 6 or 12 UOC, which count towards the total of 36 UOC required for this graduate award. A number of the courses have prerequisites, corequisites or exclusions, as indicated in the course descriptions. The program may be completed in one year of full-time study, or in two or more years of part-time study.

On successful completion of the GradDip, the student may decide to continue with postgraduate study at the MOptom level. The student may choose not to accept the GradDip award and instead use all 36 UOC towards an MOptom degree. Alternatively, if the GradDip is awarded, 30 UOC may be used in this way. Thus the postgraduate student may progress towards a higher degree at a level of their choice. This system is intended to make postgraduate study accessible to optometrists with time constraints.

Available courses are as listed for the Graduate Certificate

8760 Master of Optometry

The Master of Optometry program consists of courses from the selection listed above. Up to 15 UOC may be taken elsewhere in the University subject to the approval of the Head of School. Each course comprises 3, 6 or 12 UOC, which count towards the total of 48 UOC required for this degree. A number of the courses have prerequisites, corequisites or exclusions, as indicated in the course descriptions. The program may

be completed in one year of full-time study or in two or more years of part-time study.

Available courses are as listed for the Graduate Certificate

School of Physics

Head of School: Professor J Storey
Postgraduate Director: Professor M Gal
Website: www.phys.unsw.edu.au

Photonics and Optoelectronics

7432 Graduate Certificate in Photonics and Optoelectronics

This Graduate Certificate program provides students with the opportunity to study the fundamentals of photonics and optoelectronics. The names 'optoelectronics' and 'photonics' typically cover areas such as optical communications and various applications of lasers and optics. This program offers theoretical and practical training in some of the disciplines that underlie these strongly growing and fast changing technologies.

The program may be completed in one session full-time or longer as a part-time student. The program may also be completed by distance education. The laboratory-based courses are only available at the UNSW campus. Course requirements include a total of 18 units of credit (UOC) from a combination of core courses (12 UOC) and one elective (6 UOC).

12 UOC from the following core courses:		UOC
PHYS9720	Optoelectronics	6
PHYS9710	Lasers and Applications	6

6 UOC from the following elective courses:

PHYS9060	Advanced Optics	6
PHYS9310	Physics of Semiconductor Devices	6
PHYS9761	Optoelectronics Laboratory I	6
PHYS9762	Optoelectronics Laboratory II	6

5662 Graduate Diploma in Photonics and Optoelectronics

This Graduate Diploma program provides students with the opportunity to study the basic sciences and technologies that underlie the field of photonics. This program offers theoretical and practical training in the areas that form the foundation of photonics. This program may be completed in two sessions full-time, or longer as a part-time student. The program may also be completed by distance education. The laboratory-based courses are only available at the UNSW campus. Program requirements include a total of 36 UOC from a combination of core (24 UOC) and elective (12 UOC) courses.

24 UOC from the following core courses:		UOC
PHYS9310	Physics of Semiconductor Devices	6
PHYS9710	Lasers and Applications	6
ELEC9350	Theory of Optical Fibres and Optical Signal Processing	6
ELEC9355	Optical Communications Systems	6

12 UOC from the following electives:

PHYS9060	Advanced Optics	6
PHYS9761	Optoelectronics Laboratory I	6
PHYS9762	Optoelectronics Laboratory II	6
ELEC9502	VLSI Technology	6
ELEC9505	Micro-systems Technology	6

8722 Master of Science and Technology in Photonics and Optoelectronics

This MScTech by coursework degree program aims to provide a broad, advanced and interdisciplinary education in the field of photonics and optoelectronics. The program may be completed in one two sessions of full-time study or longer as a part-time student. Most of the courses in the program may also be completed by distance education. The laboratory-based courses are only available at the UNSW campus. Students who are unable to attend the laboratory classes will only be able to complete the Graduate Diploma. Course requirements include a total of 48 UOC from a combination of core (36 UOC) and elective (12 UOC) courses.

36 UOC from the following core courses:		UOC
PHYS9310	Physics of Semiconductor Devices	6
PHYS9710	Lasers and Applications	6
PHYS9761	Optoelectronics Laboratory I	6
PHYS9762	Optoelectronics Laboratory II	6
ELEC9350	Theory of Optical Fibres and Optical Signal Processing	6
ELEC9355	Optical Communications Systems	6

12 UOC from the following electives:

PHYS9060	Advanced Optics	6
ELEC9502	VLSI Technology	6
ELEC9505	Micro-systems Technology	6

Physics

5533 Graduate Diploma in Physics (Research)

The Graduate Diploma in Physics offers an advanced training program for graduates from overseas universities who wish to obtain specialised training in physics. The program is also available to graduates from Australian universities who have not done an Honours program and who wish to pursue postgraduate study in physics. Students qualified to enrol in the Honours program would be expected to do so rather than to enrol in this GradDip program. For suitably qualified students the expectation is that the program would allow entrance to a higher degree research program provided suitable supervision and facilities were available.

The GradDip by Research in Physics will be offered with program work and research project requirements similar to Physics Level IV, with substitutions if required to be approved by the School Postgraduate Coordinator. The program involves two sessions full-time study or four sessions part-time study comprising a total of 24 UOC, plus a single research project over the period of study or two different research projects, one in each half of the period of study (total 24 UOC). All students normally take programs in quantum mechanics, statistical mechanics and solid state physics. Other lecture programs and the research projects are offered in general areas of physics including astrophysics, biophysics, condensed matter physics and theoretical physics.

More details may be found at **www.phys.unsw.edu.au**

5663 Graduate Diploma by Research in Physics Research Techniques

Staff Contact: A/Prof RJ Stening

The Graduate Diploma in Physics Research Techniques offers an advanced training program for graduates who wish to update their knowledge of physics and/or satisfy requirements for admission to a research degree in physics. The program involves two sessions full-time study or four sessions part-time study and consists of courses at Level III/IV totalling 30 UOC and a research project (18 UOC). The choice of courses is very flexible. Most courses selected should be from the School of Physics but courses from other Schools may be included. Students wishing to proceed to a research degree should consult with their potential supervisor on their choice of courses.

Details of physics courses available may be found at **www.phys.unsw.edu.au**

Medical Physics

5661 Graduate Diploma in Medical Physics

This Graduate Diploma is designed for graduates with a three year degree in physics who want to pursue a career in medical physics but lack a background in the specifically medical applications of physics. It provides training in medical physics, physiology and anatomy and also provides research experience in a hospital setting. It serves as a prerequisite for graduates wishing to proceed to a research degree in Medical Physics. The Diploma will also satisfy in part the educational requirements for certification by the Australasian College of Physical Scientists and Engineers in Medicine (ACPSEM).

The Diploma may be undertaken in one year full-time or two years part-time. It consists of a total of 36 units of credit which will include the following:

		UOC
PHYS9411	Medical Physics 1	3
PHYS9412	Medical Physics 2	3
PHYS9413	Medical Physics Project	9
PHPH9171	Physiology for Medical Physics 1	6
PHPH9172	Physiology for Medical Physics 2	6
ANAT9171	Anatomy for Medical Physics	6
PHYS9414	Report	3

School of Psychology

Head of School: A/Prof P Lovibond
Website: www.psy.unsw.edu.au

5330 Graduate Diploma by Research in Psychology Full-time

Staff Contact: A/Prof R. Richardson

This one year, 48 units of credit program is adapted to suit the needs and objectives of each student, taking into account the areas of psychology in which they have already demonstrated competence. The expectation is that students who achieve an appropriate standard in the program are then admitted to a higher degree program, provided suitable supervision and facilities are available. The Graduate Diploma does not satisfy the requirements for an accredited Fourth Year as defined by the Australian Psychological Society and Government Registration Board. To meet the requirements, students who have completed a pass Science degree in Psychology from another Australian university would need to apply for admission to the Fourth Year Honours program in Psychology.

The program comprises formal teaching in an approved set of courses drawn from the following areas: research methods and statistics, perception, learning, cognitive psychology, psycholinguistics, social psychology, clinical psychology, developmental psychology, personality, physiological psychology, abnormal psychology, and applied psychology. Both lectures and practical work will be given.

Students normally also carry out a research project under the supervision of a member of the academic staff of the School. Active research programs exist in most areas including abnormal and clinical psychology, behavioural neuroscience, cognitive science, cognition and perception, data analysis and psychometrics, industrial and organisational psychology, and social, personality and developmental psychology. Particular attention is paid to the interrelationship between scientific theory and the practical application of psychological knowledge.

Masters Programs in the School of Psychology

The School offers programs leading to the award of the degrees Master of Psychology (Clinical), Master of Psychology (Forensic) and Master of Psychology (Organisational); and the combined degrees of PhD/Master of Psychology (Clinical), PhD/Master of Psychology (Forensic), and PhD/Master of Psychology (Organisational).

8256 Master of Psychology (Clinical) Full-time or Part-time

Staff Contact: Prof R Bryant

This program provides graduate training for psychologists who intend to work as clinicians in hospitals, community health and other settings where they might be engaged in health promotion and the diagnosis, assessment and treatment of people with a range of psychological problems or disabilities. It is accredited as fifth and sixth years of study leading to full membership of the Australian Psychological Society and to its College of Clinical Psychologists, and registration as a psychologist in NSW.

The normal entrance requirement is completion of an Honours Class 1 or Class 2 degree in Psychology from UNSW or a qualification considered equivalent.

Selection is based on academic qualifications for the program. As the number of places is limited, entry into the program is competitive. Referees reports will be sought for applicants who are short-listed and an interview may be required.

Applicants who do not satisfy these entrance requirements may in exceptional circumstances be admitted, depending upon their knowledge, experience, occupation and the nature of their undergraduate training. Students applying under these provisions will usually be required to complete a qualifying program before they are admitted.

The minimum period of registration before the award of the degree is four sessions for full-time students and six sessions for part-time students. Students with advanced standing may have the minimum period reduced by up to one half of the program i.e. a reduction of one session if a student has completed a PhD in an approved area of Psychology and one session if a student has completed part of the coursework program.

The program consists of three components, all of which are compulsory: 1. coursework (weekly lectures and seminars with associated written forms of assessment), 2. professional practice (completion of a minimum of 1,000 hours of supervised clinical practice within the School Clinic and in field clinical settings, weekly clinical meetings and Skills Training Workshops), and 3. a research thesis. The three components total 96 units of credit (48 in each stage).

It should be noted that the program extends over two calendar years and not just four academic sessions with vacation breaks.

Stage 1

PSYC7000	Research and Evaluation Methods
PSYC7001	Psychological Assessment 1
PSYC7204	Child Clinical Psychology
PSYC7210	Human Neuropsychology
PSYC7212	Experimental Clinical Psychology 1
PSYC7221	Experimental Clinical Psychology 2
PSYC7223	Professional and Ethical Practice (Clinical) 1
PSYC7224	Professional and Ethical Practice (Clinical) 2

Stage 2

PSYC7220	Psychology of Health and Illness
PSYC7222	Experimental Clinical Psychology 3
PSYC7225	Professional and Ethical Practice (Clinical) 3
PSYC7226	Professional and Ethical Practice (Clinical) 4
PSYC7227	Research Thesis (Clinical) 1*
PSYC7228	Research Thesis (Clinical) 2*

**PSYC7227 and PSYC7228 together contribute 25 per cent to the overall grading for the degree.*

Notes: Part-time students normally are expected to take half the full-time program in any one session.

8257 Master of Psychology (Forensic) Full-time or Part-time

Staff Contact: A/Prof J Goodman-Delahunty

This program provides graduate training for psychologists who intend to pursue employment within a setting associated with the legal system – police, courts, prisons, probation and parole, guardianship, child protection, statutory review tribunals (e.g., mental health), worker compensation, licensing of special programs and community services, public policy and legislative review. Graduates will be trained in the assessment of people with a range of psychological disorders, disabilities and/or special needs, be equipped with advanced interviewing and counselling skills for dealing with such clients, and familiar with statutory and common law provisions and procedures and government policies and programs relevant to different forensic settings. It is accredited as fifth and sixth years of study leading to full membership of the Australian Psychological Society and to its College of Forensic Psychologists, and registration as a psychologist in NSW.

The normal entrance requirement is completion of an Honours Class 1 or Class 2 degree in Psychology from UNSW or a qualification considered equivalent.

Selection is based on academic qualifications for the program. As the number of places is limited, entry into the program is competitive. Referees reports will be sought for applicants who are short-listed and an interview may be required.

Applicants who do not satisfy these entrance requirements may in exceptional circumstances be admitted, depending upon their knowledge, experience, occupation and the nature of their undergraduate training. Students applying under these provisions will usually be required to complete a qualifying program before they are admitted.

The minimum period of registration before the award of the degree is four sessions for full-time students and six sessions for part-time students. Students with advanced standing may have the minimum period reduced by up to one half of the program, i.e. a reduction of one session if a student has completed a PhD in an approved area of Psychology and one session if a student has completed part of the coursework program.

The program consists of three components, all of which are compulsory: 1. coursework (weekly lectures and seminars with associated written forms of assessment; 2. professional practice (completion of a minimum of 1000 hours of supervised practice in forensic settings, weekly Forensic Psychology meetings, and Skills Training Workshops) and 3. a research thesis. The three components total 96 units of credit (48 in each stage).

Stage 1

LAWS9800	Law for Psychologists 1
LAWS9810	Law for Psychologists 2
PSYC7000	Research and Evaluation Methods
PSYC7001	Psychological Assessment 1

PSYC7400 Interventions in Forensic Psychology 1
PSYC7402 Applications of Forensic Psychology
PSYC7409 Professional and Ethical Practice (Forensic) 1
PSYC7410 Professional and Ethical Practice (Forensic) 2

Stage 2

PSYC7401 Interventions in Forensic Psychology 2
PSYC7403 Experimental Psychology and Law
PSYC7411 Professional and Ethical Practice (Forensic) 3
PSYC7412 Professional and Ethical Practice (Forensic) 4
PSYC7413 Research Thesis (Forensic) 1*
PSYC7414 Research Thesis (Forensic) 2*

**PSYC7413 and PSYC7414 together contribute 25 per cent to the overall grading for the degree.*

Notes: Part-time students normally are expected to take half the full-time program in any one session.

8258 Master of Psychology (Organisational) Full-time or Part-time

Staff Contact: Prof E J Kehoe

This program provides graduate training for psychologists who intend to work in industry, commerce, consulting practice, service organisations, trade unions, or the public service. The program focuses on the theories, practice, and research in industrial and organisational psychology and in human factors. It is accredited as fifth and sixth years of study leading to full membership of the Australian Psychological Society and to its College of Organisational Psychologists, and registration as a psychologist in NSW.

The normal entrance requirement is completion of an Honours Class 1 or Class 2 degree in Psychology from UNSW or a qualification considered equivalent.

Selection is based on academic qualifications for the program. As the number of places is limited, entry into the program is competitive. Referees reports will be sought for applicants who are short-listed and an interview may be required.

Applicants who do not satisfy these entrance requirements may in exceptional circumstances be admitted, depending upon their knowledge, experience, occupation and the nature of their undergraduate training. Students applying under these provisions will usually be required to complete a qualifying program before they are admitted.

The minimum period of registration before the award of the degree is four sessions for full-time students and six sessions for part-time students. Students with advanced standing may have the minimum period reduced by up to one half of the program ie a reduction of one session if a student has completed a PhD in an approved area of Psychology and one session if a student has completed part of the coursework program.

The program consists of three components, all of which are compulsory: 1. coursework (weekly lectures and seminars with associated written forms of assessment), 2. professional practice (completion of a minimum of 1,000 hours of supervised organisational practice in organisational field settings, weekly organisational meetings and Career Development Workshops), and 3. a research thesis. The three components total 96 units of credit (48 in each stage).

Stage 1

PSYC7000 Research and Evaluation Methods
PSYC7001 Psychological Assessment 1
PSYC7100 Psychology of Organisations 1
PSYC7101 Psychology of Organisations 2
PSYC7102 Psychological Principles of Training
PSYC7115 Vocational Interviewing and Counselling
PSYC7122 Professional and Ethical Practice (Organisational) 1
PSYC7123 Professional and Ethical Practice (Organisational) 2

Stage 2

PSYC7002 Psychological Assessment 2
PSYC7117 Advanced Topics in Organisational Psychology
PSYC7124 Professional and Ethical Practice (Organisational) 3
PSYC7125 Professional and Ethical Practice (Organisational) 4
PSYC7126 Research Thesis (Organisational) 1*
PSYC7127 Research Thesis (Organisational) 2*

**PSYC7126 and PSYC7127 together contribute 25 per cent to the overall grading for the degree.*

Notes: Part-time students normally are expected to take half the full-time program in any one session.

1404 Combined Doctor of Philosophy/Master of Psychology (Clinical) Full-time

Staff Contact: Prof M Taft

The combined Doctor of Philosophy/Master of Psychology (Clinical) degree program has an emphasis on research training in clinical fields. The combined degree program requires a minimum of four full-time years to complete, and offers advanced training in research skills that are particularly relevant to clinical areas. It is accredited as fifth and sixth years of study leading to full membership of the Australian Psychological Society and to its College of Clinical Psychologists, and registration as a psychologist in NSW.

The normal entrance requirements are (1) completion of an Honours Class 1 degree in Psychology from UNSW or a qualification deemed equivalent, and (2) the availability of adequate supervision and research infrastructure. As the number of places is limited, entry into the combined program is competitive. Referees reports will be sought for applicants who are short-listed and an interview may be required. Students may apply for advanced standing, credit transfer or exemption of coursework components. The minimum period of registration before the award of the degrees is eight sessions.

The combined program consists of two components which are compulsory: (1) a research project (PhD), and (2) a coursework component (MPsychol(Clin)). The research project should be original, and lead to a significant contribution to our knowledge of the nature of psychological processes, particularly in the field of clinical psychology. The program structure requires students to work on their research project during the entire candidature until submission, and the same research-related requirements as for the regular PhD degree (Program code 1400) will apply for the first two years of this program. University regulations and guidelines for good practice in postgraduate research supervision will apply to this program.

Students will concurrently undertake a compulsory coursework component, which is set out below. There are twelve courses and students will normally complete these by taking three courses in each of the four years. In the first year only one course may be taken in Session 1. The coursework program focuses on training in the diagnosis, assessment and treatment of people with a range of psychological problems or disabilities, and the training stems from a strong theoretical and empirical background in experimental clinical psychology.

PSYC7000 Research and Evaluation Methods
PSYC7001 Psychological Assessment 1
PSYC7204 Child Clinical Psychology
PSYC7210 Human Neuropsychology
PSYC7212 Experimental Clinical Psychology 1
PSYC7220 Psychology of Health and Illness
PSYC7221 Experimental Clinical Psychology 2
PSYC7222 Experimental Clinical Psychology 3
PSYC7223 Professional and Ethical Practice (Clinical) 1
PSYC7224 Professional and Ethical Practice (Clinical) 2
PSYC7225 Professional and Ethical Practice (Clinical) 3
PSYC7226 Professional and Ethical Practice (Clinical) 4

1405 Combined Doctor of Philosophy/Master of Psychology (Forensic) Full-time

Staff Contact: Prof M Taft

The combined Doctor of Philosophy/Master of Psychology (Forensic) degree program has an emphasis on research training in forensic fields. The combined degree program requires a minimum of four full-time years to complete, and offers advanced training in research skills that are particularly relevant to forensic areas. It is accredited as fifth and sixth years of study leading to full membership of the Australian Psychological Society and to its College of Forensic Psychologists, and registration as a psychologist in NSW.

The normal entrance requirements are (1) completion of an Honours Class 1 degree in Psychology from UNSW or a qualification deemed equivalent, and (2) the availability of adequate supervision and research infrastructure. As the number of places is limited, entry into the combined program is competitive. Referees reports will be sought for applicants who are shortlisted and an interview may be required. Students may

apply for advanced standing, credit transfer or exemption of coursework components. The minimum period of registration before the award of the degrees is eight sessions.

The combined program consists of two components which are compulsory: (1) a research project (PhD), and (2) a coursework component (MPsychol(For)). The research project should be original, and lead to a significant contribution to our knowledge of the nature of psychological processes, particularly in the field of forensic psychology. The program structure requires students to work on their research project during the entire candidature until submission, and the same research-related requirements as for the regular PhD degree (Program code 1400) will apply for the first two years of this program. University regulations and guidelines for good practice in postgraduate research supervision will apply to this program.

Students will concurrently undertake a compulsory coursework component, which is set out below. There are twelve courses and students will normally complete these by taking three courses in each of the four years. In the first year only one course may be taken in Session 1. The coursework program focuses on training in the assessment of people with a range of psychological disorders, disabilities and/or special needs, advanced interviewing and counselling skills for dealing with such clients, familiarity with statutory and common law provisions and procedures and government policies and programs relevant to different forensic settings.

LAWS9800 Law for Psychologists 1
LAWS9810 Law for Psychologists 2
PSYC7000 Research and Evaluation Methods
PSYC7001 Psychological Assessment 1
PSYC7400 Interventions in Forensic Psychology 1
PSYC7401 Interventions in Forensic Psychology 2
PSYC7402 Applications of Forensic Psychology
PSYC7403 Experimental Psychology and Law
PSYC7409 Professional and Ethical Practice (Forensic) 1
PSYC7410 Professional and Ethical Practice (Forensic) 2
PSYC7411 Professional and Ethical Practice (Forensic) 3
PSYC7412 Professional and Ethical Practice (Forensic) 4

1406 Combined Doctor of Philosophy/Master of Psychology (Organisational) Full-time

Staff Contact: Prof M Taft

The combined Doctor of Philosophy/Master of Psychology (Organisational) degree program has an emphasis on research training in organisational fields. The combined degree program requires a minimum of four full-time years to complete, and offers advanced training in research skills that are particularly relevant to organisational areas. It is accredited as fifth and sixth years of study leading to full membership of the Australian Psychological Society and to its College of Organisational Psychologists, and registration as a psychologist in NSW.

The normal entrance requirements are (1) completion of an Honours Class 1 degree in Psychology from UNSW or a qualification deemed equivalent, and (2) the availability of adequate supervision and research infrastructure. As the number of places is limited, entry into the combined program is competitive. Referees reports will be sought for applicants who are short-listed and an interview may be required. Students may apply for advanced standing, credit transfer or exemption of coursework components. The minimum period of registration before the award of the degrees is eight sessions.

The combined program consists of two components which are compulsory: (1) a research project (PhD), and (2) a coursework component (MPsychol(Org)). The research project should be original, and lead to a significant contribution to our knowledge of the nature of psychological processes, particularly in the field of organisational psychology. The program structure requires students to work on their research project during the entire candidature until submission, and the same research-related requirements as for the regular PhD degree (Program code 1400) will apply for the first two years of this program. University regulations and guidelines for good practice in postgraduate research supervision will apply to this program.

Students will concurrently undertake a compulsory coursework component, which is set out below. There are twelve courses and students will normally complete these by taking three courses in each of the four years. In the first year only one course may be taken in Session 1. The coursework program focuses on theories, practice and research in industrial and organisational psychology and in human factors.

PSYC7000 Research and Evaluation Methods
PSYC7001 Psychological Assessment 1
PSYC7002 Psychological Assessment 2
PSYC7100 Psychology of Organisations 1
PSYC7101 Psychology of Organisations 2
PSYC7102 Psychological Principles of Training
PSYC7115 Vocational Interviewing and Counselling
PSYC7117 Advanced Topics in Organisational Psychology
PSYC7122 Professional and Ethical Practice (Organisational) 1
PSYC7123 Professional and Ethical Practice (Organisational) 2
PSYC7124 Professional and Ethical Practice (Organisational) 3
PSYC7125 Professional and Ethical Practice (Organisational) 4

School of Safety Science

Head of School: A/Prof C Winder
Postgraduate Studies Coordinator: Dr K Kothiyal
Website: www.safesci.unsw.edu.au

Environmental Science

Administered by the School of Safety Science
Program Coordinator: Dr B Markovic

The environmental science programs are designed to study the nature of environmental problems and the methodology of their evaluation and management. Emphasis is placed on the development of relevant skills in environmental analysis modelling and planning. The programs are primarily intended for students with a background in science or engineering; however, students with other degrees who have undertaken undergraduate level environmental courses and/or have professional experience in an environmental area may apply for entry.

7445 Graduate Certificate in Environmental Science

The Graduate Certificate in Environmental Science program is a specialist graduate program of half year full-time (or equivalent) study chosen from faculty-wide environmental courses. Specialisation is achieved by undertaking study in one environmental stream of the program, although some flexibility in courses may be permitted at the discretion of the program authority.

Program requirements

Candidates are required to complete a program of study totalling 18 UOC where 6 UOC are a core course and the remaining 12 UOC include courses from the Master of Science and Technology in Environmental Science elective streams.

Compulsory Course

SESC9751 Introduction to Environmental Science (6 UOC)

Elective Courses

Students are required to select up to 12 UOC of electives from specialist streams of courses presented for the MScTech in Environmental Science program as listed below.

5675 Graduate Diploma in Environmental Science

The Graduate Diploma in Environmental Science program is a specialist graduate program of one year full-time (or equivalent) study chosen from faculty-wide environmental courses. Specialisation is achieved by undertaking study in one or two environmental streams of the program, although some flexibility in courses may be permitted at the discretion of the program authority.

Program requirements

Candidates are required to complete a program of study totalling 36 UOC where 6 UOC are a core course and the remaining 30 UOC include courses from the Master of Science and Technology in Environmental Science elective streams.

Compulsory Course

SESC9751 Introduction to Environmental Science (6 UOC)

Elective Courses

Students are required to select up to 30 UOC of electives from specialist streams of courses presented for the MScTech in Environmental Science program as listed below.

8735 Master of Science and Technology in Environmental Science

The MScTech in Environmental Science program is a specialist graduate program of one year full-time (or equivalent part-time) study chosen

from faculty-wide environmental courses. Specialisation is achieved by undertaking study in one or two environmental streams of the program, although some flexibility in courses may be permitted at the discretion of the program authority.

Program requirements

Candidates are required to complete a program of study totalling 48 UOC where 6 units of credit are a core course and the remaining 42 units of credit may optionally include a project of 6 or 12 units of credit. Where students select the option of a 12 UOC project they must also complete SESC9900 Project Methods unless they can demonstrate prior knowledge.

Compulsory Course		**UOC**
SESC9751	Introduction to Environmental Science	6

Elective Streams

Science of the Environment

BIOS9001	Fundamental Knowledge in Enviro. Mgmt Ecology	6
BIOS9002	Management and Biodiversity	6
BIOT7081	Environmental Technology	6
GEOS9022	Vegetation Management	6
GEOL9053	Hydrogeochemistry	3
GEOL9111	Groundwater Environments	3
MSCI5004	Oceanographic Processes	6

Pollution Issues

CEIC5630	Industrial Water and Wastewater Engineering	6
CVEN9872	Solid Waste Management	6
GEOS9024	Soil Degradation and Conservation	6
GEOL9112	Investigation and Management of Salinity	3
GEOL9252	Groundwater Quality and Protection	3
MATS5394	Pollution Control in Industry	3
SESC9581	Industrial Pollution Control	6

Environmental Planning and Management

MSCI5002	Management of Marine Resources	3
SESC9091	Safety, Health and Environmental Practice	6
SESC9211	Risk Management	6
SESC9711	Environmental Planning and Assessment	6
SESC9741	Environmental Management Systems	6
SESC9761	Environmental Auditing	6

Human Health

GEOH9015	Population, Health and Environment	6
MATH5826	Statistical Methods in Epidemiology	6
SESC9130	Noise Management	3
SESC9140	Radiation Protection	3
SESC9510	Occupational Hygiene Hazards	3
SESC9511	Occupational Hygiene	6
SESC9721	Environment and Medicine	6
or		
CMED9612	Environmental Health	4
SESC9820	Chemical Safety and Toxicology	3
SESC9850	Management of Dangerous Materials	3

Remote Sensing and GIS

GEOS9012	Remote Sensing Applications	6
GEOS9016	Principles of Geographic Information Systems	6
GEOS9021	Image Analysis of Remote Sensing	6

Environmental Assessment and Modelling

SESC9761	Environmental Auditing	6
GEOS9016	Principles of Geographic Information Systems	6
GEOS9017	Advanced Geographical Information Systems	6
GEOL9055	Hydrogeochemical Modelling	3
GEOL9252	Groundwater Quality and Protection	3
SESC9261	Introduction to Environmental Risk Assessment	6
SESC9271	Advanced Topics in Environmental Risk Assessment	6

Oceanography and Meteorology

MATH5295	Atmospheric Modelling	6
MATH5285	Ocean Modelling	6
MATH5245	Methods for Computational Fluid Dynamics	6
MATH5255	Hydrodynamic Stability	6
MSCI5001	Environmental Monitoring and Assessment	3
MSCI5003	Experimental Design and Analysis	3
MSCI6300	Environment Assessment	6
OCEA5145	Applied Data Analysis	6
OCEA5125	Geophysical Fluid Dynamics	6
OCEA5155	Theoretical Project in Physical Oceanography	12

Analytical Methods and Data Processing **UOC**

CHEM7111	Quality Assurance and Laboratory Practice	6
CHEM7112	Analysis of Biological and Organic Materials	6
CHEM7113	Elemental Analysis	6
CHEM7115	Treatment of Analytical Data	6
CHEM7117	Molecular Analysis	6
GEOL9054	Analysis & Interpretation of Hydrogeochemical Data	3
MATH5275	Applied Data Analysis	6
MSCI5003	Experimental Design and Analysis	3
SESC9871	Toxicological and Environmental Laboratory Science	6

Project

Students may undertake a project on a topic relevant to the program of 6 or 12 units of credit. Students may enrol in SESC9906 or SESC9912 or may enrol directly in the appropriate project courses offered by any School of the Faculty of Science.

Industrial Safety

7437 Graduate Certificate in Industrial Safety

Students enrolled in the Graduate Certificate in Industrial Safety must complete a program totalling 18 UOC. The program is normally completed by six months of full-time study or one year of part-time study. This program may be taken in on-campus or off-campus learning mode, however the range of electives available in off-campus mode is more restricted than available in on-campus mode. It is the first stage in an articulated sequence of Graduate Certificate and Master of Science and Technology programs in industrial safety.

Students undertake 9 UOC of compulsory core courses, and 9 UOC of electives.

Core courses		**UOC**
SESC9100	Physical Hazards	3
SESC9200	Hazard and Risk Assessment	3
SESC9300	Effective Behaviour in Organisations	3

Exemption but not Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses. Where necessary, other approved postgraduate courses may be substituted.

Elective courses

Students are required to complete elective courses to make up 18 UOC. Elective courses may be taken from any school at UNSW or from other universities subject to the approval of the program coordinator and the Head of School of Safety Science (but at least 50% of the program must be completed at UNSW). The range of electives available at UNSW in off-campus mode is more restricted than for internal students.

8727 Master of Science and Technology in Industrial Safety

This program is designed as a specialist program that builds on a previous four year Bachelor degree in engineering or a related discipline. It is suitable for people who manage safety as part of their line management role and wish to extend their learning in their base discipline in addition to gaining a grounding in safety. It is also suitable for people looking for a specialist program building on a first degree in safety. In addition to the core there is a wide choice of elective courses to suit students from widely varying backgrounds. No fundamental knowledge courses are required for this program as the specialist area chosen must be based on the discipline of the student's first degree. The program requires 48 UOC and is normally completed in one year of full-time (or equivalent part-time) study, and is available in on-campus or off-campus learning mode.

Core courses – 12 UOC		**UOC**
SESC9010	Research Methods	3
SESC9100	Physical Hazards	3
SESC9200	Hazard and Risk Assessment	3
SESC9300	Effective Behaviour in Organisations	3

Exemption but not necessarily Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses. Where necessary, other approved postgraduate courses may be substituted.

Project courses – 15 UOC		**UOC**
SESC9900	Project Methods	3
SESC9912	Project	12

Elective courses – 21 UOC

Elective courses may be taken from any areas in Science and Technology within the Faculty of Science or Engineering, subject to the agreement of the head of relevant school and the Head of the School of Safety Science. This enables students to extend their specialist knowledge in their own discipline, to undertake additional general management courses or to focus on courses relating to safety science.

Risk Management

7438 Graduate Certificate in Risk Management

The Graduate Certificate in Risk Management program provides students with the opportunity to study risk management related courses to meet specific vocational needs or individual interests. The program requires 24 UOC and is normally completed in one year of part-time study. It is the first stage in an articulated sequence of Graduate Certificate, Graduate Diploma and Master of Science and Technology programs in risk management.

Fundamental Knowledge Courses – 6 UOC		**UOC**
SESC6010	Descriptive Statistics	3
and		
SESC9010	Research Methods	3
or		
ECON5203	Statistics for Business	6

Core course – 6 UOC

SESC9211	Risk Management	6

Elective Courses – 12 UOC

12 UOC of other courses from the core or electives listed for the MScTech in Risk Management as below. Students may be prevented from taking courses that would duplicate prior studies.

5668 Graduate Diploma in Risk Management

The Graduate Diploma in Risk Management is a postgraduate program in integrated risk management. Courses for the program are offered by the Faculties of Science, Engineering, and Commerce. The program requires 48 UOC and is normally completed in one year of full-time (or equivalent part-time) study. Students may be exempted from the fundamental knowledge courses where these topics have been studied previously.

Fundamental knowledge courses – 12 UOC		**UOC**
FINS5511	Corporate Finance (Internal)	6
or		
FINS5560	Corporate Finance (External)	6
and either		
ECON5203	Statistics for Business (Internal)	6
or		
SESC6010	Descriptive Statistics (External)	3
and		
SESC9010	Research Methods	3

Core courses – 18 UOC

SESC9211	Risk Management	6
SESC9231	Risk Analysis	6
FINS5531	Risk and Insurance	6

Elective courses – 18 UOC

Students may select courses from any faculty providing they can demonstrate to the program authority the relevance of the course to risk management. A list of possible electives is given with the description of the Master of Science and Technology in Risk Management below.

8728 Master of Science and Technology in Risk Management

The Master of Science and Technology in Risk Management is a program in integrated risk management which provides a general introduction to risk management principles as they are applied across all disciplines, then allows students to specialise in one or more risk areas. Courses for the program are offered by the Faculties of Science, Engineering and Commerce. Students may select either a financial or a technical focus.

The program requires 72 units of credit and is normally completed in one and a half years of full-time (or equivalent part-time) study. Students may receive advanced standing in the fundamental knowledge courses on the basis of prior studies providing they can demonstrate the prerequisite knowledge for the core courses. Advanced standing is not given for core and elective courses.

Fundamental Knowledge Courses – 18 UOC		**UOC**
ECON5103	Business Economics (Internal)	6
or		
ECON5109	Business Economics (External)	6
FINS5511	Corporate Finance (Internal)	6
or		
FINS5560	Corporate Finance (Exernal)	6
and either		
ECON5203	Statistics for Business (Internal)	6
or		
SESC6010	Descriptive Statistics (External)	3
and		
SESC9010	Research Methods (External)	3

Core Courses – 30 UOC

SESC9211	Risk Management	6
SESC9231	Risk Analysis	6
FINS5531	Risk and Insurance	6
SESC9906	Special Report	6

Elective Courses – 24 UOC

Students may select courses from any faculty providing they can demonstrate to the program authority the relevance of the course to risk management. A list of possible electives is shown below.

Financial Risk Courses		**UOC**
ACCT5901	Accounting: A User Perspective	6
ACCT5908	Auditing	6
ACCT5996	Management Accounting Control Systems	6
ECON5124	Public Enterprise Economics and Cost Benefit Analysis	8
FINS5511	Corporate Finance	6
FINS5512	Financial Markets and Institutions	6
FINS5513	Security Valuation and Portfolio Selection	6
FINS5517	Applied Portfolio Management and Modelling	6
FINS5535	Derivatives and Risk Management Techniques	6
FINS5551	International Insurance Management	6
FINS5552	Property Risk Management	6
FINS5553	Liability Risk Management	6

Safety Risk Courses

SESC9030	Occupational Health and Safety Law 2	3
SESC9100	Physical Hazards	3
SESC9200	Hazard and Risk Assessment	3
SESC9221	Major Hazards Management	6
SESC9411	Principles of Ergonomics	6
SESC9810	Toxicology	3
SESC9820	Chemical Safety and Toxicology	3
SESC9850	Management of Dangerous Materials	3

Environmental Risk Courses

CVEN9888	Environmental Management	6
CVEN9889	Environmental Economics and Law	6
GEOH9015	Population Health and the Environment	6
MATH5285	Ocean Modelling	6
MATH5295	Atmospheric Modelling	6
SESC9261	Introduction to Environmental Risk Assessment	6
SESC9271	Advanced Topics in Environmental Risk Management	3
SESC9711	Environmental Planning and Assessment	6
SESC9741	Environmental Management Systems	6
SESC9751	Introduction to Environmental Science	6

Technical Risk Management Courses

BLDG5314	Project Quality Management	4
BLDG6253	Construction Planning and Control	4
BLDG6255	Contracts Management and Law	4
COMP9514	Advanced Decision Theory	6
CVEN9701	Engineering Economics and Financial Management	6
CVEN9702	Project Planning and Control	6
CVEN9703	Quality and Quality Systems	6
CVEN9707	Contracts Management	6
CVEN9711	Management of Professional Services	6
CVEN9714	Resource Management	6
CVEN9718	Strategic Management in Engineering	6
CVEN9720	Problem Solving and Decision Making	6
CVEN9881	Hazardous Waste Management	6
GBAT9107	Maintenance Management	6
GBAT9191	Project Management	6

INFS5984	Information Systems Security	6
SESC9320	Effective Management	3
SESC9331	Technology Management	6
SESC9341	Occupational Health and Safety Management Systems Auditing	6

Courses from the AGSM may also be taken by agreement.

Ergonomics

7439 Graduate Certificate in Ergonomics

The Graduate Certificate in Ergonomics is intended to provide professionals from other disciplines with an awareness of the principles of ergonomics sufficient for them to be able to identify ergonomics problems in human-technology-environment systems and to be able to recommend a user-centred, systems approach to their assessment and control. It is the first stage in a fully articulated sequence of Graduate Certificate, Graduate Diploma and Master of Science and Technology programs in ergonomics. The program requires 24 UOC and is normally completed in six months of full-time (or equivalent part-time) study, and is available in on-campus or off-campus learning mode.

Fundamental knowledge courses – 6 UOC†		**UOC**
ANAT6151	Introductory Functional Anatomy	3
SESC6110	Physical Principles of Safety 1	3

Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses.

Core courses – 18 UOC

SESC9010	Research Methods	3
SESC9100	Physical Hazards	3
SESC9200	Hazard and Risk Assessment	3
SESC9300	Effective Behaviour in Organisations	3
SESC9411	Principles of Ergonomics	6

Exemption but not necessarily Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses. Where necessary, other approved postgraduate courses may be substituted.

† Students with no statistics in their background will have to do SESC6010 – Descriptive Statistics (3 units of credit) in addition to the above load.

5669 Graduate Diploma in Ergonomics

The Graduate Diploma in Ergonomics is intended for students wishing to become professional ergonomists. It provides students with the competencies to identify ergonomics hazards in human-technology-environment systems, to assess their associated risks and to use a user-centred, systems approach to develop controls for the hazards. It is the second stage in a fully articulated sequence of Graduate Certificate, Graduate Diploma and Master of Science and Technology programs in ergonomics. The program requires 48 UOC and is normally completed in one year of full-time (or equivalent part-time) study.

Fundamental knowledge courses – 6 UOC†		**UOC**
ANAT6151	Functional Anatomy	3
SESC6110	Physical Principles of Safety 1	3

Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses.

Core courses – 42 UOC		**UOC**
SESC9010	Research Methods	3
SESC9100	Physical Hazards	3
SESC9200	Hazard and Risk Assessment	3
SESC9300	Effective Behaviour in Organisations	3
SESC9411	Principles of Ergonomics	6
SESC9421	Applied Ergonomics	6
SESC9431	Physical Ergonomics	6
SESC9441	Ergonomics & New Technology	6
SESC9541	Assessment of the Workplace Environment	6

Exemption but not necessarily Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses. Where necessary, other approved courses may be substituted.

† Students with no statistics in their background will have to do SESC6010 – Descriptive Statistics (3 units of credit) in addition to the above load.

8729 Master of Science and Technology in Ergonomics

The Master of Science and Technology in Ergonomics is a graduate program intended for students wishing to become professional ergonomists. It provides students with the competencies to identify ergonomics hazards in human-technology-environment systems, to assess their associated risks and to use a user-centred, systems approach to develop controls for the hazards. In addition it provides students with the competencies to plan and conduct an ergonomics research or design project in a scientific manner and to disseminate the results. It is the third stage in a fully articulated sequence of Graduate Certificate, Graduate Diploma and Master of Science and Technology programs in Ergonomics. The program requires 72 units of credit and is normally completed in one and a half years of full-time (or equivalent part-time) study.

Fundamental knowledge courses† – 6 UOC		**UOC**
ANAT6151	Introductory Functional Anatomy	3
SESC6110	Physical Principles of Safety 1	3

Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses.

Core courses – 57 UOC		**UOC**
SESC9010	Research Methods	3
SESC9100	Physical Hazards	3
SESC9200	Hazard and Risk Assessment	3
SESC9300	Effective Behaviour in Organisations	3
SESC9411	Principles of Ergonomics	6
SESC9421	Applied Ergonomics	6
SESC9431	Physical Ergonomics	6
SESC9441	Ergonomics & New Technology	6
SESC9541	Assessment of the Workplace Environment	6
SESC9900	Project Methods	3
SESC9912	Project	12

Exemption but not necessarily Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses. Where necessary, other approved postgraduate courses may be substituted.

Electives – 9 UOC

Elective courses may be selected from those offered by the School of Safety Science in its other programs, e.g. Master of Safety Science, and Master of Science and Technology in OHS or Industrial Safety. Students may take courses available from other schools within the University subject to the approval of both the relevant program coordinator and the Ergonomics Program Coordinator.

† Students with no statistics in their background will have to do SESC6010 – Descriptive Statistics (3 units of credit) in addition to the above load.

Safety Science

7442 Graduate Certificate in Safety Science

The Graduate Certificate in Safety Science is a graduate program for students working in health and safety intending to become safety practitioners. It is the first stage in a fully articulated sequence of Graduate Certificate, Graduate Diploma and Master of Science and Technology programs in occupational health and safety or Master of Safety Science. The program requires 24 UOC and is normally completed in six months of full-time (or equivalent part-time) study and is available in on-campus or off-campus learning modes.

Fundamental knowledge courses

Up to a maximum of 6 UOC, depending on student background.

		UOC
ANAT6151	Functional Anatomy	3
SESC6010	Descriptive Statistics	3
SESC6110	Physical Principles of Safety 1	3
SESC6800	Fundamentals of Toxicology	3

Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses.

Core courses

A minimum of 12 UOC, depending on student background and the need for fundamental knowledge courses.

		UOC
SESC9010	Research Methods	3
SESC9100	Physical Hazards†	3
SESC9200	Hazard and Risk Assessment	3
SESC9300	Effective Behaviour in Organisations	3
SESC9400	Ergonomics 1	3
SESC9020	Occupational Health and Safety Law 1	3
SESC9600	Occupational Health	3
SESC9810	Toxicology	3

Exemption but not necessarily Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses. Where necessary, other approved postgraduate courses may be substituted.

Elective Courses

Students can also select up to 6 UOC of other courses offered by the School of Safety Science with the approval of the program authority.

† Requires Fundamental Knowledge course or equivalent as assumed knowledge.

5672 Graduate Diploma in Safety Science

The Graduate Diploma in Safety Science is a graduate program of study for students with a health and safety background intending to become safety professionals. It is the second stage in a fully articulated sequence of Graduate Certificate, Graduate Diploma and Master of Science and Technology programs in safety science or occupational health and safety. The program requires 48 UOC, is normally completed in one year of full-time (or equivalent part-time) study and is available in on-campus and off-campus study modes.

Fundamental knowledge courses – 12 UOC		**UOC**
ANAT6151	Functional Anatomy	3
SESC6010	Descriptive Statistics	3
SESC6110	Physical Principles of Safety 1	3
SESC6800	Fundamentals of Toxicology	3

Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses.

Core courses – 24 UOC		**UOC**
SESC9010	Research Methods	3
SESC9020	Occupational Health and Safety Law 1	3
SESC9100	Physical Hazards†	3
SESC9200	Hazard and Risk Assessment	3
SESC9300	Effective Behaviour in Organisations	3
SESC9400	Ergonomics 1†	3
SESC9600	Occupational Health	3
SESC9810	Toxicology†	3

Exemption but not necessarily Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses. Where necessary, other approved postgraduate courses may be substituted.

Elective courses – 12 UOC

Electives may be chosen from core courses offered in the MScTech program in Occupational Health and Safety or other courses offered by the School of Safety Science with the approval of the program authority. The range of electives available in off-campus mode is more restricted than for internal students.

8671 Master of Safety Science

The Master of Safety Science is a graduate program of two years full-time (or equivalent) study for students wanting a broad based understanding of safety engineering, occupational health, environmental science, risk management and ergonomics to become safety, health and environmental professionals. The program requires 96 units of credit and is normally completed in two years of full-time (or equivalent part-time) study and is available in on-campus or off-campus learning mode.

Fundamental knowledge courses – 12 UOC		**UOC**
ANAT6151	Functional Anatomy	3
SESC6010	Descriptive Statistics	3
SESC6110	Physical Principles of Safety 1	3
SESC6800	Fundamentals of Toxicology	3

Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses.

Core courses – 30 UOC		**UOC**
SESC9010	Research Methods†	3
SESC9100	Physical Hazards†	3
SESC9200	Hazard and Risk Assessment	3
SESC9300	Effective Behaviour in Organisations	3
SESC9400	Ergonomics 1†	3
SESC9020	Occupational Health and Safety Law 1	3
SESC9600	Occupational Health	3
SESC9810	Toxicology†	3
SESC9751	Introduction to Environmental Science	6

Exemption but not necessarily Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses. Where necessary, other approved postgraduate courses may be substituted.

Project courses – 15 UOC		**UOC**
SESC9900	Project Methods†	3
SESC9912	Project†	12

Elective courses – 39 UOC

Elective courses may be chosen from other courses offered by the School of Safety Science with the approval of the program authority. The range of electives available in off-campus mode is more restricted than for internal students.

† Requires Fundamental Knowledge course or equivalent as assumed knowledge.

Fire and Explosion Safety Management

The programs in Fire and Explosion Safety Management provides a fundamental introduction to fire and explosion safety management principles as they are applied to buildings and industry. The programs allow students to specialise in one or more areas. Elective courses for the programs can be chosen from those offered by the Faculties of Science, Engineering, Commerce and the AGSM. Students may select either a management or a technical focus.

5676 Graduate Diploma in Fire and Explosion Safety Management

Candidates are required to complete 36 UOC for the degree. Advanced Standing is not given for core and elective courses.

Core Courses – 24 UOC		**UOC**
SESC8101	Introduction to Fire and Explosion Phenomena	6
SESC8121	Risk Assessment of Fire and Explosion Systems	6
SESC8131	Building and Transport Fire Management	6
SESC8141	Major Hazards, Fire Prevention and Protection in Industry	6

Elective Courses – 12 UOC

SESC8110	Fire and Explosion Modelling	6
SESC8151	Explosion Prevention and Protection	6
SESC9903	Report	3
SESC9906	Special Report	6

Students may select other elective courses from any faculty or school providing they can demonstrate to the program authority the relevance of the course to Fire and Explosion Management. Note some courses may have prerequisites or assumed knowledge. Courses from the AGSM may also be taken by agreement with the program authority.

8736 Master of Science and Technology in Fire and Explosion Safety Management

Candidates are required to complete 48 UOC for the degree. Advanced Standing is not given for core and elective courses.

Core Courses – 30 UOC		**UOC**
SESC8101	Introduction to Fire and Explosion Phenomena	6
SESC8111	Fire and Explosion Modelling	6
SESC8121	Risk Assessment of Fire and Explosion Systems	6
SESC9912	Project	12

Elective Courses – 18 UOC

SESC8130	Building and Transport Fire Management	6
SESC8140	Major Hazards, Fire Prevention and Protection in Industry	6
SESC8150	Explosion Prevention and Protection	6

Students specialising in building fire safety management are required to take SESC8130 Building and Transport Fire Management, while students specialising in industrial safety management are required to take SESC8140 Major Hazards, Fire Prevention and Protection in Industry and SESC8150 Explosion Prevention and Protection.

Students may select other elective courses from any faculty or school providing they can demonstrate to the program authority the relevance of the course to Fire and Explosion Management. Note some courses may have prerequisites or assumed knowledge. Courses from the AGSM may also be taken by agreement with agreement of the program authority.

Occupational Health and Safety

7443 Graduate Certificate in Occupational Health and Safety Management

The Graduate Certificate in Occupational Health and Safety Management is a graduate program for students with an appropriate level of knowledge of occupational health and safety. The program requires 24 UOC and is

normally completed in six months of full-time (or equivalent part-time) study.

Core courses – 12 UOC		UOC
SESC9200	Hazard and Risk Assessment	3
SESC9300	Effective Behaviour in Organisations	3
SESC9341	OHS Management Systems Auditing	6

Exemption but not necessarily Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses.

Elective courses – 12 UOC

Elective courses may be chosen from other programs offered by the School of Safety with the approval of the program authority.

8733 Master of Science and Technology in Occupational Health and Safety

The Master of Science and Technology in Occupational Health and Safety is a graduate program of study for students with a health and safety background intending to become occupational health and safety professionals. The program requires 72 units of credit and is normally completed in one and a half years of full-time (or equivalent part-time) study, and is available in on-campus or off-campus learning modes.

Fundamental knowledge courses – 12 UOC		UOC
ANAT6151	Functional Anatomy	3
SESC6010	Descriptive Statistics	3
SESC6110	Physical Principles of Safety 1	3
SESC6800	Fundamentals of Toxicology	3

Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses.

Core courses – 24 UOC		UOC
SESC9010	Research Methods†	3
SESC9100	Physical Hazards†	3
SESC9200	Hazard and Risk Assessment	3
SESC9300	Effective Behaviour in Organisations	3
SESC9400	Ergonomics 1†	3
SESC9020	Occupational Health and Safety Law 1	3
SESC9600	Occupational Health	3
SESC9810	Toxicology†	3

Exemption but not necessarily Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses. Where necessary, other approved postgraduate courses may be substituted.

Project courses – 15 UOC		UOC
SESC9900	Project Methods†	3
SESC9912	Project†	12

Elective courses – 21 UOC

Elective courses may be taken from other courses offered by the School of Safety Science with the approval of the program authority. The range of electives available in off-campus mode is more restricted than for internal students.

†Requires Fundamental Knowledge course or equivalent as assumed knowledge.

Occupational Medicine

7444 Graduate Certificate in Occupational Rehabilitation

The Graduate Certificate in Occupational Rehabilitation is a graduate program for medical graduates only. The program requires 18 UOC, is normally completed in one year of part-time study and is available in on-campus or off-campus learning mode. It is the first stage in an articulated sequence of Graduate Certificate in Occupational Rehabilitation, Graduate Diploma and Master of Science and Technology programs in Occupational Medicine. This program is suitable for medical practitioners wishing to obtain a practitioner's qualification in occupational rehabilitation.

Core courses – 12 UOC		UOC
SESC9631	Occupational Medicine	6
SESC9651	Occupational Rehabilitation	6

Exemption but not necessarily Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses.

Elective courses – 6 UOC

Elective courses may be chosen from other programs offered by the School of Safety Science with the approval of the program authority.

5674 Graduate Diploma in Occupational Medicine

The Graduate Diploma in Occupational Medicine is a graduate program for medical graduates intending to become occupational physicians. The program requires 36 UOC and is normally completed in one year of full-time (or equivalent part-time) study, and is available in on-campus or off-campus learning mode. It is the second stage in an articulated sequence of Graduate Certificate in Occupational Rehabilitation, and Graduate Diploma and Master of Science and Technology programs in Occupational Medicine. This program is suitable for occupational physician trainees of the Australasian Faculty of Occupational Medicine of the Royal Australasian College of Physicians.

Core courses – 15 UOC		UOC
SESC9631	Occupational Medicine	6
SESC9640	Occupational Epidemiology	3
SESC9651	Occupational Rehabilitation	6

Exemption but not necessarily Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses. Where necessary, other approved postgraduate courses may be substituted.

Elective courses – 21 UOC

Elective courses may be chosen from other programs offered by the School of Safety School with the approval of the program authority.

8734 Master of Science and Technology in Occupational Medicine

The Master of Science and Technology in Occupational Medicine is a graduate program for medical graduates intending to become occupational physicians. It is the third stage in an articulated sequence of Graduate Certificate in Occupational Rehabilitation, and Graduate Diploma and Master of Science and Technology programs in Occupational Medicine. The Master of Science and Technology in Occupational Medicine is available in on-campus and off-campus study modes. This program is suitable for occupational physician trainees of the Australasian Faculty of Occupational Medicine of the Royal Australasian College of Physicians. The program requires 48 UOC where 15 UOC are core courses and 33 UOC may include a project of 12 UOC. The program is normally completed in one year of full-time (or equivalent part-time) study, and is available in on-campus or off-campus learning mode.

Core courses – 15 UOC		UOC
SESC9631	Occupational Medicine	6
SESC9640	Occupational Epidemiology	3
SESC9651	Occupational Rehabilitation	6

Exemption but not necessarily Advanced Standing may be awarded to students who can establish that they have equivalent knowledge in these courses. Where necessary, other approved postgraduate courses may be substituted.

Project Courses (Optional)		UOC
SESC9912	Project	12

Elective courses – to a maximum of 33 UOC

Elective courses may be chosen from other courses offered by the School of Safety Science with the approval of the program authority. The range of electives available in off-campus mode is more restricted than for internal students.

Institute of Environmental Studies

The environmental expertise of six faculties at UNSW has been brought together to provide practical and flexible programs in environmental management, designed for people from a wide range of disciplinary backgrounds, professional experience and environmental knowledge. They provide a solid foundation in the frameworks and tools for environmental management and an understanding of the key disciplinary approaches, whilst also enabling students to tailor-make a program to suit their special needs, by drawing on more than 100 relevant elective courses at UNSW.

These University-wide programs are coordinated by the Institute of Environmental Studies.

Entry qualifications

An appropriate degree of Bachelor from UNSW or a qualification considered equivalent from another university or tertiary institution. Performance in the undergraduate degree and/or relevant experience will be taken into account in granting admission. An applicant may be granted admission to the GradCert on the basis of evidence of other academic or professional attainments, including relevant experience.

Program requirements

Programs may be taken part-time or full-time and by distance or on-campus.

Environmental Management

7339 Graduate Certificate in Environmental Management

The Graduate Certificate in Environmental Management can be completed in one session full-time or two sessions part-time. The required total of 24 UOC comprises:

Courses		UOC
IEST5001	Frameworks for Environmental Management	6
	Two Fundamental Knowledge courses	12
and either		
IEST5002	Tools for Environmental Management	6
or		
One further Fundamental Knowledge course		6
or		
One elective		6

5499 Graduate Diploma in Environmental Management

The Graduate Diploma in Environmental Management can be completed in two sessions full-time or four sessions part-time. The required total of 48 units of credit comprises:

Courses		UOC
IEST5001	Frameworks for Environmental Management	6
IEST5002	Tools for Environmental Management	6
	Four Fundamental Knowledge courses	24
	Electives	12

8619 Master of Environmental Management

The Master of Environmental Management program can be taken over 3 sessions full-time or 6 sessions part-time. The required total of 72 units of credit (UOC) is made up of core courses (18 UOC), fundamental knowledge courses (generally 24 UOC), and electives (generally 30 UOC). A project (18 UOC, 12 UOC or 6 UOC) may in certain circumstances be substituted for some of the elective requirement.

Core courses		UOC
IEST5001	Frameworks for Environmental Management	6
IEST5002	Tools for Environmental Management	6
IEST5003	Addressing Environmental Issues	6

Fundamental Knowledge courses

Each course is 6 UOC and titled "Fundamental Knowledge in Environmental Management: ....."

BIOS9001	Ecology
ECON5125	Economics
CVEN9895	Engineering
LAWS3439	Law
CHEM7300	Physical Science
HPSC5520	Social Science

Students will take fundamental knowledge courses (generally four) in the areas outside their own disciplinary background.

Electives

Chosen from across the University to meet specific needs. Students may enhance their specific skills or broaden their area of expertise and understanding.

Higher Degrees By Research

All schools in the Faculty of Science offer PhD and MSc (Research) programs. For details of the available research areas and supervision arrangements, interested students should contact schools directly.

Conditions for Award of Higher Degrees

For the list of postgraduate degrees by research and course work, arranged in faculty order, see *UNSW Programs (by faculty)* in the *Calendar*. The conditions for the award of postgraduate research degrees follow:

Doctor of Philosophy (PhD)

Refer to conditions for the Award of Degrees under Faculty of Arts & Social Sciences section of this Handbook.

Doctor of Philosophy Master of Psychology (Clinical) (PhD MPsychol(Clin)), Doctor of Philosophy Master of Psychology (Forensic) (PhD MPsychol(For)) and Doctor of Philosophy Master of Psychology (Organisational) (PhD MPsychol(Org))

1. The combined degrees of Doctor of Philosophy/Master of Psychology (Clinical), Doctor of Philosophy/Master of Psychology (Forensic) and Doctor of Philosophy/Master of Psychology (Organisational) by thesis and formal coursework may be awarded by the Council on the recommendation of the Research Committee of the Faculty of Science (hereinafter referred to as the Committee) to a candidate who has made an original and significant contribution to knowledge, and who has satisfactorily completed a program of advanced study.

Qualifications

2. (1) A candidate for the combined degrees shall have been awarded an appropriate degree of Bachelor with Honours Class 1 in Psychology from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee.

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the combined degrees.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment as a candidate for the combined degrees.

Enrolment

3. (1) An application to enrol as a candidate for the combined degrees shall be made on the prescribed form which shall be lodged with the Registrar at least one month before the commencement of session in which enrolment is to begin.

(2) In every case before making the offer of a place the Committee shall be satisfied that initial agreement has been reached between the School and the applicant on the PhD topic area, supervision arrangements, provision of adequate facilities and coursework and that these are in accordance with the provisions of the guidelines for promoting postgraduate study within the University.

(3) The candidate shall be enrolled as a full-time student only.

(4) The candidate will present the PhD thesis for examination no earlier than three years and no later than five years from the date of enrolment, except with the approval of the Committee.

(5) A candidate for the award of the degree of Doctor of Philosophy as part of a combined program shall not be eligible to be awarded that degree until they have completed the additional requirements applicable to the other degree in such combined program.

(6) The candidate shall undertake the PhD research only as an internal student i.e. at a campus, teaching hospital, or other research facility with which the University is associated.

(7) The candidate will normally carry out the PhD research on a campus or at a teaching or research facility of the University except that the Committee may permit a candidate to spend a period in the field, within another institution or elsewhere away from the University provided that the work can be supervised in a manner satisfactory to the Committee. In such instances the Committee shall be satisfied that the location and period of time away from the University are necessary to the research program.

(8) The PhD research shall be supervised by a supervisor and where possible a co-supervisor who are members of the academic staff of the School or under other appropriate supervision arrangements approved by the Committee.

(9) A candidate for the combined degrees shall be required to undertake such formal courses and pass such assessment as prescribed. The order

in which the formal courses are taken must be approved by the School of Psychology.

Progression

4. The progress of the candidate shall be considered by the Committee following report from the School in accordance with the procedures established within the School and previously noted by the Committee.

(i) The research proposal will be reviewed as soon as feasible after enrolment. This will be during the first year of study. This review will focus on the viability of the research proposal.

(ii) Progress in the combined program will be reviewed within twelve months of the first review. As a result of either review the Committee may cancel enrolment or take such other action as it considers appropriate. Thereafter, the progress of the candidate will be reviewed annually.

PhD Thesis

5. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the investigation.

(2) The candidate shall give in writing to the Registrar two months notice of intention to submit the thesis.

(3) The thesis shall comply with the following requirements:

(a) it must be an original and significant contribution to knowledge of the subject;

(b) the greater proportion of the work described must have been completed subsequent to enrolment for the degree;

(c) it must be written in English;

(d) it must reach a satisfactory standard of expression and presentation;

(e) it must consist of an account of the candidate's own research but in special cases work done conjointly with other persons may be accepted provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may not submit as the main content of the thesis any work or material which has previously been submitted for a university degree or other similar award but may submit any work previously published whether or not such work is related to the thesis.

(5) Four copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(6) It shall be understood that the University retains the four copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

PhD Examination

6. (1) There shall be not fewer than three examiners of the thesis, appointed by the Committee, at least two of whom shall be external to the University.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that one of the following:

(a) The thesis merits the award of the degree.

(b) The thesis merits the award of the degree course to minor corrections as listed being made to the satisfaction of the head of school.

(c) The thesis requires further work on matters detailed in the examiner's report. Should performance in this further work be to the satisfaction of the Committee, the thesis would merit the award of the degree.

(d) The thesis does not merit the award of the degree in its present form and further work as described in the examiner's report is required. The revised thesis should be course to re-examination.

(e) The thesis does not merit the award of the degree and does not demonstrate that resubmission would be likely to achieve that merit.

(3) If the performance in the further work recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to submit the thesis for re-examination as determined by the Committee within a period determined by it but not exceeding eighteen months.

(4) After consideration of the examiners' reports and the results of any further examination of the thesis, the Committee may require the candidate to submit to written or oral examination before recommending whether or not the candidate be awarded the degree. If it is decided that the candidate be not awarded the degree, the Committee shall determine whether or not the candidate be permitted to resubmit the thesis after a further period of study and/or research.

Fees

7. A candidate shall pay such fees as may be determined from time to time by the Council.

Master of Science (MSc) and Master of Engineering (ME)

1. The degree of Master of Engineering or Master of Science by research may be awarded by the Council on the recommendation of the Higher Degree or Research Committee of the appropriate faculty (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee.

(2) An applicant who submits evidence of such other academic or professional attainments as may be approved by the Committee may be permitted to enrol for the degree.

(3) When the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant, before being permitted to enrol, to undergo such examination or carry out such work as the Committee may prescribe.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least one calendar month before the commencement of the session in which enrolment is to begin.

(2) In every case, before permitting a candidate to enrol, the head of the school in which the candidate intends to enrol shall be satisfied that adequate supervision and facilities are available.

(3) An approved candidate shall be enrolled in one of the following categories.

(a) full-time attendance at the University;

(b) part-time attendance at the University;

(c) external not in regular attendance at the University and using research facilities external to the University.

(4) A candidate shall be required to undertake an original investigation on an approved topic. The candidate may also be required to undergo such examination and perform such other work as may be prescribed by the Committee.

(5) The work shall be carried out under the direction of a supervisor appointed from the full-time members of the University staff.

(6) The progress of a candidate shall be reviewed annually by the Committee following a report by the candidate, the supervisor and the head of the school in which the candidate is enrolled and as a result of such review the Committee may cancel enrolment or take such other action as it considers appropriate.

(7) No candidate shall be granted the degree until the lapse of three academic sessions in the case of a full-time candidate or four academic sessions in the case of a part-time or external candidate from the date of enrolment. In the case of a candidate who has been awarded the degree of Bachelor with Honours or who has had previous research experience the Committee may approve remission of up to one session for a full-time candidate and two sessions for a part-time or external candidate.

(8) A full-time candidate for the degree shall present for examination not later than six academic sessions from the date of enrolment. A part-time or external candidate for the degree shall present for examination not later than ten academic sessions from the date of enrolment. In special cases an extension of these times may be granted by the Committee.

Thesis

4. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the original investigation.

(2) The candidate shall give in writing two months notice of intention to submit the thesis.

(3) The thesis shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree theses.

(6) It shall be understood that the University retains the three copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

5. (1) There shall be not fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the merits of the thesis and shall recommend to the Committee that:

(a) the candidate be awarded the degree without further examination; *or*

(b) the candidate be awarded the degree without further examination subject to minor corrections as listed being made to the satisfaction of the head of the school; *or*

(c) the candidate be awarded the degree subject to a further examination on questions posed in the report, performance in this further examination being to the satisfaction of the Committee; *or*

(d) the candidate be not awarded the degree but be permitted to resubmit the thesis in a revised form after a further period of study and/or research; *or*

(e) the candidate be not awarded the degree and be not permitted to resubmit the thesis.

(3) If the performance at the further examination recommended under (2)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to represent the same thesis and submit to a further oral, practical or written examination within a period specified by it but not exceeding eighteen months.

(4) The Committee shall, after consideration of the examiners' reports and the reports of any oral or written or practical examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the Council.

Master of Science (MSc) and Master of Engineering (ME) - *without supervision*

1. The degree of Master of Engineering or Master of Science without supervision may be awarded by the Council on the recommendation of the Higher Degree or Research Committee of the appropriate faculty (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation.

Qualifications

2. A candidate for the degree shall have been awarded an appropriate degree of Bachelor from the University of New South Wales with at least three years relevant standing in the case of Honours graduates and four years relevant standing in the case of Pass graduates, and at a level acceptable to the Committee.

Enrolment

3. An application to enrol as a candidate for the degree without supervision shall be made on the prescribed form which shall be lodged with the Registrar not less than six months before the intended date of submission of the thesis. A graduate who intends to apply in this way should, in his or her own interest, seek at an early year the advice of the appropriate head of school with regard to the adequacy of the subject matter and its presentation for the degree. A synopsis of the work should be available.

Thesis

4. (1) A candidate shall submit a thesis embodying the results of the investigation.

(2) The candidate shall give in writing to the Registrar two months notice of intention to submit the thesis.

(3) The thesis shall present an account on the candidate's own research. In special cases, work done conjointly with other persons may be accepted provided the Committee is satisfied about the extent of the candidate's part in the joint research.

(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.

(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of theses for higher degrees.

(6) It shall be understood that the University retains the three copies of the thesis submitted for examination and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.

Examination

5. (1) There shall be not fewer than two examiners of the thesis, appointed by the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this is not practicable.

(2) Before the thesis is submitted to the examiners the head of the school in which the candidate is enrolled shall certify that it is prima facie worthy of examination.

(3) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the thesis and shall recommend to the Committee that:

(a) the candidate be awarded the degree without further examination; *or*

(b) the candidate be awarded the degree without further examination subject to minor corrections as listed being made to the satisfaction of the head of the school; *or*

(c) the candidate be awarded the degree subject to a further examination on questions posed in the report, performance in this further examination being to the satisfaction of the Committee; *or*

(d) the candidate be not awarded the degree but be permitted to resubmit the thesis in a revised form after a further period of study and/or research; *or*

(e) the candidate be not awarded the degree and be not permitted to resubmit the thesis.

(4) If the performance at the further examination recommended under (3)(c) above is not to the satisfaction of the Committee, the Committee may permit the candidate to represent the same thesis and submit to further examination as determined by the Committee within a period specified by it but not exceeding eighteen months.

(5) The Committee shall, after consideration of the examiners' reports and the results of any further examination, recommend whether or not the candidate may be awarded the degree. If it is decided that the candidate be not awarded the degree the Committee shall determine whether or not the candidate may resubmit the thesis after a further period of study and/or research.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the Council.

Master of Science by Coursework (MSc) – Biotechnology/Biopharmaceuticals/Food Science and Technology

1. The degree of Master of Science by formal coursework may be awarded by the Council to a candidate who has satisfactorily completed a program of advanced study.

Qualifications

2. (1) A candidate of the degree shall have been awarded an appropriate degree of Bachelor of four full-time years duration (or the part-time equivalent) from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Research Committee of the Faculty of Science (hereinafter referred to as the Committee), *or*

(2) An applicant who submits evidence of such other academic or professional attainments as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least two calendar months before the commencement of the session in which enrolment is to begin.

(2) A candidate for the degree shall be required to undertake such formal courses and pass such assessment as prescribed.

(3) The progress of a candidate shall be reviewed at least once annually by the Committee and as a result of its review the Committee may cancel enrolment or take such other action as it considers appropriate.

(4) No candidate shall be awarded the degree until the lapse of two academic sessions from the date of enrolment in the case of a full-time candidate or four sessions in the case of a part-time candidate. The maximum period of a candidate shall be four academic sessions from the date of enrolment for a full-time candidate and six sessions for a part-time candidate. In special cases an extension of this time may be granted by the Committee.

Fees

4. A candidate shall pay such fees as may be determined from time to time by the Council.

Master of Science and Technology (MScTech)

1. The degree of Master of Science and Technology by formal coursework may be awarded by the Council to a candidate who has satisfactorily complete a program of advanced study.

Qualifications

2. (1) A candidate for the degree shall:

(a) have been awarded an appropriate degree of Bachelor of four full-time years duration (or the part-time equivalent) from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Postgraduate Coursework Education Committee of the Faculty (hereinafter referred to as the Committee), *or*

(b)(i) have been awarded an appropriate degree of Bachelor of three full-time years duration (or the part-time equivalent) from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee and

(ii) have undertaken appropriate postgraduate studies of the full-time year's duration (or the part-time equivalent) at the University of New South Wales or studies considered equivalent from another university or tertiary institution at a level acceptable to the Committee.

(2) An applicant who submits evidence of such other academic or professional attainments as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least two calendar months before the commencement of the session in which enrolment is to begin.

(2) A candidate for the degree shall be required to undertake such formal courses including the submission of a report on a project, and pass such assessment as prescribed. The project shall be under the supervision of an academic staff member and shall be assessed by two examiners (for a major project).

(3) The progress of a candidate shall be reviewed at least once a year by the Committee and as a result of its review the Committee may cancel enrolment or take such other action as it considers appropriate.

(4) No candidate shall be awarded the degree until the lapse of two academic sessions from the date of enrolment in the case of a full-time candidate and four sessions in the case of a part-time candidate. The maximum period of candidature shall be four academic sessions from the date of enrolment for a full-time candidate, eight sessions for a part-time candidate, and ten sessions for an external candidate. In special cases an extension of these times may be granted by the Committee.

Fees

4. A candidate shall pay such fees as may be determined from time to time by the Council.

Master of Optometry (MOptom)

1. The degree of Master of Optometry by formal coursework may be awarded by the Council to a candidate who has satisfactorily completed a program of advanced study.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor of four full-time year's duration (or the part-time equivalent) from The University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Postgraduate Coursework Education Committee of the Faculty of Science (hereinafter referred to as the Committee).

(2) In exceptional cases, an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undertake such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar two calendar months before the commencement of the session in which enrolment is to begin.

(2) A candidate for the degree shall be required to undertake such formal courses and pass such assessment as prescribed.

(3) The progress of a candidate shall be reviewed at least once annually by the Committee and as a result of its review the Committee may cancel enrolment or take such other action as it considers appropriate.

(4) No candidate shall be awarded the degree until the lapse of two academic sessions from the date of enrolment in the case of a full-time candidate or four sessions in the case of a part-time candidate. The maximum period of a candidature shall be four academic sessions in the case of a full-time candidate and eight sessions for a part-time candidate. In special cases an extension of this time may be granted by the Committee.

Fees

4. A candidate shall pay such fees as may be determined from time to time by the Council.

Master of Psychology (Clinical) (MPsychol(Clin)), Master of Psychology (Forensic) (MPsychol(For)) and Master of Psychology (Organisational) (MPsychol(Org))

1. The degree of Master of Psychology (Clinical), Master of Psychology (Forensic) or Master of Psychology (Organisational) by formal coursework and thesis may be awarded by the Council to a candidate who has satisfactorily completed a program of advanced study. The degree shall be awarded at the Pass level or with the grade of Honours Class 1 or with the grade of Honours Class 2 (two divisions).

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor with Honours in Psychology from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution, at a level acceptable to the Higher Degree Committee of the Faculty of Science (hereinafter referred to as the Committee).

(2) In exceptional cases, an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least four calendar months before the commencement of the session in which enrolment is to begin.

(2) A candidate for the degree shall be required to undertake such formal courses and pass such assessment as prescribed.

(3) The progress of a candidate shall be reviewed at least once annually by the Committee and as a result of its review the Committee may cancel enrolment or take such other action as it considers appropriate.

(4) No candidate shall be awarded the degree until the lapse of four academic sessions from the date of enrolment in the case of a full-time candidate or six sessions in the case of a part-time candidate. The maximum period of candidature shall be six academic sessions from the date of enrolment for a full-time candidate and ten sessions for a part-time candidate. In special cases a variation of these times may be granted by the Committee.

Fees

4. A candidate shall pay such fees as may be determined from time to time by the Council.

Master of Safety Science (MSafetySc)

1. The degree of Master of Safety Science may be awarded by the Council to a candidate who has satisfactorily completed a program of advanced study.

Qualifications

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Postgraduate Coursework Education Committee of the Faculty of Science (hereinafter referred to as the Committee).

(2) In exceptional cases an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodge with the Registrar at least two calendar months before the commencement of the session in which enrolment is to begin.

(2) A candidate for the degree shall be required to undertake such formal courses and pass such assessment as prescribed. The program of advanced study shall total a minimum of 45 units of credit. The number of credits allocated for each course shall be determined by the Committee on the recommendation of the Course Director (hereinafter referred to as the head of the school).

(3) The progress of a candidate shall be reviewed at least once annually by the Committee and as a result of its review the Committee may cancel enrolment or take such other action as it considers appropriate.

(4) No candidate shall be awarded the degree until the lapse of two academic sessions from the date of enrolment in the case of a full-time candidate or four sessions in the case of a part-time candidate. The maximum period of candidature shall be six academic sessions from the date of enrolment for a full-time candidate and ten sessions for a part-time candidate. In special cases an extension of these times may be granted by the Committee.

Project Report

4. (1) The program of advanced study may include a 48 units of credit project on an approved topic.

(2) The work shall be carried out under the direction of a supervisor appointed from the full-time academic members of the University staff.

(3) The candidate shall give in writing to the Registrar two months notice of intention to submit a report on the project.

(4) Three copies of the project report shall be presented in a form which complies with the requirements of the University for the preparation and submission of project reports for higher degrees.

(5) It shall be understood that the University retains the three copies of the project report submitted for examination and is free to allow the project report to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the project report in whole or in part, in microfilm or other copying medium.

Examination of Project Report

5. (1) There shall be not fewer than two examiners of the project report, appointed by the Committee.

(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the project and shall recommend to the Committee that:

(a) the project report be noted as satisfactory; *or*

(b) the project report be noted as satisfactory subject to minor corrections being made to the satisfaction of the head of the school; *or*

(c) the project report be noted as unsatisfactory but that the candidate be permitted to resubmit it in a revised form after a further period of study and/or research; *or*

(d) the project report be noted as unsatisfactory and that the candidate be not permitted to resubmit it.

(3) The Committee shall, after considering the examiners' reports and the candidate's results of assessment in the prescribed formal coursework, recommend whether or not the candidate may be awarded the degree. If it is decided that the project report is unsatisfactory the Committee shall determine whether or not the candidate may resubmit it after a further period of study and/or research.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the Council.

Master of Statistics (MStats)

1. The degree of Master of Statistics by formal coursework may be awarded by the Council to a candidate who has satisfactorily completed a program of advanced study.

Qualifications

2. (1) A candidate for the degree shall have been awarded a degree of Bachelor with major studies in statistics from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Postgraduate Coursework Education Committee of the Faculty of Science (hereinafter referred to as the Committee).

(2) In exceptional cases, an applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.

(3) If the Committee is not satisfied with qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least two calendar months before the commencement of the session in which enrolment is to begin.

(2) A candidate for the degree shall be required to undertake such formal courses and pass such assessment as prescribed.

(3) The progress of a candidate shall be reviewed at least once annually by the Committee and as a result of its review the Committee may cancel enrolment or take such other action as it considers appropriate.

(4) No candidate shall be awarded the degree until the lapse of three academic sessions from the date of enrolment in the case of a full-time candidate or six sessions in the case of a part-time candidate. In the case of a candidate who has been awarded a degree of Bachelor with Honours in Statistics the Committee may approve remissions of up to one session for a full-time candidate and two sessions for a part-time candidate. The maximum period of candidature shall be four academic sessions from the date of enrolment for a full-time candidate and eight sessions for a part-time candidate. In special cases, an extension of these times may be granted by the Committee.

Fees

4. A candidate shall pay such fees as may be determined from time to time by the Council.

Graduate Diploma (GradDip)

1. A Graduate Diploma may be awarded by the Council to a candidate who has satisfactorily completed a program of advanced study.

Qualifications

2. (1) A candidate for the diploma shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a

qualification considered equivalent from another university or tertiary institution at a level acceptable to the Postgraduate Coursework Education Committee of the appropriate faculty (hereinafter referred to as the Committee).

(2) An applicant who submits evidence of such other academic or professional attainments as may be approved by the Committee may be permitted to enrol for the diploma.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for diploma shall be made on the prescribed form which shall be lodged with the Registrar at least two calendar months before the commencement of the session in which enrolment is to begin.

(2) A candidate for the diploma shall be required to undertake such formal courses and pass such assessment as prescribed.

(3) The progress of a candidate shall be reviewed at least once annually by the Committee and as a result of its review the Committee may cancel enrolment or take such other action as it considers appropriate.

(4) No candidate shall be awarded the diploma until the lapse of two academic sessions from the date of enrolment in the case of a full-time candidate or four sessions in the case of a part-time candidate. The maximum period of candidature shall be four academic sessions from the date of enrolment for a full-time candidate and six sessions for a part-time candidate. In special cases, an extension of these times may be granted by the Committee.

Fees

4. A candidate shall pay such fees as may be determined from time to time by the Council.

Graduate Diploma by Research (GradDip)

1. A Graduate Diploma by Research may be awarded by the Council to a candidate who has satisfactorily completed an approved program of study that includes the submission of a research report embodying the results of an original investigation and the completion of coursework.

Qualifications

2. (1) A candidate for the diploma shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Postgraduate Coursework Education Committee of the appropriate faculty (hereinafter referred to as the Committee).

(2) An applicant who submits evidence of such other academic or professional attainments as may be approved by the Committee may be permitted to enrol for the diploma.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the graduate award shall be made on the prescribed form which shall be lodged with the Registrar at least two calendar months before the commencement of the session in which enrolment is to begin.

(2) In every case before making the offer of a place the Committee shall be satisfied that initial agreement has been reached between the School and the applicant on the topic area, supervision arrangements, provision of adequate facilities and any coursework to be prescribed and that these are in accordance with the provisions of the guidelines for promoting postgraduate study within the University.

(3) The normal duration of the program is two academic sessions from the date of enrolment in the case of a full-time candidate or four sessions in the case of a part-time candidate. In special circumstances a variation of these times may be approved by the head of school.

(4) The progress of a candidate shall be reviewed by the end of two sessions by the Committee and as a result of its review the Committee may cancel enrolment or take such other action as it considers appropriate.

(5) The candidate may undertake the research as an internal student, i.e. at a campus, teaching hospital, or other research facility with which the University is associated, or as an external student not in attendance at the University except for periods as may be prescribed by the Committee.

(6) An internal candidate will normally carry out the research on a campus or at a teaching or research facility of the University except that the Committee may permit a candidate to spend a period in the field, within another institution or elsewhere away from the University provided that the work can be supervised in a manner satisfactory to the Committee. In such circumstances the Committee shall be satisfied that the location and period of time away from the University are necessary to the research program.

(7) The research shall be supervised by a supervisor or supervisors who are members of the academic staff of the School or under other appropriate supervision arrangements approved by the Committee. Normally an external candidate within another organisation or institution will have a co-supervisor at that institution.

Research Report

4. (1) On completing the program of study a candidate shall submit to the School a research report embodying the results of the original investigation.

(2) The research report shall present an account of the candidate's own research. In special cases, work done conjointly with other persons may be accepted, provided the Committee is satisfied as to the candidate's contribution to the joint research.

Coursework

5. The School shall specify, at the time of the candidate's acceptance into the program, any courses to be undertaken and the level of achievement required in each of the courses.

Fees

6. A candidate shall pay such fees as may be determined from time to time by the Council.

Graduate Certificate (GradCert)

1. A Graduate Certificate may be awarded by the Council to a candidate who has satisfactorily completed an approved program of study.

Qualifications

2. (1) A candidate for the Graduate Certificate shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Postgraduate Coursework Education Committee of the Faculty (hereinafter referred to as the Committee).

(2) An applicant who submits evidence of such other academic and professional qualifications as may be approved by the Committee may be permitted to enrol for the Graduate Certificate.

(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.

Enrolment and Progression

3. (1) An application to enrol as a candidate for the Graduate Certificate shall be made on the prescribed form which shall be lodged with the Registrar by the advertised closing date, which shall be set at least two calendar months before the commencement of the session in which enrolment is to begin.

(2) A candidate for the certificate shall be required to undertake courses and pass any assessment prescribed.

(3) The progress of a candidate shall be reviewed by the end of two sessions by the Committee and as a result of its review the Committee may cancel enrolment or take such other action as it considers appropriate.

(4) The normal duration of the course is one academic session from the date of enrolment in the case of a full-time student or two sessions in the case of a part-time. For an open learning or external candidate the normal duration is two sessions from the date of enrolment. In special cases, a variation of these times may be approved by the head of school.

Fees

4. Candidates shall pay such fees as may be determined from time to time by Council.

Postgraduate Course Descriptions

ACCT5901
Accounting: A User Perspective
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S1 S2 X1

This course is primarily for the users rather than the preparers of accounting information. The focus is on the understanding and the use of accounting information; the composition and meaning of the financial statements prepared for resource providers in accordance with the law and contractual arrangements; and accounting systems and reports designed for the decision makers within an organisation.
Note/s: Instead of ACCT5901, students may enrol in ACCT5930, which is a more technical introductory accounting course. Students who wish to complete the special program in Professional Accounting or who wish to study more advanced financial accounting courses, such as ACCT5970, should start with ACCT5930 rather than ACCT5901.

ACCT5905
International Financial Reporting and Analysis
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ACCT5901 or ACCT5930 or equivalent

This course aims to provide an understanding of the international dimensions of financial reporting and analysis for effective operation in the global business environment. The internationalisation of business and the growth of the world's capital markets create accounting challenges for multinational enterprises and the parties interested in the preparation and use of their financial reports. Topics include: types of differences in national financial reporting practices; the reasons for the differences; the results of the convergence efforts of the International Accounting Standards Board; multinational management and investor perspectives on information disclosure and harmonisation; foreign currency exposures and the associated accounting issues; international financial statement analysis; financial reporting 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. Numerical examples and cases are used in examining important concepts and issues.Note: The dimensions of international accounting concerned with reporting to management on multinational operations are covered in ACCT5955 Value-Based Management in a Global Economy.

ACCT5908
Auditing and Assurance Services
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: ACCT5930

This course examines the practice of auditing and the underlying concepts. Although the focus of attention is on audits carried out under the provisions of the Australian Corporations & Securities Legislation, 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. Topics include: risk analysis approach; assessment of risk; development of audit strategy; internal control evaluation and compliance testing; substantive testing; analytical review; auditing in an EDP environment; audit sampling; audit reporting; contractual and common law duties; the role of ethics; and an introduction to internal and public sector auditing.

ACCT5909
Current Developments in Auditing Research
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1

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.

ACCT5910
Financial Statement Analysis
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: ACCT5901 or ACCT5930;
Corequisite/s: FINS5513 OR FINS5511

This course examines the: sources of information available to analysts; traditional ratio analysis; application of techniques of financial analysis to equity valuation; credit assessment; and price regulation. Also looked at are: calculations of key indicators of financial performance; issues arising from international differences in accounting standards and practices; off-balance sheet financing and financial instruments; problems arising from complex organisational structures; and strategies for managing the financial analysis function.

ACCT5912
Accounting: A User Perspective
Graduate Programs in Business and Technology
Staff Contact: K Brooke M Brennan
Enrolment requires School approval
UOC6 HPW1.5 S1 X1
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

This course is designed for those who use accounting information, rather than those whose task it is to prepare it. The focus is on the understanding and use of accounting information, as well as the composition and meaning of the financial statements. The course covers accounting reports prepared for external users as well as accounting reports used by managers to plan, control and make decisions.

ACCT5917
Strategic Management: Systems and Processes
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S1 X1

This course explores the process and practice of strategic management - the constitution of an organisation's competitive positioning in its environment. Topics to be covered include: strategic thinking and analysis; the formulation and choice of strategic alternatives; managing extended strategic change; and the embedding of organisation al strategy in everyday activities. These topics are explored through a critical examination of relevant literatures, documented case studies and contemporary business practices.

ACCT5919
Business Risk Management
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S2 X1

In a rapidly changing global world, with decreasing product life cycles and increasing customer and societal expectations, there are significant and increased risks associated with ongoing value creation by organisations. In this world, value is put at risk - by competition, or failures of corporate leadership, strategies, processes, and capabilities. Developing effective ways of managing such Business Risks is proving to be a central agenda item for organisations seeking continuing success. This course addresses this emergent field conceptually, technically and speculatively. Case studies and research reports are used throughout.

ACCT5920
Managing Intangible Resources
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S1

The gap between the market value of firms and the capitalisation of their assets in the balance sheet highlights the value that investors are prepared to attribute to the "intangible resources" of many organisations (such as financial service, software development and e-commerce companies). The value generating potential of such organisations is attributed to resources, and competencies in managing those resources, that the traditional accounting system is both unable and unwilling to represent in explicit financial terms. This course aims to identify these "intangible resources" and to examine their role in achieving superior

financial performance. Topics include: customer relationships; supplier relationships; knowledge management; diversity; and community and government relationships. In addition, this subject will also explore advances in financial reporting that attempt to capture and represent these "intangible resources," for example, triple line reporting, the Scandia Navigator system and other recent attempts at social accounting. This subject is based on the premise that long term sustainable value creation is achieved only from collaborative organisational practices in which the contributions of all stakeholders are recognised and rewarded.

ACCT5921
Business Performance Management
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S2
Corequisite/s: ACCT5996 or equivalent introductory management accounting course

This course examines the management of business performance in organisations through the use of performance measurement and reward systems. Topics include: theoretical frameworks for analysing performance measurement and reward system design; performance measurement in decentralized organisations; systems for measuring continuous improvement; the concept of a "balanced scorecard"; technical issues in developing performance measures such as EVA, SVA and reports such as the balanced scorecard and intangible asset monitor ; designing and implementing/performance-based reward systems; ethical issues in measuring and rewarding performance. Concepts and issues are examined with an extensive use of cases.

ACCT5922
E-Business: Strategy and Processes
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S1 S2

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 usch organisations, the strategic management of time, cost, flexibility, quality, and integration is critical to sustain value generation. This subject has two aims. First, it seeks to highlight and evaluate the new business strategies and models adopted by E-businesses. Second, it explores how organisational resources may be mobilised to achieve these new value propositions and to facilitate value generation within a dynamic electronic business environment.

ACCT5930
Financial Accounting
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S1 S2

This course examines the fundamentals of financial accounting for entities of simple organisational design; financial recording processes, systems design and internal control; preparation of general purpose statements of financial position, operating performance and cash flow statements; responsibilities in financial reporting; financial reporting constraints; recognition and measurement of specific financial statement elements; and analysis and interpretation of financial reports.
Note/s: Students may substitute ACCT5930 Financial Accounting for ACCT5901 Accounting: A User Perspective. The course ACCT5930 will be useful for students specialising in Accounting, Actuarial Studies, Banking, Finance, Funds Management, International Finance and Risk and Insurance. While ACCT5901 has a strong focus on using financial reports, ACCT5930 includes both user and preparer perspectives with a more thorough analysis of the construction of financial statements.

ACCT5931
Strategic Financial and Resource Management
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2 X1
Prerequisite/s: ACCT5996

This course will introduce emergent thinking about the interfaces between financial and business performance, with a focus on adding value to the business rather than emphasising financial control. The link between strategy, resourcing and change is highlighted, in focusing on the effective use of an organisation s financial and other resources in creating value for customers and shareholders. The course aims to introduce strategic financial management as an integrated way of thinking about the key drivers of value in organisations.
Note/s: Not available to students who have completed ACCT3583 or ACCT3593 in the last three years.

ACCT5932
Public Sector Accounting and Financial Reporting
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ACCT5901 or ACCT5930 or equivalent

A review of accounting methods applied by Commonwealth, State and Local Government entities. Fund accounting and cash-based reporting. Accrual-based reporting including a review of the issues associated with the measurement of assets and liabilities in the public sector. Infrastructure assets, heritage assets, and obligations arising from complex transactions. Departmental and whole of government reports. Issues arising from the commercialisation of government units. Identification and costing of community service obligations. Performance indicators and the evaluation of financial performance and service quality.

ACCT5934
Issues in Public Sector Financial Administration
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ACCT5901 or ACCT5930 or equivalent

Alternative administrative models. Separating funders and providers, and measuring financial and operational performance in general government agencies. Ring-fencing regulatory functions. Resource allocation processes: performance, zero-based, program output and flexible budgeting. Forms of accrual budgeting. Identifying and costing outputs. Information management, systems design process re-engineering to reduce administrative costs. Project evaluation in the public sector, and assumptions about the public sector cost of capital. Application of discounted cash flow analysis and economic cost-benefit analysis in project evaluation. Service competition and benchmarking service delivery. Analysis of contracting out and privatisation proposals.

ACCT5949
Managing Agile Organisations
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S2

There has been much change and innovation in the structure and form of organisations in the new millennium. There is now a large array of organisational forms - from simple hierarchies to complex organisational sets and alliances. Given this diversity, managers need an innovative repertoire of managerial skills and competencies.This course has three aims: (a) to briefly identify the new and innovative ways that productive relationships have been structured at the intra-organisational and inter-organisational levels; (b) to investigate the challenges these pose for the concept of 'managerial work', and (c) to develop the managerial competencies required to manage dynamic 'agile' organisations. Topics covered include: the postindustrial age, managerial work, managing discourse, power, normative rule structures, teams, ambiguity and change. Group discussion is emphasised in this course. There is also a focus on the use of case studies.

ACCT5951
Current Developments in Accounting Research - Financial
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1

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.

ACCT5952
Current Developments in Accounting Research - Managerial
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1

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.

ACCT5955
Value-Based Management in a Global Economy
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S1
Corequisite/s: ACCT5996 or Equivalent Introductory Management Accounting course

This course examines the design and use of contemporary management technologies that have been developed to support value creation in organisations. Topics include: design and implementation of strategic cost management systems, advanced cost analysis; advanced cost estimation techniques; assessing and evaluating customer and segment profitability; revenue analysis; capacity management; target costing and life-cycle costing. Cases are used extensively in the course and particular focus is placed on the role of the technologies in multi-national organisations.

ACCT5967
Special Topic in Accounting
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: ACCT5997 or equivalent

To assist MCom 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.

ACCT5970
Accounting Concepts and Financial Reporting
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: ACCT5930

This course covers: preparation of financial statements for entities of complex organisational design; cross border entities and transactions; consideration of issues in asset, liability, expense and revenue recognition and measurement; accounting for primary and derivative financial instruments; and analysis and interpretation of financial statements of complex entities.
Note/s: Not available to students with a Bachelor's degree from an Australian university with a major in accounting.

ACCT5981
Strategic Resource Management
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S2
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457
Strategic Resource Management focuses on ways in which organisations utilise available resources to generate value over time. Attention is given to the drivers of both shareholder and customer value as guides to organisational performance in capital and product and service markets respectively. The transformation of resources in and out of financial forms is at issue, as is the elimination of waste in the process. The key question is: 'How does resource deployment effectively support strategy in the midst of continuous change?'

ACCT5982
Managing Agile Organisations
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S2
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

Managing Agile Organisations seeks to develop the managerial perspectives and competencies required for the emergent knowledge economy. It addresses the new challenges posed by fast-moving service life cycles, workforce empowerment, the virtual structuring of organisations, globalisation, and heightened ambiguity. It examines how these challenges should be met by managers in agile organisations, as they negotiate time and space, interactions and discourse, power and culture, diversity and commitment, and innovation and change.

ACCT5985
The Innovative Organisation
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S2
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

The Innovative Organisation introduces new ways of thinking about organisations. This course explains how organisational systems, structures and processes can support superior organisational performance when underpinned by progressive people management practices. It aims to clarify current approaches to managing in innovative ways, and to critically evaluate these approaches in the light of the individual student's experience and understanding. It deals with topics such as new forms of work organisation, networks, developing capabilities, organisational learning, employment relations, technology and change.

ACCT5996
Business Processes: Analysis and Improvement
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s or Corequisite/s: ACCT5901 or ACCT5930

This course examines the design and operation of business support systems whose role is to provide financial and non-financial information about resource consumption and value generation, and facilitate the improvement of business processes and organisational performance. The focus is on how organisational processes are evaluated, managed and changed to sustain future profitable operations. The course provides a number of tools that develop an understanding of how processes, as presently configured, consume resources and may be improved in order to generate valued attributes of products and services, including time, quality, invariability, flexibility and cost.
Note/s: Not available to students who have completed ACCT2522 or ACCT2532 in the last three years.

ACCT5997
Seminar in Research Methodology
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1

This course considers the relationship between science and scientific method; provides an introduction to the interpretation of the key statistical techniques used in accounting research; and considers and reviews some of the principle research methods that have been used to address issues in accounting.

ACCT5998
Project Seminar
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC6 S1 S2

ACCT5999
Project Report
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC12 S1 S2

ACCT7908
International Auditing and Assurance Services
School of Accounting
Staff Contact: School Office
UOC6 S1 S2

Note/s: Only offered to students in the International Professional Accounting Program Beijing ACCTES8405.

ACCT7930
International Financial Accounting
School of Accounting
Staff Contact: School Office
UOC6 S1 S2

Note/s: Only offered to students in the International Professional Accounting Program Beijing ACCTES8405.

ACCT7931
Strategic Financial and Resource Management
School of Accounting
Staff Contact: School Office
UOC6 S1 S2

Note/s: Only offered to students in the International Professional Accounting Program Beijing ACCTES8405.

ACCT7970
Accounting Concepts and Financial Reporting (International)
School of Accounting
Staff Contact: School Office
UOC6 S1 S2

Note/s: Only offered to students in the International Professional Accounting Program Beijing ACCTES8405.

ACCT7996
Business Processes: Analysis and Improvement
School of Accounting
Staff Contact: School Office
UOC6 S1 S2

Note/s: Only offered to students in the International Professional Accounting Program Beijing ACCTES8405.

ACCT8908
International Auditing and Assurance Services
School of Accounting
Staff Contact: School Office
UOC6 S1 S2
Prerequisite/s: ACCT8930

Note/s: Only offered to students in the International Professional Accounting Program Guangzhou ACCTES8403.

ACCT8930
International Financial Accounting
School of Accounting
Staff Contact: School Office
UOC6 S1 S2

Note/s: Only offered to students in the International Professional Accounting Program Guangzhou ACCTES8403.

ACCT8931
Strategic Financial and Resource Management
School of Accounting
Staff Contact: School Office
UOC6 S1 S2
Prerequisite/s: ACCT8930

Note/s: Only offered to students in the International Professional Accounting Program Guangzhou ACCTES8403.

ACCT8970
Accounting Concepts and Financial Reporting (International)
School of Accounting
Staff Contact: School Office
UOC6 S1 S2
Prerequisite/s: ACCT8930

Note/s: Only offered to students in the International Professional Accounting Program Guangzhou ACCTES8403.

ACCT8996
Business Processes: Analysis and Improvement
School of Accounting
Staff Contact: School Office
Enrolment requires School approval
UOC6 S1 S2
Prerequisite/s: ACCT8930

Note/s: Only offered to students in the International Professional Accounting Program Guangzhou ACCTES8403.

ACTL5000
Thesis – Actuarial Studies
School of Economics
Staff Contact: School Office
UOC24

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.

ACTL5001
Thesis (part-time) – Actuarial Studies
School of Economics
Staff Contact: School Office
UOC24

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.

ACTL5002
Superannuation & Retirement Benefits
Actuarial Studies Unit
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON5103, ECON5203
Excluded: ECON5114

This course provides a comprehensive analysis of superannuation and retirement benefits, primarily in Australia. Topics include: alternative superannuation arrangements, taxation and regulation of superannuation, risk management and investment strategies for superannuation, design of retirement benefits, the retirement decision, policy developments and controversies and international comparisons.

ACTL5003
Research Topics in Actuarial Studies
Actuarial Studies Unit
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1

This course is an advanced course in actuarial science covering selected topics in the areas of actuarial modelling in insurance risk, life insurance, superannuation and financial economics. The course will involve the study and discussion of current research papers and advanced texts of interest to research students. As part of the course, students will learn to develop a research topic, apply the methodology of scientific research and gain exposure to the presentation of research in actuarial journals.

ACTL5004
Project Report - Actuarial Studies
Actuarial Studies Unit
Staff Contact: M Sherris
Enrolment requires School approval
UOC12 S1

Students complete a project under the direction of a supervisor.

ACTL5100
Actuarial Theory and Practice A
Actuarial Studies Unit
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1

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 ACTL5200, corresponds to the Part II courses of the professional examinations of The Institute of Actuaries of Australia.

ACTL5101
Probability and Statistics for Actuaries
Actuarial Studies Unit
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON5203.

This course covers probability and statistics topics relevant to actuarial studies with applications in insurance and related areas. 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 and analysis of variance.

ACTL5102
Financial Mathematics
Actuarial Studies Unit
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1

This course develops the financial and actuarial mathematics required for the analysis of financial and insurance transactions. Topics covered include: mathematics of compound interest, valuation of cash flows of 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.

ACTL5103
Stochastic Modelling for Actuaries
Actuarial Studies Unit
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2

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 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 such as Matlab.

ACTL5104
Actuarial Statistics
Actuarial Studies Unit
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1

This course covers the estimation and application of survival models in actuarial modelling. Topics include: actuarial notation and applications of survival models; state Markov models; binomial and Poison models for mortality; maximum likelihood estimation; construction of multiple decrement tables; models with transition intensities depending on age and duration; the census approximation and formulae; statistical comparison of crude rates with standard actuarial tables; graduation of 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 such as Matlab will form part of the course assessment.

ACTL5105
Life Insurance & Superannuation
Actuarial Studies Unit
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1

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; actuarial valuation of disability insurance contracts.

ACTL5106
Insurance Risk Models
Actuarial Studies Unit
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2

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 compoind Poisson; estimation of aggregate claims distribution; probability of ruin; premium rating and credibility; experiencerating systems; and claims reserving for loss run-off data.

ACTL5109
Financial Economics for Insurance and Superannuation
Actuarial Studies Unit
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2

The aim of this course is to introduce the mathematical and economic models of financial economics used by actuaries and to overview their application to asset-liability management. The topics are illustrated with applications to the valuation, actuarial and risk management of insurance and superannuation contracts especially those with embedded options and financial guarantees.

ACTL5200
Actuarial Theory & Practice B
Actuarial Studies Unit
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2

This course, along with ACTL5100 Actuarial Theory and Practice A, develops the theory and practice underlying the actuarial management of risk-based and other products offered by financial institutions. The course draws examples from actuarial practice and discusses implications for life insurance, general insurance, superannuation, asset-liability management and other areas where actuaries are involved in product design, pricing, reserving, investment and surplus management. The course emphasises recent developments in actuarial theory. This course, along with ACTL 5100, corresponds to the Part II courses of the professional examinations of The Institute of Actuaries of Australia.

AERO9010
Project
School of Mechanical and Manufacturing Engineering
Staff Contact: D Kelly
UOC12 S1 S2

Note/s: The project must be completed in no more than two sessions.

AERO9105
Aerospace Vehicle Design and Manufacture
School of Mechanical and Manufacturing Engineering
Staff Contact: J Page
UOC6 HPW3 S1

Design objectives and constraints: function, cost durability. Design process: configuration design, structural design, systems. Integration design. Production methods. Quality control: design manufacture, operation. Design development: prototyping, component and system testing (ground and flight), manufacture. The above topics will be dealt with in the context of workshops associated with an intensive design project.

AERO9415
Finite Element Analysis and Applications for Aerospace Structures
School of Mechanical and Manufacturing Engineering
Staff Contact: D Kelly
UOC6 HPW3 S1
Excluded: AERO4401, MECH9410, NAVL4401

Theoretical foundations. Linear static and dynamic analysis. Non-linear material behaviour and geometrically non-linear behaviour. Validation of models. Project: Each student will undertake a project involving the finite element modelling of a structure and the analysis of its static and dynamic characteristics. A major finite element package will be used for the conduct of this project.

AERO9543
Cad/Cam for Aerospace Structures
School of Mechanical and Manufacturing Engineering
Staff Contact: K Hoang
UOC6 HPW3 S1
Excluded: MANF9543

Current aviation standards in Australia for CAD/CAM use in aerospace industries. Concepts of CAD/CAM and introductions to CATIA, NC and Fourth Shift. Concurrent engineering. Group technology. Process planning. Integrated manufacturing planning and control. Manufacturing control: computer and numerical, robotics, measurement, analysis and actuation.

AERO9606
Aerodynamics
School of Mechanical and Manufacturing Engineering
Staff Contact: N Ahmed
UOC6 HPW4 S1 S2

Potential flow and wing theory. Low speed, inviscid and incompressible flow; high-speed viscous and compressible flow. Visualisation in the laboratory and the use of computer modelling techniques.

AERO9607
Flight Dynamics
School of Mechanical and Manufacturing Engineering
Staff Contact: T Barber
UOC6 HPW3 S2

Introduction to atmospheric and space environment. Aerospace vehicle performance. Mission Profiles. Longitudinal and static stability. Neutral and manoeuvre points and margins. Flight test measurements and handling qualities. Dynamic stability and control of atmospheric vehicles and their testing in flight and evaluation.

AERO9705
Aerospace Propulsion
School of Mechanical and Manufacturing Engineering
Staff Contact: R Casey
UOC6 HPW4 S1 S2

Propulsion systems: history, types, basic thrust, efficiency equations. Propellers, rotors and fans: engine cycle thermodynamics, performance, testing. Engine intakes: subsonic, supersonic, ramjets, rockets. Noise and pollution.

ANAT6151
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.

ANAT9171
Anatomy for Medical Physics
School of Medical Sciences
Staff Contact: B Freeman
UOC6 HPW6 S1 S2

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.

ARCH7003
Graduate Research Project
Architecture Program
Staff Contact: J Plume
UOC12 HPW8 S1 S2
Excluded: ARCH7001, ARCH7002.

The project comprises research into the theory or practice of architecture in relation to the Program within which the student is enrolled and is nominated by the student and approved by the Program Director. The research should represent both a synthesis of and an extension to the knowledge and skills acquired during the Program and will be supervised by a member of the academic staff. Appropriate research methodologies and techniques are to be used in all aspects of the work leading to the preparation of a written research project. Assessment by written report and seminar.

ARCH7004
Architectural Research Project
Architecture Program
Staff Contact: P Kohane
UOC12 HPW8 S1 S2

A studio-based design study related to the project being offered in Architectural Design Project 1 or 2, or Architectural Design Charette, or another study or project agreed with the Program Director allied with architectural design, history, or theory. The study will comprise the investigation and documentation of selected design and theoretical and historical aspects of architectural design, or of the studio project, or of the studio teaching philosophy and process, or of the design methods or techniques being used in the studio. This course will usually require attendance at and participation in the Architectural Design Project studio. A report of 20,000 words including a comprehensive literature review, or an equivalent mode of documentation agreed with the Program Director, is to be submitted for examination.

ARCH7103
Architecture Design Project 1
Architecture Program
Staff Contact: P Johnson
UOC12 HPW8 S1
Excluded: ARCH7101

Theory, research and studio practice, in the form of graduate research projects in design, applied to general architectural themes of high priority in the contemporary context. After thorough theoretical foundation and research analysis, the theme is adapted to a specific and concrete situation to achieve an architectural synthesis of all relevant influences arising from the physical and human context. Assessment by major design studio project.

ARCH7104
Architecture Design Project 2
Architecture Program
Staff Contact: P Johnson
UOC12 HPW8 S2
Excluded: ARCH7102

Theory, research and studio practice, in the form of graduate research projects in design, applied to general architectural themes of high priority in the contemporary context. After thorough theoretical foundation and

research analysis, the theme is adapted to a specific and concrete situation to achieve an architectural synthesis of all relevant influences arising from the physical and human context. Assessment by major design studio project.

ARCH7105
Architectural Design Charette
Architecture Program
Staff Contact: School Office
UOC12 HPW16

A studio-based design study under the direction of a visiting national or international architect, designer, or theorist of repute based around a theme and site selected by the visitor. The charette is offered once per year at the discretion of the Program Director. The name of the visiting architect and will be advertised during the six months preceding the Summer Session. Assessment is by design critique of the studio project.

ARCH7204
Design Computing Theory
Architecture Program
Staff Contact: J Plume
UOC6 HPW2 S1
Excluded: ARCH7201

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 reading and one major essay task.

ARCH7205
Computer Graphics Programming
Architecture Program
Staff Contact: S Peter
UOC6 HPW4 S1
Excluded: ARCH7203

A study of the principles and techniques of interactive computer graphics programming using a high-level procedural language. Topics include: procedural language concepts, computer graphics techniques, event driven programming, and world coordinate systems. Assessment is through a staged series of programming exercises.

ARCH7206
CAD Management and Information Technology
Architecture Program
Staff Contact: J Plume
UOC6 HPW3 S2
Excluded: ARCH7202, ARCH7222

This course is divided into two discrete components: the first relates to the implementation and management of CAD systems; while the second reviews the current state of information technology. The CAD Management component will discuss the implications and impact of change within architectural practice as well as practical issues such as CAD system selection and installation; maintenance and upgrades; software customisation; resource management; office standards; and training. The Information Technology component 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 projects and student seminars.

ARCH7304
Architecture and the City
Architecture Program
Staff Contact: P Kohane
UOC6 HPW2 S1

This course investigates the historical formation of selected international cities, with attention focussed on past and present theories. Australian developments are studied. Classes also explore contemporary debates through the projects or writings of Le Corbusier, Kahn, Rossi et al. Assessment is by two essays.

ARCH7305
Theories in History
Architecture Program
Staff Contact: P Kohane
UOC6 HPW2 S1 S2
Excluded: ARCH7302

This course investigates the writings of architectural theorists from Vitruvius to the present. Authors to be studied include Alberti, Semper, Loos and Le Corbusier. Interpretations of the texts will be focussed around specific issues critical to modern practice. These will range from broad social concerns, such as the ethical role of the architect, to the qualities of architectural form, such as the relationship of structure to ornament. The aim of the subject is to provide a theoretical foundation capable of responding to the problems we now face. Assessment is by two essays.

ARCH7306
Theory and Architectural Practice
Architecture Program
Staff Contact: P Johnson
UOC6 HPW2 S1
Excluded: ARCH7303

Presents theoretical issues which have arisen in 20th-century practice and criticism, raises a number of ethical issues in relation to architectural practice and their impact on theory, examines the validity of certain architectural positions currently adopted within the architectural profession, and finally discusses prospects for a viable architectural future by reviewing ideas informing both visions for and the projected context of the profession. Assessment is by two essays.

ARCH7307
Architectural Design Strategies
Architecture Program
Staff Contact: M Tawa
UOC6 HPW2 S1

The course focuses on the recent history and application of design conceptualisation and problem-solving strategies. It reviews architectural design research, design formulation, design thinking and attitudes, strengths and weaknesses of design methods, the use of precedents, problem-solving techniques, conceptual blockages and breakouts, strategies for small-scale and large-scale design tasks, strategies for simple and complex design tasks, design feedback, design reporting, and offers case studies of design strategies by significant architects and designers. Also raised are issues and strategies associated with the new field of 'non-design'. Assessment by essay and design study. Course may be offered in compact mode, including weekends.

ARCH7308
Architectural Design Aesthetics
Architecture Program
Staff Contact: M Tawa
UOC6 HPW2 S1 S2

The course considers the aesthetics of contemporary selected local and overseas design approaches such as the aesthetics of the New Urbanism. Also considered are major urban interventions such as designing for the Olympics and the revitalisation of devastated cities. Topics studied may include historic and theoretical issues about style, cultural difference, context and townscape, tradition, authenticity, proportion, scale, materiality and technology. Selected case studies are presented on significant and controversial buildings, projects, and architects/designers, from Australia and overseas. Assessment by essay and design study. Course may be offered in compact mode, including weekends.

ARCH7309
Architectural Writing and Criticism
Architecture Program
Staff Contact: C De Lorenzo
UOC6 HPW2 S1 S2

The course examines recent historical and contemporary examples of written and journalistic criticism of architecture, including selected writings by Australian and overseas critics. Key discursive techniques are discussed as well as major critical themes, along with thematic categories in architectural writing over the past three centuries. A selection of the work of Australian and international writers and critics will be presented and discussed. Some seminars will be offered by active Australian architectural writers, journalists and critics. Assessment by two essays. Course may be offered in compact mode, including weekends.

ASIA5001
Approaches to Asia
School of History
Staff Contact: M Roces
UOC8 HPW2 S1

Introduces students to the different types of approaches and perspectives developed in the scholarly research on Asia. Topics include orientalism, gender, postmodernism, citizenship and democracy, subaltern studies, oral history and the interview, dress/costume and nation, anthro-history, nationalist histories and memoir, biography and autobiography. Presents different ways of seeing, writing and studying about Asia in contemporary times.

ASIA5100
Research Project
Department of Chinese & Indonesian Studies
Staff Contact: D Reeve
Enrolment requires School approval
UOC8 S1 S2

A research project of 10,000 words on a topic approved by the Coordinator of the Master of Arts in Asian Studies.
Note/s: This project is available only to students enrolled in a full MA program who have achieved distinction level over three completed courses and demonstrated research capacity. Application forms to undertake this course are available from the Coordinator and must be lodged for consideration by the end of the teaching period of the session preceding the start of the research project.

ASIA5200
Reading Program (Asian Studies)
Department of Chinese & Indonesian Studies
Staff Contact: D Reeve
Enrolment requires School approval
UOC8 S1 S2

Reading programs are individually determined. Approval must be obtained from the Coordinator of the program.
Note/s: Students must have completed at least three courses to be considered for acceptance into a reading program. Students may enrol in a Reading Program as a substitute for one of the optional courses.

ATAX0100
Principles of Australian Taxation Law
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1 S2

Principles of Australian Taxation Law is intended to provide graduates from a degree outside Law or Commerce with a sophisticated but broad understanding of the Australian taxation system from a legal perspective. In this course the fundamental elements of the Australian direct and indirect taxation regimes are analysed. The course investigates the income and deductions rules, timing issues in taxation, capital gains tax, the basic fringe benefits tax rules and the taxation of superannuation. The course also gives students an understanding of the Goods and Services Tax and of the administration of the tax system. Important state taxes such as stamp duty and payroll tax are also discussed.

ATAX0103
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.

ATAX0104
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.

ATAX0105
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.

ATAX0106
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.

ATAX0108
Principles of Capital Gains Taxation
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2
Recommended Prior Knowledge: ATAX0100

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.

ATAX0113
Taxation of Companies, Trusts and Partnerships
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1
Recommended Prior Knowledge: ATAX0100

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.

ATAX0116
Critical Perspectives and Ethics
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1
Recommended Prior Knowledge: ATAX0100

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.

ATAX0117
Tax Accounting Systems
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2
Recommended Prior Knowledge: ATAX0100 and ATAX0105

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.

ATAX0123
Principles of Goods and Services Tax Law
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2
Recommended Prior Knowledge: ATAX0100

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.

ATAX0301
Tax Policy
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1 S2
Recommended Prior Knowledge: Completion of a minimum of 18 units of credit (GradDipTaxStudies)

No tax decision, from the highest tax policy design issue to the most mundane and technical problem of tax accounting, is made in a tax policy vacuum. This course is designed to develop the skills and knowledge necessary to enable the evaluation of government tax policies. An intensive 'hands on' approach is adopted to the development of techniques for practical, policy driven, tax problem solving. Economic issues are given prominence complemented with attention to political, institutional and administrative constraints on the development of tax policy. The skills learnt will enable you to move comfortably from consideration of broad strategic tax policy problems to evaluating tax policy decisions at the practical level.

ATAX0303
Taxation of Corporations
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

Companies are significant entities for collective investment. This course provides a comprehensive analysis of financial and taxation issues relating to investment in, and distributions by, Australian domestic companies. Examination of companies involves the theoretical framework of corporate tax integration theory, and detailed practical analysis of the Australian imputation system and rules relating to corporate distributions. Corporate structuring issues and anti-avoidance provisions are also detailed.

ATAX0304
International Comparative Taxation
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1
Recommended Prior Knowledge: ATAX0320

This course is designed to equip students with an understanding of the operative tax systems in three jurisdictions, namely the United States, Singapore and Hong Kong. A comparison will be made between the operation of these tax systems and the operation of Australia's international tax system. There will also be a detailed examination of the operation of Australia's Double Tax Agreements (DTAs) generally.

ATAX0305
Taxation of Trusts
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

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.

ATAX0306
Current Problems in Tax Decision Making
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

This course provides students with insights into current issues affecting tax administration. The course considers compliance research from the perspectives of both taxpayers and the economy in general. Administrative and constitutional law aspects are examined to provide a context for tax administrative law, and the review and appeal processes generally. Additionally the leading works on decision making theory are discussed to provide a perspective on their application in administrative decision making.

ATAX0307
Taxation of Corporate Finance
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

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.

ATAX0308
International Tax: Anti-Avoidance
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1
Recommended Prior Knowledge: ATAX0305, ATAX0311 and ATAX0320.

This course exposes students to the main aspects of the law which are specifically relevant to anti-avoidance of international taxation. It aims to instil a clear understanding of these aspects so that students, when dealing with cross border income flows in their roles as tax professionals, may avoid inadvertently falling into an unexpected trap created by these

provisions. Specifically, students studying this course will be required to come to grips with Australia's: (i) controlled foreign company ('CFC') rules; (ii) foreign investment fund ('FIF') rules; (iii) transferor trust rules and (iv) the thin capitalisation and transfer pricing rules.

ATAX0310
Taxation of Superannuation
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

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.

ATAX0311
Taxation of Capital Gains
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

This course centres upon the basic structure and central concepts of the Australian Capital Gains Tax. It considers the policy rationale for taxing capital gains, and provides in-depth technical analysis of the legislation. It covers the general scheme, detailed calculation provisions, the impact of CGT on entities (such as companies, trusts and partnerships) and on specific assets, and the CGT concessions that exist in the roll-over and exemption provisions for individuals and large and small businesses. The course explores some of the key anti-avoidance provisions that exist, and aims to provide a thorough understanding of the key aspects of the Australian CGT.

ATAX0314
Selected Problems in Stamp Duty
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

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. The course examines stamp duty on conveyances, transfers of dutiable property, leases, transfers, dutiable transactions and trusts. Although the course has broad focus, stamp duty rules in New South Wales, Victoria, Western Australia and Queensland are specifically covered.

ATAX0315
Taxation of Specific Industries
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

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.

ATAX0318
Complex Corporate Structures
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2
Recommended Prior Knowledge: ATAX0303 and ATAX0311.

This is a third level course dealing with complex structures at the "big end". It is designed to take you beyond the relatively static consideration of companies, trusts and partnerships considered in foundation courses on taxation of entities, capital gains and corporate finance. It deals with multiple vehicles in groups, the synergies and problems from their interaction. It covers the group consolidation legislation, intra-group transactions and those with outsiders. There is a full treatment of anti-avoidance provisions (particularly Part IVA) and issues of legal formalism. Research emphasises active exploration by you of current structures.

ATAX0320
Principles of Australian International Tax
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

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. The course provides the foundations for the other postgraduate courses dealing with international tax.

ATAX0321
Taxation of Innovative Financial Products
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2
Recommended Prior Knowledge: ATAX0303 and ATAX0307

This course deals with the policy and tax issues which underpin new financial techniques and the products which have been based on these techniques. Basic to the course are the principles underpinning the deductability and timing of interest payments. Derivative products are considered, particularly the instruments on which they are based, such as options, futures and forwards. More detailed consideration is given to specific products which are current in the market place such as instalment warrants, convertible securities, synthetic equity, LEPOS, swaps and the like.

ATAX0322
Goods and Services Tax: Design and Structure
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

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.

ATAX0323
Principles of Goods and Services Tax Law
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2
Recommended Prior Knowledge: ATAX0322.

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.

ATAX0324
Goods and Services Tax: Complex Issues and Planning
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1
Recommended Prior Knowledge: ATAX0322 and ATAX0323.

This course provides a detailed analysis of the more difficult GST issues and areas. It focuses on the identification and classification of supplies against the background of complex commercial arrangements; the treatment of cross-border transactions; rules governing the financial and insurance sectors (and the design flaws inherent in these rules); supplies made in the course of the sale of businesses, and the application of anti-avoidance provisions. The overall aim of the course is to enhance your capacity to embark upon independent analyses of the hard GST questions, particularly those questions likely to arise at advanced practice levels.

ATAX0325
Taxation of Employee Remuneration
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

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.

ATAX0326
Taxation and Investment Regulation in China
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

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 in the course 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.

ATAX0355
Taxation of Property Transactions
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1
Recommended Prior Knowledge: ATAX0008 or ATAX0311 or equivalent and ATAX0323 or equivalent.

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.

ATAX0401
Tax Policy
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1 S2
Recommended Prior Knowledge: Completion of a minimum of 24 UOC (MTax students)

No tax decision, from the highest tax policy design issue to the most mundane and technical problem of tax accounting, is made in a tax policy vacuum. This course is designed to develop the skills and knowledge necessary to enable the evaluation of government tax policies. An intensive 'hands on' approach is adopted to the development of techniques for practical, policy driven, tax problem solving. Economic issues are given prominence complemented with attention to political, institutional and administrative constraints on the development of tax policy. The skills learnt will enable you to move comfortably from consideration of broad strategic tax policy problems to evaluating tax policy decisions at the practical level.

ATAX0403
Taxation of Corporations
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

Companies are significant entities for collective investment. This course provides a comprehensive analysis of financial and taxation issues relating to investment in, and distributions by, Australian domestic companies. Examination of companies involves the theoretical framework of corporate tax integration theory, and detailed practical analysis of the Australian imputation system and rules relating to corporate distributions. Corporate structuring issues and anti-avoidance provisions are also detailed.

ATAX0404
International Comparative Taxation
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1
Recommended Prior Knowledge: ATAX0420

This course is designed to equip students with an understanding of the operative tax systems in three jurisdictions, namely the United States, Singapore and Hong Kong. A comparison will be made between the operation of these tax systems and the operation of Australia's international tax system. There will also be a detailed examination of the operation of Australia's Double Tax Agreements (DTAs) generally.

ATAX0405
Taxation of Trusts
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

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.

ATAX0406
Current Problems in Tax Decision Making
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

This course provides students with insights into current issues affecting tax administration. The course considers compliance research from the perspectives of both taxpayers and the economy in general. Administrative and constitutional law aspects are examined to provide a context for tax administrative law, and the review and appeal processes generally. Additionally the leading works on decision making theory are discussed to provide a perspective on their application in administrative decision making.

ATAX0407
Taxation of Corporate Finance
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

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.

ATAX0408
International Tax: Anti-Avoidance
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1
Recommended Prior Knowledge: ATAX0405, ATAX0411 and ATAX0420

This course exposes students to the main aspects of the law which are specifically relevant to anti-avoidance of international taxation. It aims to instil a clear understanding of these aspects so that students, when dealing with cross border income flows in their roles as tax professionals, may avoid inadvertently falling into an unexpected trap created by these provisions. Specifically, students studying this course will be required to come to grips with Australia's: (i) controlled foreign company ('CFC') rules; (ii) foreign investment fund ('FIF') rules; (iii) transferor trust rules and (iv) the thin capitalisation and transfer pricing rules.

ATAX0410
Taxation of Superannuation
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

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.

ATAX0411
Taxation of Capital Gains
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

This course centres upon the basic structure and central concepts of the Australian Capital Gains Tax. It considers the policy rationale for taxing capital gains, and provides in-depth technical analysis of the legislation. It covers the general scheme, detailed calculation provisions, the impact of CGT on entities (such as companies, trusts and partnerships) and on specific assets, and the CGT concessions that exist in the roll-over and exemption provisions for individuals and large and small businesses. The course explores some of the key anti-avoidance provisions that exist, and aims to provide a thorough understanding of the key aspects of the Australian CGT.

ATAX0414
Selected Problems in Stamp Duty
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

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. The course examines stamp duty on conveyances, transfers of dutiable property, leases, transfers, dutiable transactions and trusts. Although the course has broad focus, stamp duty rules in New South Wales, Victoria, Western Australia and Queensland are specifically covered.

ATAX0415
Taxation of Specific Industries
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

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.

ATAX0416
Current Research Problems in Taxation
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1 S2

This course is designed primarily to give students the opportunity to explore the full depth of the research literature in a significant and challenging area of tax research. The content will vary from year to year to reflect emerging problems and the availability of ATAX academic staff and visiting experts. Assessment is by way of one major research paper (of approximately 20,000 words). This is intended as a research oriented Masters course only - accordingly it is not offered to Graduate Diploma in Advanced Taxation students. Moreover, it should only be undertaken by Masters' students who have already completed other Masters courses.

ATAX0418
Complex Corporate Structures
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2
Recommended Prior Knowledge: ATAX0403 and ATAX0411

This is a third level course dealing with complex structures at the "big end". It is designed to take you beyond the relatively static consideration of companies, trusts and partnerships considered in foundation courses on taxation of entities, capital gains and corporate finance. It deals with multiple vehicles in groups, the synergies and problems from their interaction. It covers the group consolidation legislation, intra-group transactions and those with outsiders. There is a full treatment of anti-avoidance provisions (particularly Part IVA) and issues of legal formalism. Research emphasises active exploration by you of current structures.

ATAX0420
Principles of Australian International Tax
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

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. The course provides the foundations for the other postgraduate courses dealing with international tax.

ATAX0421
Taxation of Innovative Financial Products
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2
Recommended Prior Knowledge: ATAX0403 and ATAX0407

This course deals with the policy and tax issues which underpin new financial techniques and the products which have been based on these techniques. Basic to the course are the principles underpinning the deductability and timing of interest payments. Derivative products are considered, particularly the instruments on which they are based, such as options, futures and forwards. More detailed consideration is given to specific products which are current in the market place such as instalment warrants, convertible securities, synthetic equity, LEPOS, swaps and the like.

ATAX0422
Goods and Services Tax: Design and Structure
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

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.

ATAX0423
Principles of Goods and Services Tax Law
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2
Recommended Prior Knowledge: ATAX0422.

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.

ATAX0424
Goods and Services Tax: Complex Issues and Planning
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1
Recommended Prior Knowledge: ATAX0422 and ATAX0423.

This course provides a detailed analysis of the more difficult GST issues and areas. It focuses on the identification and classification of supplies against the background of complex commercial arrangements; the treatment of cross-border transactions; rules governing the financial and insurance sectors (and the design flaws inherent in these rules); supplies made in the course of the sale of businesses, and the application of anti-avoidance provisions. The overall aim of the course is to enhance your capacity to embark upon independent analyses of the hard GST questions, particularly those questions likely to arise at advanced practice levels.

ATAX0425
Taxation of Employee Remuneration
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

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.

ATAX0426
Taxation and Investment Regulation in China
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

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 in the course 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.

ATAX0455
Taxation of Property Transactions
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1
Recommended Prior Knowledge: ATAX0008 or ATAX0411 or equivalent and ATAX0423 or equivalent.

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.

AVIA5001
Law and Regulation in Aviation
Department of Aviation
Staff Contact: School Office
UOC6 S1

This course provides an overview of the regulatory structure of civil aviation in Australia. It focuses on the legal system within which this regulatory system operates and the powers, responsibilities and scope of various aviation regulatory authorities. In particular, the course will concentrate on providing a practical insight into the legal implications associated with the various aviation positions such as the pilot in command.

AVIA5003
Aviation and Security
Department of Aviation
Staff Contact: School Office
UOC6 S1 S2

Aviation security needs to be understood by all those involved in the operational requirements of civil aviation. Past disasters have provided appalling lessons that any departure from strict, internationally accepted procedures creates an "opportunity" for those intent on acts of unlawful interference. The course Aviation and Security deals with the broad issue of security appreciation for professionals and managers, a perspective of the human and organisational dimensions of aviation security, an explicit understanding of responsibilities, the mechanism for implementation and the ability to determine and report on security events. This course is designed for a wide cross section of professionals in the aviation, transport and affiliated industries.

AVIA5004
Aviation Safety and Accident Investigation
Department of Aviation
Staff Contact: School Office
UOC6 S2

Safety and Accident prevention is an issue in almost every walk of life, none more so than within the aviation industry. The objective of this course is to provide those working in aviation and associated industries with a broad and detailed understanding of the commercial aviation safety system and strategies developed to make that system safer. While the course specifically relates to commercial air service operations in Australia, it also recognises the vital importance of global co-operation and the role of specific international organisations. It also focuses on the investigation and prevention of accidents, and the roles of the Bureau of Air Safety Investigation and the Aviation Regulatory authorities.

AVIA5005
Airline Operational Management
Department of Aviation
Staff Contact: R Robertson
UOC6 S1 S2

Airline Operational Management includes the operational and day to day aspects of airline management such as operational control, aircraft maintenance outsourcing, crew planning and scheduling, airport management, catering, reservations management, delay and punctuality control, marketing and emergency planning. The course covers these aspects of the day to day management and the relationship between these functions and those of the corporate areas in AVIA5009. These matters drive the major airline cost areas.

AVIA5006
Airport Planning
Department of Aviation
Staff Contact: School Office
UOC6 S2

Airport Planning includes the following: town planning aspects, access, obstacles, growth, longer term issues of noise and other environmental issues, longer term political issues and ownership issues as airports become privatised. Also included are topics covering the process of privatisation and investment evaluation, community benefits, airport master plans, forecasting aircraft movements and passenger and freight flows, terminal planning issues, runway and taxiway planning.

AVIA5007
Airport Management
Department of Aviation
Staff Contact: School Office
UOC6 S1

This course covers day to day operational issues such as managing annual budgets, fees (landing, passenger, shops, car parking, etc.) determination methods, emergency planning in all aspects, relationships with airlines, short term political issues management, slot management-peak time issues, managing concessions and other airport business opportunities, aircraft parking control, relationship with other industry bodies and general administrative tasks at airports such as roads, signs, flight information, electricity and water.

AVIA5008
Air Traffic Management
Department of Aviation
Staff Contact: School Office
UOC6 S1

This course includes the following aspects: definition and quantification of risk, primacy and management of Air Traffic System safety, development of efficient procedures, Air Traffic System - 'requirements, management of traffic priorities, environmental management, financial imperatives, aviation industry liaison and public liaison'.

AVIA5009
Airline Corporate Management
Department of Aviation
Staff Contact: R Robertson
UOC6 S1

Airline Corporate Management includes organisational structures, business planning and budgeting, financial analysis, supply and demand analysis, economics, forecasting, commercial agreements liaisons, scheduling planning and fleet planning. This course provides an insight into the complex and interwoven nature of the airline business and gives a picture of the prime drivers, which differentiate airlines. This course is complementary to the course of Airline Operational Management.

AVIA5018
Aviation Human Factors
Department of Aviation
Staff Contact: G Braithwaite
UOC6 S1 S2

Aviation Human Factors is a fast developing subject area that influences all aspects of the aviation environment from ramp to maintenance line and from airport to flight deck and has particular relevance for all involved in management. This course provides and indepth introduction to the subject in the context of organisational efficiency, and management of error and safety. Basic principles of physical and cognitive human performance are covered along with a detailed analysis of error, situational awareness, ergonomics and the evaluation of human factors. Specific aviation coverage includes Crew Resource Management (CRM), human factors in aircraft operations air traffic control, maintenance and management.

AVIA5020
Aviation Research Project
Department of Aviation
Staff Contact: School Office
UOC6 S1 S2 X1

This course requires the student, under guidance, to research an issue in aviation management and produce a written report. The course of the project will be agreed between the research supervisor and the student.

AVIA5021
Aviation Safety Analysis and Research Methods
Department of Aviation
Staff Contact: School Office
UOC6 S2

The collection and analysis of safety data is a major issue in aviation where past occurences often hold the key to preventing future incidents and accidents. The student is introduced to practical issues in planning, gathering and analysing safety data and the presentation of research findings. particular emphasis is placed on proactive safety management and continuous monitoring and the process that exist within the aviation industry to support such strategies. Part the assessment requirements of this module will involve conducting an applied safety research project.

AVIA5022
Aircraft Accident Investigation Techniques
Department of Aviation
Staff Contact: School Office
UOC6 S1

Aircraft accident investigation is an exacting science that draws upon a complex range of skills. this course introduces students to the skills required of an investigator and the processes of investigation. The course covers the principles of investigation, regulatory requirements, material evidence, witness evidence, interview techniques, preservation, transportation and alternative sources of evidence, environmental issues, proactive investigation methods and reporting.

AVIA5028
Airline Marketing Management
Department of Aviation
Staff Contact: School Office
UOC6

This course is designed to give students a general introduction to marketing principles and then move to specialist areas of marketing in airlines. The history of airline marketing and its relationship to the regulatory environment is covered. A comparison of regional/ cultural marketing provides a global perspective. The process of airline marketing is covered from a theoretical approach and from practical implementation perspectives. The course briefly looks at the relationship between airlines and airports and the tourism industry. Future directions for marketing are covered.

AVIA5311
Inflight Services Management
Department of Aviation
Staff Contact: School Office
UOC3 S1 S2 X1

Inflight services management studies the managemnt issues in the provision of passenger food and beverages and in other services provided to passengers and crew during their flight. The course covers iterfaces with other industries, quality assurance, menu design and pricing, catering production and operations management, and the design on inflight services.
Note/s: Distance Education mode

AVIA5312
Airline Incident Investigation
Department of Aviation
Staff Contact: J Guselli
UOC3 S1 S2
The airline industry comprises many component systems. Each of these systems in turn is a combination of other systems. The delivery of a process that is both safe and expeditious can generate a significant potential error. This course provides an introduction to the necessary skills and techniques of effective investigation that will prevent error within the aviation industry, before an accident occurs and is applicable to all categories of staff throughout the aviation industry. Particular emphasis is placed on the roles and responsibilities of investigators and the gathering of key causal factors. This enables investigators to develop early warning systems that can improve the safety health of their organisations through study of the principles of system safety and incident analysis.
Note/s: Distance Education mode

AVIA5313
Aviation Ground Safety Investigation
Department of Aviation
Staff Contact: G Braithwaite
UOC3 S1 S2

Aviation Ground Safety Investigation concerns the movement areas around an aerodrome and the investigation of incidents and accidents that occur within them. Ground damage represents a major cost to the aviation industry exceeding $200 billion per annum, yet safety measures have tended to focus mainly on aircraft safety in flight. This course covers the investigative process and issues specific to ground safety. This includes principles of safety and human factors, managing the response to incidents and accidents, handling of witnesses, victims and media, legal requirements in investigation, sources of evidence, analysis techniques, reporting and proactive management.
Note/s: Distance Education mode

AVIA5314
Aviation System Safety
Department of Aviation
Staff Contact: School Office
UOC3 S1 S2 X1

Just as aircraft accidents are arguably never the result of a single causal factor, so too safe operations are rarely assured through single safety measures. Rather, it is a system of safety measures or defences that protect complex operating systems from accidents. This course considers the elements of aviation system safety including the theory of systems safety, modelling system safety, safety management systems, continuous monitoring, establishing and assessing safety culture and an introduction to risk management in aviation. In depth consideration is also given to the issue of regulating systems safety including methods of assessing compliance.

BEES9011
Essential Skills for Research Students (postgraduate students only)
School of Biological, Earth & Environ Sciences
Staff Contact: I Suthers
Enrolment requires School approval
UOC6 S2
Excluded: BIOS4511

The course covers essential skills needed in biological research and subsequent employment. Principal topics covered include presentation skills (written, oral, and audiovisual including computer-aided presentations), database and library usage, information retrieval and usage of major computer packages as well as more specific research skills which may be tailored to particular interest groups. The course must be taken by all commencing postgraduate students in the School of Biological Science unless they have already passed BIOS4511.
Note/s: Enrolment in postgraduate research program in a biological discipline within UNSW, or completion of requirements for Honours in biology or other discipline area, is required for enrolment in this course.

BEES9917
Alternative Higher Degree Qualifying Program (full-time)
School of Biological, Earth & Environ Sciences
Staff Contact: R McMurtrie
Enrolment requires School approval
UOC42 S1 S2

Similar in content and standard to BIOS4517 Biological Science Honours but designed specifically for students who cannot regularly attend the University.
Note/s: Plus BIOS9011

BEES9919
Alternative Higher Degree Qualifying Program (part-time)
School of Biological, Earth & Environ Sciences
Staff Contact: R McMurtrie
UOC10.5

Similar in content and standard to BIOS4513 Biological Science Honours but designed specifically for students who cannot regularly attend the University.
Note/s: Plus BIOS9011

BENV7140
Multimedia on the Web
Faculty of the Built Environment
Staff Contact: S Peter
UOC6 HPW3 S2
Excluded: ARCH9711

This course will discuss the potential and limitations of the World Wide Web as a tool for the presentation of design information. The course aims to help students develop an understanding of what constitutes a good web page as well as learning HTML. Students will learn to use a range of graphics applications (including Adobe Photoshop) as well as a Web Editor. Assessment will be through the development of a series of web pages.

BENV7141
Multimedia in Design Presentation
Faculty of the Built Environment
Staff Contact: D Utian
UOC6 HPW3 S2
Excluded: ARCH9714

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.
Note/s: Assessment is by projects and student seminars.

BENV7142
CAD and Visualisation
Faculty of the Built Environment
Staff Contact: J Plume
UOC6 HPW3 S1
Excluded: ARCH7220, ARCH7221

Introduction to the concepts and techniques relating to the use CAD systems in architectural design. The course deals with both 2D drawing and 3D modelling, rendering & animation; and will include extensive hands-on use of a CAD system and a modelling & rendering application. Assessment will be through a series of exercises and one major design presentation.

BENV7143
Advanced Visualisation
Faculty of the Built Environment
Staff Contact: J Plume
UOC6 HPW3 X2
This course 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 staged learning exercises and one major design presentation project.

BENV7147
Information Management Systems for Design Professionals
Faculty of the Built Environment
Staff Contact: J Plume
UOC6 HPW3

This course provides an understanding of how computer-based information management systems can assist design professionals in their practices. The course is intended for those who wish to have knowledge in both the theoretical and practical aspects of design information management systems. The theoretical aspects include basic concepts of databases, data modelling, database design, implementing a database, implementing a database application and using Internet and network technology with databases. The practical aspects consider writing database proposals, using MS Access for creating databases, writing SQL statements and building database user interfaces (particularly in a network context). Assessment is through class exercises and a major database design project.

BENV7148
Object Based CAD Modelling
Faculty of the Built Environment
Staff Contact: J Plume
UOC6 HPW4 S2

This course reviews current developments in object-based CAD technologies, with particular emphasis on practical issues of application and implementation. The theoretical component of the course deals with issues of object modelling, information interchange, intelligent objects and concept modelling. The practical side of the course investigates the implementation of object-based CAD technologies in the context of a specific CAD system, covering object manipulation, IFC model interchange and object intelligence. Assessment is mainly through practical hands-on work and one major written report.

BENV7190
People and Urban Space
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW2
Excluded: ARCH7322

Urban design is concerned with improving the quality of the public realms of human settlements. As a basis for designing guidelines for the achievement of a high quality environment it is important to understand how different patterns of urban space are associated with specific behaviours and aesthetic effects within different cultures. The lectures/ seminars focus on the empirical research on people (designers and users) and urban space uses and meanings. Assessment is by two essays.

BENV7191
Urban Heritage Conservation
Faculty of the Built Environment
Staff Contact: B Judd
UOC6 S2

Heritage conservation is more than old buildings. Heritage values underpin the development of a community, and an understanding of how they have been, and are continuing to be, expressed in the urban fabric is critical to the management of the built environment today. This course will provide an introduction to the theory, principles and practice of the conservation of the urban landscape. It will use a combination of lectures, case studies and studio projects to explore the opportunities, issues and dilemmas facing culturally significant items, sites and areas.

BENV7605
Research Seminar 1
Planning and Urban Development
Staff Contact: School Office
UOC3

A program of supervised independent study in an area of planning in which the student is undertaking, or expects to undertake, research. Students present a seminar on their current or proposed research, take part in discussions at other student seminars, and may be asked to attend comparable postgraduate seminars within the University and at other institutions.
Note/s: Students enrolled in the PhD Course 1150, MTP Course 2230, MScTown Planning Course 2235 and GradDip Course 5205 are expected to enrol in this course each year, starting with Research Seminar 1 in their first year, Research Seminar 2 in their second year.

BENV7606
Research Seminar 2
Planning and Urban Development
Staff Contact: School Office
UOC3

A program of supervised independent study in an area of planning in which the student is undertaking, or expects to undertake, research. Students present a seminar on their current or proposed research, take part in discussions at other student seminars, and may be asked to attend comparable postgraduate seminars within the University and at other institutions.
Note/s: Students enrolled in the PhD Course 1150, MTP Course 2230, MScTown Planning Course 2235 and GradDip Course 5205 are expected to enrol in this course each year, starting with Research Seminar 1 in their first year, Research Seminar 2 in their second year.

BENV7704
Principles of Political Economy
Faculty of the Built Environment
Staff Contact: School Office
UOC3 HPW3

This course is an introduction to politcal economy for non-economists. It establishes a foundation of concepts and viewpoints which are utilised in a number of courses Topics include: the forms of capital; modes of production; global economic change and the new international division of labour; relationship between economy and state; politics and ideology; class structure; elementary price theory; factors influencing economic growth; the distribution of welfare.

BENV7707
Research Design
Faculty of the Built Environment
Staff Contact: School Office
UOC3 HPW3

This course provides an introduction to issues of research design in urban and planning studies. It considers both fundamental epistemological questions and more pragmatic topics such as writing and presentation as well as providing insights into the world of advanced research. The primary focus is on the written thesis required in the final year of the BTP Program. The subject canvasses the relevant conceptual, methodological, and technical bases for the construction of the thesis. Lecturers, tutorials and assessments guide students toward a developed thesis proposal and plan of study.

BENV7708
The Language of Planning
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW4

This course aims to introduce students, commencing their planning studies, with the forms and languages used by planning: the jargon of the profession and its explicit and implicit meanings and implications. Specifically, the aims are to ensure students understand the generalities and some detail of the relationship between politics, governnment and society; the forms and structures of Australian poltiics and government; the relationships between planning, politics and government; planning systems in theory and practice; the operation of development control systems; land ownership and titling; land uses and activities, and their definitions; density definition and its planning implications; planning associations and organisations and their significance; the language of urban design; methods of describing society and its structures.

BENV7709
Planning Processes
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW6

The course covers planning methodologies, with a focus on the strategic choice approach. A planning exercise is used as a case study to demonstrate the use of the method in practice. Applications are critically assessed. The emphasis is on cooperative work within the planning process framework.

BENV7710
Planning Law and Administration
Faculty of the Built Environment
Staff Contact: P Williams
UOC6 HPW6 S1

The course comprises three parts, Planning Law, Planning Administration and Land Valuation. Planning Law: conceptual / theoretical nature of the law; relationship between the environmental context, the Crown, the parliament and the judiciary; ways in which the laws are made and promulgated, relationship between laws and regulations, the legal concept of property in land, definition of various legal concepts of interests in land, Australian Constitution and legal relationship between Commonwealth and States, particularly in regard to matters affecting land, the place of administrative law. Planning Administration: administrative context within which planning operates as a function of government, especially the role and function of statutory bodies in the planning and environment area, the administration of the planning function at the national, state and local levels, the art of management, administrative theory, personnel administration, the role and responsibility of the professional planner in the public and private sector. Land Valuation: principles and practices of land valuation in Australia. Definitions of value, methods of valuation, the role of the valuer, compensation and betterment.

BENV7711
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 practicioners. This course will give you the skills, the understanding and the enthusiasm to play an active role in shaping your city..

BENV7713
Development Control
Faculty of the Built Environment
Staff Contact: P Williams
UOC6 HPW6 S1

This subject introduces students to the implementation of planning objectives in the NSW Planning System via this State s Statutory Development Control system. Various Development Control Systems are examined, based on common law, statute and policy. Strategic planning at state and local government levels are examined in detail, as is the statutory planning (i.e., development application) process. Emphasis in this subject is placed on familiarising students with the skills required by a professional planner in undertaking various planning tasks.

BENV7714
The Economics of Cities
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3

This course examines how economic processes influence the structure and performance of cities and regions in national and global contexts, drawing upon examples from Australia, Asia, North America & Europe, and setting these economic processes against social, cultural, environmental and political influences.

BENV7715
Social Planning
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW6 S2

This course explores contemporary issues facing the professional planner working in an increasingly diverse and complex society. Various cultural, social and environmental issues that challenge different groups' sense of belonging and claims to the city are examined. These groups include ethnic communities, children, the aged, women, people with disabilities, gays and lesbians, Aborigines and homeless people. Students are encouraged to question their own prejudices and values as they develop better understandings of the needs of these groups. The ability of the planning system to respond is explored, as are creative and inter-disciplinary approaches that can be facilitated by urban planners.

BENV7716
Politics, Power and Policy
Faculty of the Built Environment
Staff Contact: School Office
UOC3 HPW3

The aim of the course is to create an understanding of the complex forces and processes (political, ideological, economic, etc.) which operate in the management of urban areas. Issues covered will include relationships between urban government, politics, planning, the community and various interest groups. Urban theory. The relationship between public policy and planning. The social context of planning. The different social needs within Australian society. The formulation and implementation of policy.

BENV7717
Metropolitan Policy
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3

A renewed interest in urban governance is occurring in market economies. Why this is so and how urban management is conceived by different interest groups and implemented are the questions posed in this course. The course considers the answers and implications for property development and investment.

BENV7719
Planning in Practice
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3 S2

This course consists of two components: environment law and dispute resolution, and professional practice. Environmental law and dispute resolution examines recent statutory and administrative changes to the planning system, environmental and natural resources law, the operation of the Land and Environment Court, the significance of the court and the roles of planners at court, and other means for the resolution of environmental disputation. Professional practice focuses on professional ethics and standards, planning as a profession, negligence, preparing and responding to a consultant's brief and preparing for court work. Such hand-on skills are discussed in the broader context of philosophical positions, 'professionalism' and the social, political and industrial environment.

BENV7720
Land and Environment Law
Faculty of the Built Environment
Staff Contact: P Williams
UOC6 HPW3 S1

Planning, Planning legislation, Environmental planning instruments, Environment - common law - statute - role of public and pressure groups, environmental planning control, environment assessment, heritage legislation. Land law - public and private, Estates and tenures, Co-ownership, Leases, Easements, Restrictive covenants, Licences, Residential tenancies tribunal. Old system title, Possessory title, Torrens title, Land Titles Office practice, Sale of land, Other methods of transferring land, Crown land tenures, Strata title, Community title. Alternative models including other countries, Critical perspective, Heritage Law.

BENV7721
Planning and Land Policy
Faculty of the Built Environment
Staff Contact: P Williams
UOC6 HPW3 S2

The objectives of planning; The history of land use planning in Australia; The achievement of planning objectives; Planning authorities; Planning codes and development plans; Statutory powers of planning authorities; Planning procedures; Control of the development process; Retail development; Commercial development; Industrial and warehouse development; Special development; Environmental impact assessment. Government intervention in land use matters; Public finance and planning; Political considerations and planning and development; Government control and speculation - laissez-faire or public control; Planning and housing policy; Urban decay and renewal; The problems of the urban fringe; Conservation, preservation, redevelopment.

BENV7722
Qualitative Methods
Faculty of the Built Environment
Staff Contact: School Office
UOC6 S2

BENV7723
Spatial Policy
Faculty of the Built Environment
Staff Contact: R Freestone
UOC6 S1 S2

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.

BIOC5318
Graduate Diploma (Biochemistry)
School of Biotechnology and Biomolecular Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC36 S1 S2

BIOC5319
Graduate Diploma (Biochemistry)
School of Biotechnology and Biomolecular Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC18 S1 S2

BIOM5001
Thesis Part A
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 S1 S2

Thesis topic for BE(Mech)/MBiomedE students only.

BIOM5904
Thesis Part B
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC12 HPW12

Thesis for students enrolled in Program 3749.

BIOM9012
Biomedical Statistics
Graduate School of Biomedical Engineering
Staff Contact: School Office
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.

BIOM9040
Analogue Electronics for Biomedical Engineers
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 HPW3

Basic theory of passive components, simple network analysis, small signal amplifiers, feedback and oscillators, operational amplifiers and their uses, analogue integrated circuits. Safety requirements for medical instruments, circuit diagram analysis and component identification. Laboratory work involves both design and construction of analogue circuits.
Note/s: For students with no electronics background.

BIOM9040
Analogue Electronics for Biomedical Engineers
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 HPW3 S1

Basic theory of passive components, simple network analysis, small signal amplifiers, feedback and oscillators, operational amplifiers and their uses, analogue integrated circuits. Safety requirements for medical instruments, circuit diagram analysis and component identification. Laboratory work involves both design and construction of analogue circuits.
Note/s: For students with no electronics background.

BIOM9050
Microprocessors and Circuit Design for Biomedical Engineers
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: BIOM9501, BIOM9040.

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: School Office
UOC6 HPW3 S1
Prerequisite/s: BIOM9101.

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.

BIOM9101
Mathematical Modelling for Biomedical Engineers
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 HPW4 S1

Model formulation and validation. Ordinary differential equations. Laplace transforms. Partial differential equations. Fourier series. Numerical methods.
Note/s: This course is also for students with 1 year university maths or less.

BIOM9311
Mass Transfer in Medicine
Graduate School of Biomedical Engineering
Staff Contact: School Office
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: S Sadler
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.Students should note that this course will be offered in S1 from 2004.

BIOM9410
Regulatory Requirements of Biomedical Technology
Graduate School of Biomedical Engineering
Staff Contact: School Office
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: School Office
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: School Office
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.

BIOM9432
Chemistry and Physics of Synthetic and Biological Polymers
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 HPW3 S2

This course outlines the chemistry and physics of synthetic and natural polymers. It is an introductory level offering that covers polymerisation, synthesis of branched macromolecules and networks and polymer behaviour in solution and solid state. It also covers biological polymers. This includes synthesis and characterisation of biological polymers using proteins, polysaccharides and DNA as examples.

BIOM9440
Biomedical Practical Measures
Graduate School of Biomedical Engineering
Staff Contact: School Office
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: School Office
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: School Office
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: A McIntosh
UOC6 HPW2 S2
Prerequisite/s: BIOM9510, ANAT2111

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: School Office
UOC6 HPW2 S2
Prerequisite/s: BIOM9541

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: School Office
UOC6 HPW3 S2
Prerequisite/s: BIOM9510.

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: School Office
UOC6 HPW3 S1
Prerequisite/s: BIOM9040 or BIOM9050.

Microcomputer architecture; physiological data acquisition systems: input/output signals and devices; assembly language programming; interfacing to higher level languages; the numeric data coprocessor; interrupts; graphics; practical sessions on use of Debug, Assembler, familiarisation with interrupt vector table and I/O ports. Major assignment on specific biomedical application (eg. bedside ECG monitor).
Note/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: School Office
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: School Office
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.

BIOS9001
Fundamental Knowledge in Environmental Management: Ecology
School of Biological, Earth & Environ Sciences
Staff Contact: P Banks
UOC6 HPW45 S2

Students will gain essential knowledge for environmental managers concerning ecosystem structure and function, ecological sustainability, maintenance of biodiversity and ecosystem integrity, restoration of disturbed ecosystems, bioeconomics, conservation of threatened populations, and impacts of particular environmental threats such as climatic change, pollution, salinisation and species invasions. The course will emphasise the effective management and monitoring of complex ecosystems where inherent uncertainty, limited ecological understanding and political, economic and legal constraints must be factored into environmental decision making. Issues in management of terrestrial and marine ecosystems will be introduced through lectures, learning exercises and field excursions.
Assumed Knowledge:This is a basic training in ecological concepts and principles for non-biologists and no biological knowledge is assumed.
Note/s: This course is one of the Fundamental Knowledge core courses available within the Masters of Environmental Management degree program. If places are available it may also be taken as short course in stand alone mode or as part of other postgraduate programs. It is offered as an intensive 2 week course in December with field training at the UNSW Field Station at Smiths Lake followed by a week of study on campus at Kensington.

BIOS9002
Management of Biodiversity
School of Biological, Earth & Environ Sciences
Staff Contact: P Adam
UOC3 HPW21

The course introduces the concepts of biodiversity and briefly examines its components in Australia and globally. Factors which threaten biodiversity such as habitat loss, habitat degradation and exploitation, pollution and their biological consequences including extinctions are considered. Management tools are discussed covering both methods for assessing existing biodiversity and the methods and planning required to maintain it at appropriate levels.
Note/s: The course is available as an elective within the Masters, Graduate Diploma and Graduate Certificate in Environmental Management programs, and in other postgraduate programs within UNSW, or on its own as a short course. It is offered as an "on campus" intensive course in the winter break.

BIOT5013
Practical Biotechnology
School of Biotechnology and Biomolecular Sciences
Staff Contact: R Cail
Enrolment requires School approval
UOC6 HPW8 S1 S2

Students will carry out a structured laboratory program which could include experimentation in either microbial or mammalian cell systems. In addition, students will learn a range of laboratory and instrumentation techniques, as well as analytical methods relevant to biotechnology. Under some circumstances, students may substitute the laboratory program with a literature review and/or technical and economic feasibility study of biotechnology-based process.

BIOT7051
Applied Genetics
School of Biotechnology and Biomolecular Sciences
Staff Contact: D Glenn
Enrolment requires School approval
UOC6 HPW5 S2

The aims of this course are to study the nature of the genetic systems in different cell types, and the ways in which these genetic systems can be manipulated, in the context of their contribution to the industrial application of these cells. The cells studied include bacteria, yeast, mammalian and plant; approaches to mutant production; presence of nature replicons and the development of vecotrs; the use of recombinant and conventional genetics to produce products such as amino acids, antibiotics etc.

BIOT7060
Biopharmaceuticals Project
School of Biotechnology and Biomolecular Sciences
Staff Contact: R Cail
Enrolment requires School approval
UOC6 HPW8 S1 S2

A small experimental or design project, or an extensive literature review and analysis of a selected topic in biotechnology.

BIOT7061
Peptide and Protein Technology
School of Biotechnology and Biomolecular Sciences
Staff Contact: C Marquis
Enrolment requires School approval
UOC6 HPW5 S1

This course covers a range of aspects germane to the industrial production of proteins and their application. Topics covered include sources of proteins, methods of analysis of proteins, industrial scale production of enzymes and peptide hormones, generation of hybrid and recombinant cell lines for protein production including monoclonal antibodies, vaccines; bioreactors for mammalian cell culture, recovery and downstream processing techniques for proteins, an introduction to bioinformatics and proteomics and the chemical sysnthesis of peptides and peptide libraries. Applications of proteins in medical therapy and diagnosis and as analytical tools including ELISA and affinity chromatography: applications of enzymes in the food and beverage industries.

BIOT7070
Recombinant Protein Expression Systems
School of Biotechnology and Biomolecular Sciences
Staff Contact: F Foong
Enrolment requires School approval
UOC6 S1

In this module, the topics deal with some basic recombinant DNA techniques and then heterologous protien expression in prokaryotes and eukaryotes are discussed in greater detail. For prokaryotes, Escherichia coli is the model species chosen and for eukaryotes, the cell systems of yeast and mammalian cells are described. The advantages and disadvantages of the various expression cell systems are outlined. The vectors used for cloning of the protien genes are also described and illustrated. Cloning of genes into the vectors, production and subsequent characterisation of the recombinant protien are also described. These examples are actual biopharmaceutical products currently produced by the biotechnology industry and students are referred to published journal papers throughout the modules.

BIOT7080
Biopharmaceutical Production Processes
School of Biotechnology and Biomolecular Sciences
Staff Contact: C Marquis
Enrolment requires School approval
UOC6 S2

The units in this module were selected to give the students a good understanding of the fundamental principles associated with biopharmaceutical manufacture. The module begins by discussing basic fermentation principles for the large-scale culture of bacterial and mammalian cells to produce recombinant protein pharmaceuticals. This is followed by a thorough study of the main unit operations associated with product recovery, commonly referred to as downstream processes. The principles of Good Maunfacturing Practice are discussed in the third unit, which is relevant to all aspects of drug manufacturing, including fermentation and product recovery operations. This unit is thus designed to put regulatory principles in the context of biopharmaceutical manufacture. The last unit covers modern methods of product characterisation, which forms a critical component of the regulatory procedure.

BIOT7081
Environmental Biotechnology
School of Biotechnology and Biomolecular Sciences
Staff Contact: L Foster
Enrolment requires School approval
UOC6 HPW5 S1

Environmental Biotechnology discusses the commercial applications of bioprocess to environmental problems. Applications include the use of bacteria and fungi to detoxify wastes, converting them to usable substances. Prevention of biodeterioration of valuable materials is also an important area of study. Lectures cover biodeterioration, biomineralogy, biodegradable plastics, bioremediation, biofuels and waste water treatment. Students present research reviews and conduct experimental projects.

BIOT7091
Applied Cell Culture
School of Biotechnology and Biomolecular Sciences
Staff Contact: F Foong
Enrolment requires School approval
UOC6 HPW5 S2

This course covers the physiological and molecular aspects of the culture and growth of deifferent host cell systems, such as Escherichia coli, mammalian and plant cells. Lecture topic areas cover molecular composition of cells, effects of media and physical parameters on growth, cell composition and metabolism. It also deals with regulation of gene expression and recombinant protein production, as well as stress responses of cells, maintenance energy and cell survival. Practical and laboratory classes include culture of bacterial, mammalian and plant cells and the analysis of various indicators such as cell growth, enzyme and protein production.

BIOT7123
Biotechnology Project
School of Biotechnology and Biomolecular Sciences
Staff Contact: R Cail
Enrolment requires School approval
UOC6 HPW4 S1 S2

A small experiment or design project, or an extensive literature review and analysis of a selected topic in biotechnology. The topics could include microbial and yeast fermentation, production of recombinant proteins for pharmaceuticals, enzymatic biotransformations, plant cell culture, mammalian cell culture, environmental biotechnology including bioleaching and bioremediation.

BIOT7160
Genomics and Proteomics
School of Biotechnology and Biomolecular Sciences
Staff Contact: S Mahler
Enrolment requires School approval
UOC6 S2
The course gives a detailed insight into the fields of genomics and proteomics. Genomics is the study of the functions and interactions of the genes in a genome whereas proteomics is defined as the study of all the proteins expressed by the genome. Genomics and proteomics are central to modern biotechnology and are key to a wide range of research areas in the biological sciences including medical and environmental biotechnology. Prior to the human genome project, the number of known genes was limited as was the number of targets available for drug discovery. The sequencing of the human genome and the rapid emergence of high-throughput genomic and proteomic techniques is resulting in a surge of new drug targets such as extracellular receptors, ion channels, transporters, intracellular second messengers, transcription factors and chromosomal DNA itself. The genome and the proteome are intimately linked between a complex pathway of transcription and translation, which principally involves mRNA processing, protein folding and posttranslational modifications. Both genomics and proteomics incorporate areas of biotechnology, bioinformatics and biology, and utilise a multitude of methods and techniques to study gene and protein expression profiles of cells and whole biological systems. The course is divided into four distinct units. Unit one is an introduction to the field of genomics and includes topics such as the organisation and sequencing of the human genome, single nucleotide polymorphisms and techniques for identifying gene expression patterns. Unit two addresses the closely related areas of functional, structural and comparative genomics. Topics such as genetic testing, the use of array technologies for molecular profiling, pharmacogenomics and high-throughput technologies are covered. Unit three gives a detailed description of the current state of expression, cell map and modular proteomics. Basic technologies used in protein separations and detection including chip-based technologies are described. Unit 4 is concerned with protein characterisation and associated techniques and methods including mass spectrometry.

BIOT7170
Therapeutic Modalities of Biopharmaceuticals
School of Biotechnology and Biomolecular Sciences
Staff Contact: S Mahler
Enrolment requires School approval
UOC6 S2

Therapeutic Modalities of Biopharmaceuticals is a detailed study and analysis of the various classes of biopharmaceuticals and includes case studies of the therapeutic mode of action of selected examples. Recombinant DNA technology has allowed the production of a wide variety of biopharmaceuticals for the treatment of human disease. There are a number of classes of biopharmaceuticals including cytokines, growth factors, clotting factors, growth hormones, enzymes, monoclonal antibodies and oligonucleotide-based compounds. Most biopharmaceuticals approved for human administration are protein based. For example erythropoietin (EPO), a protein of the cytokine group responsible for red blood cell formation, is used therapeutically to treat anaemia. Biopharmaceuticals are now a significant sector of the health care industry, and EPO is the worlds biggest selling biopharmaceutica. Other diseases targeted with biopharmaceuticals include cancer, inflammation, heart disease, diabetes, haemophilia and various viral infections. Biopharmaceuticals are also able to treat conditions such as wound healing, infertility and growth deficiency to name but a few. The course includes a study of the pharmacology of proteins and peptides as drugs and includes pharmacokinetics, pharmacodynamics and metabolism. Oligonucleotides are also becoming an increasingly important class of biopharmaceuticals, and the mode of action of aptamers, ribozymes, DNAzymes, PNAs and other oligonucleotide-based biopharmaceuticals is studied.

BIOT8010
Graduate Seminars
School of Biotechnology and Biomolecular Sciences
Staff Contact: P Doran
Enrolment requires School approval
UOC3 HPW2 S1 S2

CEIC5333
Experimental Design in the Process Industries
School of Chemical Eng and Industrial Chemistry
Staff Contact: J Heuts
UOC6 S2

This course is structured to provide a sound introduction to the fundamentals of experimental design and its impact on productivity and quality in research development and manufacturing processes. Topics covered will include: basic statistical hypothesis testing, quality control, control charts, regression analysis, factional designs, fractional factional designs, screeing designs, linear and curve-linear models, non-linear models, Taquchi concepts, optimisation, response surface concepts.

CEIC7001
The Aluminium Industry
School of Chemical Eng and Industrial Chemistry
Staff Contact: M Skyllas-Kazacos
Enrolment requires School approval
UOC6 S1 S2

Topics include role of aluminium, effects of globalisation and cooperative trade agreements, quality requirements, environmental responsibility, processing options, raw material specifications, production of alumina to meet specifications, plant performance monitoring, troubleshooting, key performance indicators, cost analysis, evolution of proposals, data analysis techniques, project planning/management.

CEIC7002
Electrochemical Engineering
School of Chemical Eng and Industrial Chemistry
Staff Contact: M Skyllas-Kazacos
Enrolment requires School approval
UOC6 S1 S2

Hall-Heroult Process overview, electrode reactions, energy requirements, elec-rode fundamentals, voltage balance and voltage breakdown, voltage and current efficiency losses, cell design options and constraints, electrode materials, current and voltage distributions, magnetic fields and their effects, modeling for design optimisation.

CEIC7003
Process Operation
School of Chemical Eng and Industrial Chemistry
Staff Contact: M Skyllas-Kazacos
Enrolment requires School approval
UOC6 S1 S2

Electrolyte and cell conditions, energy vs material balances, cell dynamics, heat loss control, maintenance of electrolyte (A1F3 and A12O3 control), process control, cell start-up options, alumina feeding, fundamentals of alumina dissolution, different feeding methods, electrolyte volume, super-heat, dry scrubbing and impact on process.

CEIC7004
Material Requirements and Selection
School of Chemical Eng and Industrial Chemistry
Staff Contact: M Skyllas-Kazacos
UOC6 S1 S2

Anode requirements, raw materials, production, performance testing, design constraints, anode stubs, rota, physical limits, bath volume, coatings, catalysts, sulphur content of coke, pitch impurities. Cathode blocks, jointing, graphitic for low voltage vs amorphous for low cost, porosity, mechanical/chemical wear, electrical contacting, current collectors, design limits, impact of start-up conditions. Sidewall Materials, SiC (nitride bonded), carbons, refractories.

CEIC7005
Quality Control in Smelting
School of Chemical Eng and Industrial Chemistry
Staff Contact: M Skyllas-Kazacos
UOC6 S1 S2

Testing and monitoring - anodes, cathodes, predicting failure. Operating scheduling - crane utilisation, tapping and anode change, cell condition monitoring. Data processing and trend predictions.

CEIC7006
Retrofitting & Advances Cell Design
School of Chemical Eng and Industrial Chemistry
Staff Contact: M Skyllas-Kazacos
Enrolment requires School approval
UOC6 S1 S2
Advanced electrochemical cell design. Increasing productivity by - line current increase, bigger anodes (and impact on bath volume), magnetics and bus bars, cathode design changes. Advanced cell design - magnetics, thermoelectric modeling, magnetic field minimisation, modeling methodology, challenges for large cells, anode change sequence, cover, thermal effect. Process control. Options for robotics.

CEIC7007
Emissions and Waste Minimisation
School of Chemical Eng and Industrial Chemistry
Staff Contact: M Skyllas-Kazacos
Enrolment requires School approval
UOC6 S1 S2

Occupational health issues. Analysis of emissions from cells - design and work practices, impacting and emission release into potroom, dry scrubbing, work practices and dust. Emissions from anodes. Cathode wastes - reactions and chemical composition, cathode waste utilisation and/or disposal.

CEIC8101
Reaction Engineering and Catalysis
School of Chemical Eng and Industrial Chemistry
Staff Contact: A Adesina
Enrolment requires School approval
UOC6 HPW3 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 heterogeneous reactions, diffusion and reaction in porous crystals, design of fixed bed reactors, trickle-bed and slurry bed reactors.In addition, there will be a project component on an individual basis. The individual study project is to be chosen in the areas identified by D-Catalysis and E-Chemical Reactions (see School for details).

CEIC8102
Process Control
School of Chemical Eng and Industrial Chemistry
Staff Contact: J Bao
Enrolment requires School approval
UOC6 HPW3 S1 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.In addition, there will be a project component on an individual study basis. The individual study project is to be chosen in the areas identified by codes A-Artificial Intelligency, F-Computer Modelling and Design and Q-Process Control advanced (see School for details).

CEIC8103
Particle & Separation Technology
School of Chemical Eng and Industrial Chemistry
Staff Contact: R Amal
Enrolment requires School approval
UOC6 HPW3 S2

The course covers lectures and demonstrations on: Particle characterisation and preparation using the latest techniques, floc characterisation and its relevance in separation techniques. There will also be relevant lectures on other aspects of separation technologies, theory and practice, novel applications to industry and environment management.In addition, there will be a project component on an individual study basis. The individual study project is to be chosen in the areas identified by codes O-Particle systems, D-Catalysis and S-Separations (mem., super., mass trans and diff. Oper) (see School for details).

CEIC8104
Topics in Polymer Technology
School of Chemical Eng and Industrial Chemistry
Staff Contact: J Heuts
Enrolment requires School approval
UOC6 HPW3 S2

In past years this course has focussed upon three main areas (a) reaction engineering and catalyst aspects of polyolefins; (b) advanced free radical polymersation; (c) polymers for biomedical applications. The lectures will also cover new methods of polymersiation, new polymers and new applications.In addition, there will be a project component on an individual study basis. The individual study project is to be chosen in the areas identified in code P-Polymer processing (see School for details).

CEIC8201
Minerals Engineering 1
School of Chemical Eng and Industrial Chemistry
Staff Contact: T Tran
Enrolment requires School approval
UOC6 HPW3 S1

Lectures/Tutorials - 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.In addition, there will be a project component on an individual study basis. The individual study project is to be chosen in the areas identified by codes M-Minerals and U-Waste Processing and pollution control (see School for details).

CEIC8203
Environmental Management
School of Chemical Eng and Industrial Chemistry
Staff Contact: R Amal
Enrolment requires School approval
UOC6 HPW3 S1

Processes: Drinking water treatment (current practice and new technologies), sewage treatment (ocean and inland, primary, secondary and tertiary treatment), solid waste management (landfill, thermal processes and recycling), introduction to clean production.Case Studies: Topics chosen from industrySite Visits: to various sewage treatment plans and the NSW waste service liquid waste treatment plan, Lidcombe.In addition, the above will include a project component on an individual study basis.

CEIC8204
Topics in Business Management in Chemical Engineering
School of Chemical Eng and Industrial Chemistry
Staff Contact: R Burford
Enrolment requires School approval
UOC6 HPW3 S1

The aim of this course is 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.In addition, there will be a project component on an individual study basis. The individual study project is to be chosen in the areas identified by codes C-Business Management/Inf. Tech and G-Design (at least 3 to 4 students per project) (see School for details).

CEIC8205
Fuel and Energy Engineering
School of Chemical Eng and Industrial Chemistry
Staff Contact: J Stubington
Enrolment requires School approval
UOC6 HPW3 S1

Current energy resources and alternatives for the future. Basic principles of fuel conversion processes: gasification, carbonisation, oil refining etc. Introduction to combustion of solid, liquid and gaseous (fossil) fuels.In addition, the above will also include a project component on an individual study basis. The individual study project is to be chosen in the areas identified by Code U-Waste Processing and pollution control (see School for details).

CEIC8206
Minerals Engineering II
School of Chemical Eng and Industrial Chemistry
Staff Contact: T Tran
Enrolment requires School approval
UOC6 HPW3 S2

Practice - This part of the course involves a metallurgical 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.In addition, there will be a project component on an individual study basis. The individual study project is to be chosen in the areas identified by codes M-Minerals and U-Waste Processing and pollution control (see School for details).

CEIC8209
Fuel and Energy Engineering 2
School of Chemical Eng and Industrial Chemistry
Staff Contact: F Lucien
Enrolment requires School approval
UOC6 HPW3 S2

Fundamentals of combustion science and engineering. Fuel plant technology. Energy management and technologies for the efficient use of fuel.In addition, the above will also include a project component on an individual study basis. The individual study project is to be chosen in the areas identified by Code U-Waste Processing and pollution control (see School for details).

CEIC8301
Electrochemical Engineering
School of Chemical Eng and Industrial Chemistry
Staff Contact: M Skyllas-Kazacos
Enrolment requires School approval
UOC6 HPW3 S1 S2

This course will cover basic and advanced concepts in electrochemistry and electrochemical reactor design including current-voltage relationships, activation and mass-transfer controlled processes, limiting current, electrode material selection, current and voltage distribution as a function of electrode geometry and cell design. Specific examples will be used from important industrial electrochemical applications including aluminium smelting, the chor-alkali process, electroplating and batteries and fuel cells.The course may also include a project component on an individual study basis. The individual study project is to be chosen in the areas identified by Code I-Electrochemical processes (see School for details).

CEIC8302
Process Heat Transfer
School of Chemical Eng and Industrial Chemistry
Staff Contact: R Sheikholeslami
Enrolment requires School approval
UOC6 HPW3 S1

The course will cover operation and design of process equipment such as heat recovery units, packed beds, dryers, regenerators, economizers, evaporators, thermal desalination systems, compact heat exchangers, and etc. Both practical and fundamental aspects will be covered.The course may also include a project component on an individual study basis. The individual study project is to be chosen in the areas identified by Code T-Transport processes and R-Refrigeration/drying (see School for details).

CEIC8303
Fouling in Process Industries and Equipment
School of Chemical Eng and Industrial Chemistry
Staff Contact: R Sheikholeslami
Enrolment requires School approval
UOC6 HPW3 S1

Fouling is a universal problem in various types of process equipment and is costing the industrial nations billions of dollars annually. This course aims to approach the problem from both practical and fundamental points of view. The course will discuss applications, process and industrial fouling occurrences, mechanisms and fundamentals, predictive models, prevent and cleaning methods, design considerations, monitoring techniques, economic considerations and some case studies.The course may also include a project component on an individual study basis. The individual study project is to be chosen in the areas identified by Code T-Transport processes, L-Industrial process and S-Separations (mem., super., mass trans & diff. Oper.) (see School for details).

CEIC8310
Computing Studies in the Process Industries
School of Chemical Eng and Industrial Chemistry
Staff Contact: T Pham
Enrolment requires School approval
UOC6 HPW3 S1

Introduction to computing systems. Hardware, personal computers, software. Operating systems: DOS, Windows. Languages: Basic, Pascal. Introduction to computing applications: Word Processing, Spreadsheets, Databases, Equation Solvers with specific reference to solution to Process Engineering problems.

CEIC8311
Instrumental Analysis in the Proc Industries
School of Chemical Eng and Industrial Chemistry
Staff Contact: M Brungs
Enrolment requires School approval
UOC6 HPW3 S1

This course will encompass both chemical and physical analysis of materials. The basic principles of laboratory and on-line instrumentation will be examined and this material will be reinforced by appropriate laboratory classes. Selected topics include: analyses of and for water, colour, density and viscosity, spectroscopic, electrochemical and chromatographic techniques. The course will also include aspects of sampling and Laboratory Information Management Systems (LIMS).

CEIC8312
Safety & Communication in the Process Industries
School of Chemical Eng and Industrial Chemistry
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2

Toxicity of chemicals. Material safety data sheets. Storage of hazardous materials. Disposal of hazardous materials. Air pollution and ventilation, electrical and mechanical aspects of machinery. General laboratory safety. Fire precautions in laboratories. Fire fighting training. The principles of hazard analysis and hazardous operations. Safety with large scale equipment. Plant visits. Oral and written communcation. The basis of writing proposals and reports. Error analysis. Verbal presentations to small and larger audiences. Use of slides and overheads.

CEIC8313
Environmental Technologies
School of Chemical Eng and Industrial Chemistry
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2

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.

CEIC8320
Process Engineering Project for M.EngSc program only
School of Chemical Eng and Industrial Chemistry
Staff Contact: R Sheikholeslami
Enrolment requires School approval
UOC12 HPW6 S1 S2

An investigation of a problem in any area related to process engineering which involves a significant research or design component. Such an investigation should be related to the research interests and expertise of Staff in the School of Chemical Engineering and Industrial Chemistry.

CEIC8330
Process Engineering in the Petroleum Industry
School of Chemical Eng and Industrial Chemistry
Staff Contact: A Adesina
Enrolment requires School approval
UOC6 HPW3 S1 S2

1. Origin and nature of crude oil overview of the Petroleum refinery. 2. Petroleum processing operations Hydrotreating, desulphurisation, denitrogenation, demetallation, deoxygenation, hydrocracking. Process description flow sheet, hydrogen supply, operating conditions, reactor types. 3) Catalytic cracking: Feed classification, supply and associated reactions. Mechanism of catalytic cracking. Cracking catalysts bifunctionality, properties, testing, coking and longevity. Process Engineering operating variables, reactor types and arrangement, design of fluid catalytic crackers. 4) Catalytic Reforming: Thermodynamics of catalytic reforming Individual reactions. The balance between catalyst efficiency and catalyst life. Catalysts. Deactivation. Reactor design. Residue Processing. Production of fuels, residues and carbon.

CEIC8331
Process Engineering: Natural Gas and Light Hydrocarbons to Petrochemicals
School of Chemical Eng and Industrial Chemistry
Staff Contact: A Adesina
Enrolment requires School approval
UOC6 HPW3 S1 S2

Feedstock for the petrochemical industry. Natural gas, synthesis gas, LPG, C4 hydrocarbons. Syngas production. Steam reforming, carbon dioxide reforming, water gas shift, partial oxidation. Process based on C1 chemistry catalysts, processes and reactors. Methanation and Fischer-Tropsch synthesis, methanol synthesis. Olefin production (ethylene, propylene and butene). Steam cracking, catalytic cracking, thermal dehydrogenation, catalytic (oxidative) dehydrogenation. Manufacture of base petrochemicals. Synthesis of ethylene oxide, aldehydes and acetic acid production, hydroformylation, hydration and halogenation compounds. Manufacture of vinyl monomers and condensation polymer feedstocks.

CEIC8332
Process Engineering in the Food Industry
School of Chemical Eng and Industrial Chemistry
Staff Contact: T Pham
Enrolment requires School approval
UOC6 HPW3 S1 S2

This course covers the application of process engineering techniques in the food industry, with its particular emphasis on product sensory quality and hygiene. The topics considered will include evaporation and drying, separation, refrigeration, thermal processing, prediction of quality and microbiological changes, and computer techniques. The course will include lectures, assignments and one major design project.

CEIC8335
Advanced Computer Methods in the Process Industries
School of Chemical Eng and Industrial Chemistry
Staff Contact: T Pham
Enrolment requires School approval
UOC6 HPW3 S1 S2

Solution of Process Engineering problems, trouble-shooting and Process Design utilising advanced computer applications including flowsheeting, numerical methods, statistical design, CAD and process integration.

CEIC8336
Environmental Chemistry in the Process Industries
School of Chemical Eng and Industrial Chemistry
Staff Contact: P Crisp
Enrolment requires School approval
UOC6 HPW3 S1

Introduction ot the chemical processes underlying major problems. The following topics will be covered: soil chemistry, acid rain, land degradation, urban air pollution, ozone depletion, global climatic change, radioactive contamination, alternative energy sources, chemical waste contamination, toxic elements, toxic organics, absorption processes and occupational diseases. The role of the chemical industry in causing and resolving the problems will be examined.

CEIC8337
Particle Characterisation in the Process Industries
School of Chemical Eng and Industrial Chemistry
Staff Contact: R Amal
Enrolment requires School approval
UOC6 HPW3 S1 S2

This course will cover theoretical and practical aspects of methods of charactersating fine particulate materials. Characteristics investigated include: particle size and size distribution, density, porosity, surface area, zeta potential and electrostatic charge, morphology and structure. Techniques covered include: sedimentation, optical techniques, electrozone sensing, image analysis, time of flight analysis, inertial impaction, mercury porosimetry, gas adsorption, helium pycnometry, morphological analysis. Practical examples of industrial applications will be given together with laboratory demonstrations using all the techniques.

CEIC8341
Membrane Technology in the Process Industries
School of Chemical Eng and Industrial Chemistry
Staff Contact: D Wiley
Enrolment requires School approval
UOC6 HPW3 S1

Classification of membranes and membrane processes. Driving forces and mass transfer mechanisms. Characterisation for membranes. Control of concentration polarisation and fouling. Aspects of the design of membranes, membrane modules and membrane systems. Operating principles of major membrane processes include microfiltration, ultrafiltration, nanofiltration, reverse osmosis, dialysis, electrodialysis, membrane distillation, pervaporation, gas permeation, liquid membranes. Selected applications and economic aspects of membrane technology in the fields of biotechnology, biosensors (including bioreactors), controlled release, chemical and food processing, water and waste treatment.

CEIC8351
Pharmaceutical Processing
School of Chemical Eng and Industrial Chemistry
Staff Contact: N Foster
Enrolment requires School approval
UOC6 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.

CHEM5003
Special Program (Chemistry Postgraduate Qualifying)
School of Chemical Sciences
Staff Contact: P Southwell Keely
UOC48 S1 S2

CHEM7111
Quality Assurance and Laboratory Practice
School of Chemical Sciences
Staff Contact: P Southwell Keely
UOC6 HPW3 S2

International bodies and regulations; statistical and QA tools; uncertainty and traceability; method validation; accreditation; interlaboratory trials and proficiency testing; GLP, Guide 25 and ISO 9000 etc.; Laboratory Information Management Systems.

CHEM7112
Analysis of Biological and Organic Materials
School of Chemical Sciences
Staff Contact: P Southwell Keely
UOC6 HPW3 S2

Analysis of biological and organic species in complex matrices (e.g., biological, food, soil, wastewater etc.). Emphasis will be on: (i) bioassays and new methods requiring minimal sample preparation; enzyme and immunoassays, assay formats, transduction and design, biosensors including DNA and surface plasmon resonance devices; (ii) conventional instrumental techniques for analysis of biological and organic molecules with emphasis on sample preparation including sampling, extraction, derivatisation and clean-up.

CHEM7113
Elemental Analysis
School of Chemical Sciences
Staff Contact: P Southwell Keely
UOC6 HPW3 S1

Elemental analysis for inorganic and organic samples. Environmental, water and wastewater, food, soil and plant, geological, petroleum and materials analysis. Atomic absorption and emission spectroscopy. AAS (atomic absorption) and ICP-AES (inductively coupled plasma atomic emission spectroscopy) techniques. Metallic and non-metallic elements in inorganic and organic matrices. Elemental mass spectrometry especially ICP/MS. X-ray fluorescence; wavelength and energy dispersive techniques. Elemental organic (C,H,N) analysis; analysers.

CHEM7114
Chromatography
School of Chemical Sciences
Staff Contact: P Southwell Keely
UOC6 HPW3 S2

Principles of chromatographic separation; gas, liquid and thin layer chromatography. Gas chromatography: columns, instrumentation and applications. HPLC: overview of techniques; normal and reverse phase; size exclusion; ion-exchange and ion-pair techniques; instrumentation, derivatisation and method selection. Latest chromatographic software and data handling methods. Applications in the food, pharmaceutical, biological and health fields.

CHEM7115
Treatment of Analytical Data
School of Chemical Sciences
Staff Contact: P Southwell Keely
UOC6 HPW3 S1

Basic definitions. Errors and Uncertainty. Confidence Limits. Hypothesis Testing. Outlier tests, t-tests, F-tests. ANOVA. Calibration. Experimental Design and Optimisation. Multivariate analysis.

CHEM7116
Chromatography/Mass Spectrometry
School of Chemical Sciences
Staff Contact: P Southwell Keely
UOC6 HPW3 S1

Principles of mass spectrometry especially when combined with gas chromatography and liquid chromatography. Method source and analyser options for environmental, forensic, clinical, pharmaceutical, food, natural product, petroleum, polymer and biological analysis. Sampling and clean-up for chromatography-mass spectrometry. Interpretation of spectra; use of databases. Fast separations and MS/MS. Quantitative methods; isotope dilution; isotope ratio MS. Management and maintenance of equipment; costing analyses and planning equipment replacements.

CHEM7117
Molecular Analysis
School of Chemical Sciences
Staff Contact: P Southwell Keely
UOC6 HPW3 S2

Spectroscopic methods for the molecular analysis of materials. FTIR and Raman spectroscopy and microscopy: methods for macroscopic and microscopic analysis based on the vibrational spectrum as a fingerprint. NMR spectroscopy as an analytical technique; NMR of liquids and solids. NMR for analysis of foods. UV, visible and near infrared spectroscopy as analytical methods. X-ray absorption spectroscopy.

CHEM7118
Surface Analysis of Materials
School of Chemical Sciences
Staff Contact: P Southwell Keely
UOC6 HPW3 S1

Surface characterisation for "wet" and "dry" (vacuum) analysis. Ion, electron and photon probes for surface characterisation. Spectroscopic techniques for qualitative and quantitative analysis of polymer, mineral and electronic sample surfaces. Ultra high-vacuum analytical instruments: principles, operation and maintenance. Complementary techniques for chemical and structural analysis of surfaces, e.g. photoemission and surface X-ray absorption. Secondary ion mass spectrometry for molecular analysis of surfaces of complex surfaces.

CHEM7300
Fundamental Knowledge in Environmental Management - Physical Science
School of Chemical Sciences
Staff Contact: M England
UOC6 S2

This course provides an introduction to the physical principles that underlie an understanding of the environment. An introduction is given to the 'material' (atoms, molecules) and 'immaterial' (energy, radiation) worlds. From the standpoints of 'Earth', 'Air' and 'Water' a description of the environment is built up, which will lead to an appreciation of the place of humankind in the world, and the complex web of relationships between the different aspects of the environment. Approaches to measurement will be introduced, as the way in which we can discover about the environment and build a model of the world we live in.

CHIN5000
China's Provinces
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
UOC8 HPW2 S2

Introduces students to the social, political and cultural diversity of China's provinces under decentralisation and the emergence of local identities. Includes an overview of current research by Chinese and international scholars.
Note/s: Students enrolled in the Chinese Studies postgraduate program will be required to consult Chinese language sources and write an essay in Chinese.

CHIN5006
Business Chinese A
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
UOC6 HPW3 S1

This is an integrated Modern Standard Chinese language skills course which combines listening, speaking, reading and writing.The emphasis is on the development of communicative language competence and the gradual acquisition of business related language usage. The requirements of background speakers of Chinese dialects other than Mandarin are also catered for in this course.
Note/s: Course available for students enrolled in the Faculty of Commerce and Economics.

CHIN5007
Business Chinese B
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
UOC6 HPW3 S2
Prerequisite/s: CHIN5006

Further consolidation and development of language skills acquired in CHIN5006.

CHIN5008
Chinese Language Management Case Studies
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
UOC6 HPW3 S1
Excluded: CHIN5908

Provides an introduction to recently published Chinese-language case studies on Strategic Management in China with a focus on management issues that are specific to China. Students will gain familiarity with Chinese management terminology and the operational environment of Chinese and foreign-funded enterprises in China. Students will be expected to prepare group presentations for each session.
Assumed Knowledge: Third-year level proficiency in Chinese.
Note/s: Course available for students enrolled in the Faculty of Commerce and Economics.

CHIN5009
Chinese for Commercial Use
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
UOC6 HPW3 S2
Excluded: CHIN5909

Aims to give students a thorough knowledge of specialised commercial Chinese language usage. Terminology will be studied in the context of actual business transactions and company records of Chinese enterprises. The focus will be on the service sector in such fields as foreign trade, finance and marketing. Emphasis will be placed on project work and group presentations.
Assumed Knowledge: Third-year level proficiency in Chinese.
Note/s: Course available for students enrolled in the Faculty of Commerce and Economics.

CHIN5900
Chinese-English Translation Project
Department of Chinese & Indonesian Studies
Staff Contact: Y Zhong
UOC8 HPW2 S1

Aims to give students advanced language and other technical skills needed for specialist translation from Chinese into English and vice versa. Students will complete a portfolio of translations on commercial, legal and technical topics, including one major translation project in an area of their choice. The weekly workshops will be used to discuss general professional issues and work in progress.
Assumed Knowledge: Third-year level proficiency in Chinese.

CHIN5901
Chinese-English Professional Interpreting
Department of Chinese & Indonesian Studies
Staff Contact: Y Zhong
UOC8 HPW2 S2

Introduces the theory of interpreting and provides training in Chinese-English consecutive interpreting. Students will be expected to complete various interpreting assignments in the following areas: business, community, health, hospitality and law. In addition to practical training in two-way interpreting, the weekly workshops will provide a forum for discussion of theoretical and ethical issues in the profession.
Assumed Knowledge: Third-year level proficiency in Chinese.

CHIN5902
Chinese In-Country Research Project I
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
Enrolment requires School approval
UOC8 S1 S2

For this course, students will be required to study one session at a Chinese university in a program approved by the Department and to complete a research report of five thousand Chinese characters in length. Upon their return from China, students will have to give a presentation and pass an oral exam on the research report written during their in-country study in China.
Assumed Knowledge: Third-year level proficiency in Chinese.

CHIN5903
Chinese In-Country Research Project II
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
Enrolment requires School approval
UOC8 S1 S2

For this course, students will be required to study one session at a Chinese university in a program approved by the Department and to complete a research report of five thousand Chinese characters in length. Upon their return from China, students will have to give a presentation and pass an oral exam on the research report written during their in-country study in China. This course can be taken in conjunction with CHIN5902 to complete one year of study at a Chinese university.
Assumed Knowledge: Third-year level proficiency in Chinese.

CHIN5906
Chinese Business and Management
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
UOC8 HPW2 S1
Excluded: IBUS5606

Introduces the regulatory framework of Chinese business and relatively complex enterprise structures and commercial transactions. The focus is on the macroeconomic, legal, cultural and operational environment. Considers the main emerging issues confronting the Chinese business community.

CHIN5908
Chinese Management Terminology
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
UOC8 HPW2 S1
Excluded: CHIN5008

Overview of recent Chinese-language management case studies. Students will gain familiarity with Chinese and English management terminology. Includes substantial translation assignments from Chinese into English and vice versa.
Assumed Knowledge: Third-year level proficiency or equivalent in Chinese.

CHIN5909
Chinese for Commercial Use
Department of Chinese & Indonesian Studies
Staff Contact: H Hendrischke
UOC8 HPW2 S2
Excluded: CHIN5009

Aims to give students a thorough knowledge of specialised commercial and legal language usage in China. Terminology will be studied in the context of bi-lingual business transactions and company records. Emphasis will be placed on translation projects in both directions. Requires completion of individual projects by students.
Assumed Knowledge: Third-year level proficiency or equivalent in Chinese.

CHIN5910
Chinese Poetry and Poetics: Theories of Translation
Department of Chinese & Indonesian Studies
Staff Contact: J Von Kowallis
UOC8 HPW2 S2

Examines seminal works and themes in Chinese poetry from its inception in the ancient Shijing [Book of Odes] and Chu Ci [Elegies of Chu] to the Tang, Song, and through the Qing, Republican, and contemporary eras as well as literary theory from the Shi pin [Categories of Poetry] and the Wen xin diao long [The Literary Mind and the Carving of Dragons] down to the critical and theoretical writings of Wang Guowei, Lu Xun, Wen Yiduo, Qian Zhongshu, and Liu Zaifu on poetry, poetics, literary and cultural criticism. Also critically examines the theory and practice of translation of Chinese poetry into English from Ezra Pound to Stephen Owen.

CHIN5913
Chinese Performing Arts
Department of Chinese & Indonesian Studies
Staff Contact: M Yang
UOC8 HPW2 S1
Excluded: CHIN2313, CHIN2314

Covers various forms of Chinese performing arts with emphasis on traditional theatre, dance and the art of storytelling. Explores a broad spectrum of relevant issues, and through this process examines contemporary anthropological and cultural theories and their application in the study of performing arts. Students also study methodology and acquire skills for research and academic writing in this field.
Assumed Knowledge: Third-year proficiency in Chinese. Taught in intensive mode.

CHIN5914
Chinese Musical Culture
Department of Chinese & Indonesian Studies
Staff Contact: M Yang
UOC8 HPW2 S2
Excluded: CHIN2313, CHIN2314

An examination of vocal and instrumental music in Chinese culture. Students will be introduced to the scholarly literature on Chinese music and its study. Attention is paid not only to the music of the majority Han Chinese but also to the music of China's ethnic minorities. Consideration is given to the interaction between the musical cultures of China and other countries. Also discusses the relationship between music and politics, economy, religion, ethnicity, gender, globalisation and cultural hybridity.
Assumed Knowledge: Third-year proficiency in Chinese. Taught in intensive mode.

CHIN5915
Chinese Autobiography
Department of Chinese & Indonesian Studies
Staff Contact: L Heinrich
UOC8 HPW2 S2

Chinese autobiography covers a literary genre that is new in China. Includes comprehensive theoretical analysis of issues of voice, narratology, mimetics, and Chinese neologisms in the early twentieth century.

CMED9539
Psychiatry of Old Age
School of Public Health and Community Medicine
Staff Contact: School Office
UOC6

This course deals with the major psychiatric disorders encountered in the care of older people (dementia; depression; paranoid disorders; late onset schizophrenia and mania; anxiety disorders; stress in late life). It covers the assessment and management of these disorders, as well as other relevant issues such as preventative psychiatry, psychological treatment for the elderly, family assessment and behavioural/psychiatric disturbances in the nursing home. This course is only available to students currently enrolled in the Geriatric Medicine programs: MMed, GradDip, GradCert.

CMED9540
Pharmacology
School of Public Health and Community Medicine
Staff Contact: School Office
UOC6

This course examines the pharmacology of ageing. Topics covered include pharmacokinetics, pharmacodynamics, adverse drug reactions, drug interactions and drug prescribing in the elderly. The major drug groups involved in geriatric medicine will also be noted. This course is only available to students currently enrolled in the Geriatric Medicine programs: MMed, GradDip, GradCert.

CMED9541
Rehabilitation
School of Public Health and Community Medicine
Staff Contact: School Office
UOC6

This course introduces students to the principles and practice of rehabilitation medicine, with particular reference to rehabilitation of the elderly. Topics covered include the rehabilitation of stroke and other neurological disorders including spinal cord injury, orthopaedic and musculoskeletal rehabilitation, orthotics, prosthetics, and rehabilitation in the palliative care setting. The role of the allied health professional in rehabilitation of the elderly is also considered. This course is only available to students currently enrolled in the Geriatric Medicine programs: MMed, GradDip, GradCert.

CMED9542
Healthy Aging
School of Public Health and Community Medicine
Staff Contact: School Office
UOC6

This course addresses a number of health issues relevant to the practitioner in his/her day to day management of older patients. Students consider the concepts of healthy ageing and wellness, and community attitudes to ageing. The value of screening and screening tools in clinical practice is discussed. A number of clinical issues are covered such as dental and oral health, physical exercise, nutrition, sexuality, and addictions in the elderly. The importance of communication and specific communication disorders in the elderly are also examined. This course is only available to students currently enrolled in the Geriatric Medicine programs: MMed, GradDip, GradCert.

CMED9543
Organisation and Delivery of Services for Older People
School of Public Health and Community Medicine
Staff Contact: School Office
UOC6

A course consisting of primary medical care, hospital based provision, community health services, geriatric assessment teams, institutional care, ethical aspects of care, testamentary capacity and informed consent, guardianship board, terminal care, team concepts and team leadership, funding of care - State and Commonwealth responsibilities. This course is only available to students currently enrolled in the Geriatric Medicine programs: MMed, GradDip, GradCert.

CMED9544
Gerontology
School of Public Health and Community Medicine
Staff Contact: School Office
UOC6

Biology of ageing - age associated changes in structure and function of majorB body systems, psychology of ageing, psychological theory and cognition in later life, sociology of health and illness in the elderly, politics of ageing. This course is only available to students currently enrolled in the Geriatric Medicine programs: MMed, GradDip, GradCert.

CMED9546
Major Project (Geriatric Medicine)
School of Public Health and Community Medicine
Staff Contact: R Poulos
UOC16 S1 S2

Candidates are required to submit a major project on an approved topic. The project should include qualitative analysis and show some original thinking or critical evaluation. Candidates will be assisted in the planing and preparation of the project by a preparatory course covering aspects of study design, research methods and critical appraisal of scientific papers. Satisfactory completion of this preparatory course is a prerequisite of undertaking the project, but candidates with prior experience in research may be exempted from the preparatory course. The maximum length of the project is 20,000 words. This course is only available to students currently enrolled in the MMed in Geriatrics.

CMED9547
Supervised Clinical Experience
School of Public Health and Community Medicine
Staff Contact: D Chan
UOC8 S1 S2

A minimum of 140 hours of supervised clinical experience is required. Placements will be arranged in association with the students, at geriatric centres approved by the School of Public Health and Community Medicine. Overseas students are required to undertake their clinical attachments in Sydney. Students will be encouraged to spend as much time as possible in these units, and rotation through a number of units will be available, to ensure that students have ample opportunity to experience the practice of geriatric medicine in Australia. This course is only available to students currently enrolled in the MMed in Geriatrics.

CMED9548
Clinical Geriatrics 1
School of Public Health and Community Medicine
Staff Contact: School Office
UOC6

Presentation of disease - specific features of presentation in old age; nonspecific syndromes: e.g. immobility, falls. System disorders: eg haematological, renal. Also special senses: hearing, vision. This course is only available to students currently enrolled in the Geriatric Medicine programs: MMed, GradDip, GradCert.

CMED9549
Clinical Geriatrics 2
School of Public Health and Community Medicine
Staff Contact: School Office
UOC6

Presentation of disease - specific features of presentation in old age: nonspecific syndromes: e.g. incontinence, confusional states. System disorders: e.g. cardiac, respiratory, neuroloical, vascular, metabolic, bone, endocrine. This course is only available to students currently enrolled in the Geriatric Medicine programs: MMed, GradDip, GradCert.

CMED9550
Clinical Examination
School of Public Health and Community Medicine
Staff Contact: P Gonski
UOC4 S1 S2

This is a clinical exam (oral), which is held in Sydney at the conclusion of the coursework component of the Graduate Certificate, the Graduate Diploma or the Master of Medicine in Geriatrics program and is only available to students currently enrolled in these programs.

COMP3161
Concepts of Programming Languages
School of Computer Science and Engineering
Staff Contact: G Kellar
UOC6 HPW3 S1
Prerequisite/s: COMP9021.

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.

COMP4001
Object-Oriented Software Development
School of Computer Science and Engineering
Staff Contact: J Xue
UOC6 HPW4 S1 X1
Prerequisite/s: COMP9024 or enrolment in MEngSci program 8685.

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 or 65% average in COMP9102.

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 Van der 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 formalization of common sense reasoning.

COMP4416
Intelligent Agents
School of Computer Science and Engineering
Staff Contact: W Wobcke
Enrolment requires approval
UOC6 S2

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.

COMP9008
Software Engineering
School of Computer Science and Engineering
Staff Contact: A Nymeyer A Sowmya
UOC6 HPW4 S1 S2
Excluded: COMP3111.

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 lifecycle. CASE tools: A major group project is undertaken.

COMP9020
Foundations of Computer Science
School of Computer Science and Engineering
Staff Contact: A Ramer
UOC6 HPW3 S1 S2

Mathematical methods for designing correct and efficient programs: Propositional logic, First-order logic. Order of growth of functions. Recurrence relations. Combinatorics. Discrete probability. Sets, relations, functions. Elements of graph theory.

COMP9021
Principles of Programming
School of Computer Science and Engineering
Staff Contact: G Whale
UOC6 HPW3 S1 S2

This is a first programming course. It provides an introduction to programming in an procedural language (C in particular) and covers the following fundamentals.Algorithmic constructs: selection, iteration and recursion, expression evaluation and assignment; library modules and I/O streams. Data modelling: primitive types, arrays, strings, abstract data types. Sequential ADTs, trees, hashing.Scripting languages: shell and awk.Lab: programming exercises and assignments.

COMP9022
Digital Systems Structures
School of Computer Science and Engineering
Staff Contact: H Guo
UOC6 HPW3 S1 S2
Corequisite/s: COMP9021;
Excluded: COMP2021

Multilevel computing system description: High-level language - Assembly language - Operating Systems - Machine Code - Microprogram - Digital Circuit. Introduction to Computer Systems: processor/bus/memory/peripherals, introduction to fetch/execute cycle, CPU Organisation. Digital circuit level: basic components (processing, storage, communication), hierarchical logic descriptions, data and control paths, register transfer language, simple CPU structure. Machine code level: data representation, registers, instruction sets, fetch/execute cycle, programmers model of computer. Assembly language level: assembly language and machine code, assembly language format, the assembly process, assembly language and high-level languages. Laboratory: take-home digital-circuit kits, programming assignments.

COMP9024
Data Structures and Algorithms
School of Computer Science and Engineering
Staff Contact: A Mahidadia P Maheshwari
UOC6 HPW3 S1 S2
Prerequisite/s: COMP9021

Data types and data structures: abstractions and representations; dictionaries, priority queues and graphs; AVL trees, B-trees, heaps. C for Java programmers. Data structure implementation in C. Lab: programming assignments.

COMP9031
Internet Programming
School of Computer Science and Engineering
Staff Contact: N Parameswaran
UOC6 HPW3 S2
Prerequisite/s: COMP9021

Introduction to objects; classes and methods; events; threads; socket programming; mail protocols; web programming; server side and client side programming; mobile codes; web security. Applications: web servers, mark up languages and parsers; web services.

COMP9101
Design and Analysis of Algorithms
School of Computer Science and Engineering
Staff Contact: A Ignjatovic H El Gindy
UOC6 HPW3 S1 S2
Prerequisite/s: COMP9024 or enrolment in program 8685;
Excluded: COMP3121, COMP3120.

Techniques for design and performance analysis of algorithms for a variety of computational problems. Asymptotic notations, bounding summations, recurrences, best-case, worst-case and average-case analysis. Design techniques: divide-and-conquer, dynamic programming and memorisation, greedy strategy, backtracking, branch-and-bound. Algorithms: sorting and order statistics, trees, graphs and flow networks, matrices, arithmetic circuits. Intractability: classes P, NP, and NP-completeness, approximation algorithms.

COMP9102
Programming Languages and Compilers
School of Computer Science and Engineering
Staff Contact: J Xue
UOC6 HPW5 S2
Prerequisite/s: COMP9024 or enrolment in MEngSci program 8685;
Excluded: COMP3131.

Covers the fundamental principles in programming languages and implementation techniques for compilers (emphasis on compiler front ends). Course contents include: program syntax and semantics, formal translation of programming languages, finite-state recognisers and regular expressions, context-free parsing techniques such as LL(k) and LR(k), attribute grammars, syntax-directed translation, type checking and code generation. Lab: implementation of a compiler in a modern programming language for a small programming language.

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: COMP9008.

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 tools tha t 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;
- laboratory 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: Enrolment in Program 8685
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.

COMP9151
Foundations of Concurrency
School of Computer Science and Engineering
Staff Contact: K Engelhardt
UOC6 HPW5 S2
Prerequisite/s: COMP9024 or Enrolment in Program 8685;
Excluded: COMP3151.

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.

COMP9201
Operating Systems
School of Computer Science and Engineering
Staff Contact: K Elphinstone G Keller
UOC6 HPW3 S1 S2
Prerequisite/s: COMP9022, COMP9024 or enrolment in MEngSci program 8685;
Excluded: COMP3231.

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 drawn from UNIX, MS-DOS, Mach. Lab. programming assignments.

COMP9211
Computer Architecture
School of Computer Science and Engineering
Staff Contact: O Diessel
UOC6 HPW4 S2
Prerequisite/s: COMP9022 or enrolment in MEngSci program 8685;
Excluded: COMP3211.

Combinatorial and sequential circuit design and realisation. Arithmetic and logic unit design strategies. Instruction set design: role of performance metrics, RISC vs CISC. Processor design: datapath design, microprogramming, and an introduction to the use of pipelining in enhancing performance. Memory Hierarchy: cache and virtual memory systems. Processor, memory and I/O interface. Testing and design for testability.

COMP9221
Microprocessors and Embedded Systems
School of Computer Science and Engineering
Staff Contact: S Nooshabad
UOC6 HPW4 S2
Prerequisite/s: COMP9022 or enrolment in MEngSci program 8685;
Excluded: COMP3221, ELEC2041.

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 microprocess 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.

COMP9231
Integrated Digital Systems
School of Computer Science and Engineering
Staff Contact: C Kwok
UOC6 HPW4 S2
Prerequisite/s: COMP9022 or enrolment in MEngSci program 8685;
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 COMP9201
Corequisite/s: COMP9211.

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.

COMP9311
Database Systems
School of Computer Science and Engineering
Staff Contact: J Shepherd X Lin
UOC6 HPW3 S1 S2
Corequisite/s: COMP9021 or enrolment in MEngSci program 8685.

A first course on database management systems. Data modelling; principles of database design; data manipulation languages; database application techniques; introduction to DBMS internals; introduction to advanced databases. Lab: design and implementation of a database application using Oracle and SQL.

COMP9315
Database Systems Implementation
School of Computer Science and Engineering
Staff Contact: X Lin
UOC6 HPW3 S1 S2
Prerequisite/s: (COMP9024 or enrolment in MEngSci program 8685), COMP9311.

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 H Paik
UOC6 HPW4 S1 S2
Prerequisite/s: COMP9021 or enrolment in MEngSci program 8685 or COMP1021 or COMP1721 or COMP2811; and COMP9311 or COMP3311 or INFS5926 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.

COMP9331
Computer Networks and Applications
School of Computer Science and Engineering
Staff Contact: M Rezvan
UOC6 HPW3 S1 S2
Prerequisite/s: COMP9021 or enrolment in MEngSci program 8685;
Excluded: COMP3331.

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.

COMP9332
Network Routing and Switching
School of Computer Science and Engineering
Staff Contact: M Hassan M Hassan
UOC6 HPW3 S1 S2
Prerequisite/s: COMP3331 or COMP9331.

This course will focus on the routing and switching architectures, algorithms and protocols for packet switching networks, both connectionless and connection oriented networks (such as IP and ATM networks). Advanced Internet addressing : CIDR, VPN, NAT. In depth discussion of interior and exterior routing protocols, such BGP, OSPF. IP over ATM solutions : such as LANE, Classical IP over ATM. IP switching and MPLS. Mobile IP. Internet Multicasting. Overview of emerging switching and routing technologies, such as optical routing and QoS routing. There is a substantial network programming component in the assessable material, for which C 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: S Jha
UOC6 HPW3 S2
Prerequisite/s: COMP9331.

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.

COMP9414
Artificial Intelligence
School of Computer Science and Engineering
Staff Contact: W Wilson
UOC6 HPW4 S1
Corequisite/s: COMP9021 or enrolment in MEngSci program 8685;
Excluded: COMP3411

Overview of Artificial Intelligence. Topics include: the representation of knowledge, search techniques, problem solving, machine learning, expert systems, natural language understanding, computer vision and an Artificial Intelligence progrmamming language (Prolog or LISP). Students may be required to submit simple Art ificial Intelligence programs, or essays on an aspect of A.I, for assessment, in areas such as robotics, computer vision, natural language processing, and machine learning.

COMP9415
Computer Graphics
School of Computer Science and Engineering
Staff Contact: T Lambert
UOC6 HPW3 S2
Corequisite/s: COMP9024 or enrolment in MEngSci program 8685;
Excluded: COMP3421, 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.

COMP9417
Machine Learning
School of Computer Science and Engineering
Staff Contact: M Bain
UOC6 HPW3 S1
Prerequisite/s: COMP9414.

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.

COMP9511
Human Computer Interaction
School of Computer Science and Engineering
Staff Contact: D Woo
UOC6 HPW3 S1 S2
Excluded: COMP3511

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. Lab/Tutorial: Optional for postgraduates.

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 - INS) and ancillary data can play in navigation will be discussed. Particular emphasis will be placed on the role such positioning technologies will play in Transport Telematics and for personal location, in relation to Location-Based Services, etc. Students will gain hands-on experience with a variety of navigation technology.
Note/s: Enrolment requires School approval. This course is equivalent to GMAT4910.

COMP9912
Project (24 units of credit)
School of Computer Science and Engineering
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1 S2

Students undertake a supervised research project equivalent to 4 lecture courses worth 6 units of credit each. Assessment is based on a project report produced by the student. Project reports must be spiral bound and submitted on the last day of the semester to the Studentl Office. A receipt will be issued.

COMP9945
Project Report (18 units of credit)
School of Computer Science and Engineering
Staff Contact: School Office
Enrolment requires School approval
UOC18 S1 S2

Students undertake a supervised research project equivalent to 3 lecture courses worth 6 units of credit each. Assessment is based on a project report produced by the student. Project reports must be spiral bound and submitted on the last day of semester to the Student Office. A receipt will be issued.
Note/s: Available only to MEngSc and MinfSc students.

CONS0001
Project Finance
Building Construction Management Program
Staff Contact: G De Valence
UOC6 HPW3 S1

The application of financial analysis to building and construction projects. The workings and regulation of financial markets and institutions in Australia. International financial markets; the impact of financial market conditions on the construction industry. Sources of finance and financial instruments used in providing projects with capital. Structuring project finance packages and lender's management of risk. The characteristics of the various techniques used in project finance. Case studies are used to demonstrate the features of project financing.

CONS0002
Human Resources Management
Building Construction Management Program
Staff Contact: M Loosemore
UOC6 HPW3 S1 S2

Human resource management in context. Human resource management in the construction industry. The mechanics of human resource management. Industrial relations; equal opportunities; occupational health and safety. The human resource implications of news business ideas; evaluating human resource management activities.

CONS0003
Project Quality Management
Building Construction Management Program
Staff Contact: K Karim
UOC6 HPW3 S1 S2

TQM theory and application, alternative approaches to quality management, quality management plans, quantifying quality management and control. Analysis of ISO 9000.

CONS0004
Economics in Construction
Building Construction Management Program
Staff Contact: School Office
UOC6 HPW3

Economics of the construction industry; its interrelationship with national and transnational economics. The market for building; price formation.

CONS0005
Computers in Construction Management
Building Construction Management Program
Staff Contact: X Zou
UOC6 HPW3 S1 S2

This course discusses issues, problems and solutions relating to computer applications for construction project management, and the creation and distribution of information within the building industry. It includes topics such as: project information systems structure; networking and communication technologies; digital document formats and environment; spreadsheets; database systems; project feasibility; project planning; cost management; shared project information databases; and CAD product modeling standards for interoperability with estimating and planning applications. The course involves practical use of spreadsheet, data base, and project planning programs, as well as web page design programs.

CONS0006
Property Management
Building Construction Management Program
Staff Contact: J Kim
UOC6 HPW3 S2

Property development process; property market research; financial evaluation of property development. Property lifecycle. Marketing and disposal of property development. Principles of sustainable development and their application. Introduction of property asset management; commercial/industrial property management; retail property management. Building maintenance. Strata title management. Taxation in property management.

CONS0007
Principles and Practice of Management
Building Construction Management Program
Staff Contact: J Kim
UOC6 HPW3 S1 S2

Introduces the general principles of management: basic management functions; planning process, organising; control of time, cost and quality. Organisation structure; concepts of management communication; motivation; delegation; team building. Strategic planning; external environment and ethics.

CONS0009
Construction Planning and Control
Building Construction Management Program
Staff Contact: T Uher
UOC6 HPW3 S2

The concept of construction planning and control; scheduling techniques - barchart, CPM, PERT, line of balance, multiple activity chart. Critical chain scheduling. Computer based scheduling. Applications of work study. Risk and scheduling; theory of decision making; utility theory.

CONS0010
Contracts Management and Law
Building Construction Management Program
Staff Contact: T Uher
UOC6 HPW3 S2

Principles of administration of construction contracts; formation of construction contracts and subcontracts; options for project delivery; subcontracting; partnering and strategis alliance; analysis of selected contracts; contract disputes, dispute resolution; contract claims; risk allocation in construction contracts; international contracting; joint ventures.

CONS0011
Cost Planning and Analysis
Building Construction Management Program
Staff Contact: P Marsden
UOC6 HPW3 S2

Construction estimating, elemental cost planning, design variables, cost control procedures; feasibility studies. Case studies of selected sites.

CONS0012
Quantitative Methods in Management
Building Construction Management Program
Staff Contact: School Office
UOC6 HPW3

Statistical analysis and modelling methods in construction management. Forecasting methods.

CONS0013
Construction Management Applications
Building Construction Management Program
Staff Contact: T Uher
UOC6 HPW3 S2

The objective of the course is to expose students to the realities of involvement with large construction projects. A detailed analysis of the various stages of the construction process is carried out: feasibility, design and documentation, pre-construction, construction and commissioning, with a view to demonstrating the practical application of construction management theory in industry situations. Case studies of major construction projects are examined.

CONS0014
Project Management
Building Construction Management Program
Staff Contact: T Uher
UOC6 HPW3 S2

Introduction to the concept of project management; project management theory; project delivery strategies; organisation of projects from design to commissioning; role of project manager; organisation structure; managing cultural diversity; leadership in project management; negotiation; conflict management.

CVEN7800
Urban Hydrology and Stormwater
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

An introduction to human impacts on the hydrological cycle with an emphasis on the additional factors that need consideration in urban environments, an introduction to impacts of urban development on stormwater quantity and quality, management of urban stormwater quantity and quality, an introduction to impacts of urban developments on groundwater, case studies.

CVEN7801
Design of Stormwater Structures
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Design of stormwater quantity and quality management structures such as detention basins, retention basins, infiltration basins, artificial wetlands, gross pollutant traps, sedimentation basins, and pollution booms.

CVEN7802
Coastal Dynamics
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Theory of periodic waves in coastal waters. Wave growth, refraction, diffraction, shoaling and breaking processes. Measurement, analysis and prediction of waves.

CVEN7803
Coastal and Beach Processes
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Coastal and beach processes including tides, storms, currents and elevated water levels, morphology, sediment transport mechanisms, beach erosion and nourishment, prediction and modelling of shoreline change.

CVEN7804
Coastal Structures
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21
Prerequisite/s: CVEN7802.

Wave forces on coastal and ocean structures with application to practical engineering design of harbours, breakwaters, seawalls, piles, decks, marinas, pipelines and outfalls.

CVEN7805
Coastal Zone Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Coastal hazards and management options assessment within local, State and Federal government frameworks. Environmental and ecological aspects including climate change and marine biota. Dredging and spoil disposal. Asset management and risk assessment in the coastal zone.

CVEN7806
Catchment and Water Quality Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Fundamental concepts, total catchment management, issues in non-urban catchment inclusive of non-point-source contamination and erosion, water quality management in catchments, rivers, lakes, reservoirs, estuaries and the coastal zone.

CVEN7807
Groundwater Hydrology
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Physical properties of groundwater. Darcy flow; porosity, hydraulic conductivity and intrinsic permeability - field and laboratory tests. Principles of groundwater flow. Storage and transmissivity. Groundwater in the hydrological cycle: flow nets; local and regional flow systems - springs; interactions with surface water. Groundwater modelling. Unsaturated zone flow and calculation of infiltration. Groundwater recharge mechanisms and water balance calculations.

CVEN7808
Investigation of Groundwater Resources
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Groundwater investigation methods. Drilling methods; well design and completion for water production and contamination investigation. Contract specification and supervision. Solutions to the radial flow equation; pumping test interpretation; programme of field work and data analysis.

CVEN7809
Geophysical Techniques in Groundwater and Geotechnical Studies
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Introduction to geophysical methods in civil and environmental engineering; physical properties of soils, rocks and contaminated material. Seismic methods - field equipment and methods for seismic refraction. Properties of seismic waves. Cross-hole surveys, tomography and characterisation of bulk modulii. Seismic refraction interpretation methods. Borehole geophysics - field equipment and methods; caliper, electrical, fluid, nuclear and electromagnetic logs. Gravity and magnetic methods. Case histories describing the use of geophysical methods in geotechnical engineering and environmental investigation.

CVEN7810
Electrical Methods in Groundwater Investigation
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Electrical properties of water, soil, rock and contaminants. The frequency dependence of electrical conductivity and relative permittivity. Relationships between porosity, clay content, fluid conductivity and bulk electrical conductivity. Electrical conductivity sounding and profiling using galvanic and induction techniques. Electrical conductivity imaging. Forward and inverse modelling of conductivity images. Time domain methods. Ground probing radar methods.

CVEN7811
Sediment Transport in Alluvial River Systems
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Catchment and river morphological processes including river response to changed conditions and river engineering and management. Sediment transport estimation for cohesive and non-cohesive materials including computer modelling application packages.

CVEN7812
Natural and Artificial Wetlands
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

The objective of this course is to extend the student s knowledge of physical and biochemical processes which occur in wetlands and how to measure, model and predict those processes. Wetland classification and components. Wetland hydrodynamics and forcing. Water balance. Pollutant characterisation. Biochemical processes. Biofilms. Macrophytes. Nutrient and pathogen removal. Wetland design, modification and maintenance. Data collection.

CVEN7813
Estuarine Processes
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

The objective of this subject is to extend the student s knowledge of physical and biochemical processes which occur in estuaries and how to measure, model and predict those processes. Topics include estuarine classification and density structure. Tides and water level response of estuaries. Tidal flushing of estuaries and inlets. Mixing processes and random walk and box models. Two layer models. Difference models for hydrodynamics and algal dynamics. Biochemical processes in estuaries.

CVEN7814
Flood Estimation
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Introduction and background to flood estimation; frequency analysis of hydrological data; flood frequency analysis; design rainfall data; regional flood methods; rational methods; estimation of extremes.

CVEN7815
Introduction to Catchment Models
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

An introduction to the concepts and reductionist approach involved in the modelling of catchment processes influencing the quantity and quality of surface runoff from a catchment. Also introduced are the different forms of models, how these models are combined to provide a catchment modelling system, and implementation of catchment modelling systems. The information and data required for operation of these modelling systems and sources of this information are also discussed. Finally, the calibration, validation, and reliability of catchment modelling systems is presented.

CVEN7816
Catchment Surface Models
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

An introduction to processes influencing the generation of surface runoff and the transportation of pollutant constituents with the surface runoff. The surface runoff models considered include UH methods, time-area methods, linear and non-linear reservoir models and, kinematic wave methods. Water quality models considered include UAL, Simple methods, and process based models. Selection of appropriate models is discussed also.

CVEN7818
Channel and River Models
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Selection of models for routing flows along the channels and rivers in a catchment drainage network. Also included is a detailed discussion of the theory of these models. Models considered include Muskingum with both variable and constant parameters, kinematic wave models, non-inertial and diffusion models, and dynamic wave models. These models will be discussed with reference to single channel situations and network situations. Also included is a discussion of water quality models for motion of pollutant constituents in channels and rivers. These models will include plug-flow methods, and advection-dispersion models in both a coupled and uncoupled situation.

CVEN7819
Hydrological Processes
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Hydrological cyle; atmospheric circulation; weather systems and oceanic circulation; moisture in the atmosphere; measurement of meterological parameters; calculation of potential evaporation and evapotranspiration.

CVEN7820
Rainfall and Runoff Processes
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Precipitation processes; interception and infiltration; storm runoff processes; loss models; hydrograph analysis.

CVEN7821
Water Resources Modelling 1
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21
Corequisite/s: CVEN7819

Water resources data - sources, errors and corrections; introduction to storage yield relationships for reservoir design; extension of hydrological records; introduction to time series analysis.

CVEN7822
Water Resources Modelling 2
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Time series analysis; stochastic models; stochastic reservoir analysis; optimisation in water resources.

CVEN7823
Applied Groundwater Modelling
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21
Prerequisite/s: CVEN7807

Equations and numerical methods; conceptual model and grid design; boundaries; sources and sinks of ground water; model execution and calibration; profile models; particle tracking.

CVEN7824
Risk Analysis in Water Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Introduction to the theory of probability; joint, marginal and conditional probability; commonly used probability distributions; expectations and estimation of model parameters; hypothesis testing and confidence limits; uses in water and coastal engineering - applications to flood design, monte carlo simulation, bootstrap, and hydrological, human and environmental risk assessment.

CVEN7825
Aquatic Chemistry for Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Introduction to principles of the chemistry of natural waters and polluted systems covering basic processes of acidity and alkalinity, mineral precipitation, complexation, oxidation/reduction and surface and colloid chemistry. Tools developed enabling solution of realistic water chemistry problems including introduction to use of chemical speciation computer codes.

CVEN7826
Microbiology for Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

The objective of this unit is to familarise the student with the fundamentals of water and wastewater chemistry along with the microbiology that drives most of these reactions in various environments. A structured approach is used to introduce concepts governing chemical equilibria, reaction rates, pH, alkalinity, oxidation-reduction and complexation, and integrates this knowledge with an understanding of microbial growth, metabolic diversity and persistence of disease-causing microorganisms.

CVEN7827
Contaminant Transport in the Environment
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21
Prerequisite/s: CVEN7825.

Fundamentals of dispersion common to all environmental media (air, water, soil). Dispersion processes: nature of dispersion processes, advection and diffusion. Modelling of dispersion in the atmosphere, water bodies and soil. Transport processes in wetlands, lakes, reservoirs, estuaries, and coastal waters. Data collection relating to transport and dispersion.

CVEN7828
Transformation and Fate of Contaminants in the Environment
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21
Prerequisite/s: CVEN7825.

Major variables and general principles of the transformation and fate of pollutants. Air chemistry: interaction and degradation of gaseous pollutants in the atmosphere. Aquatic chemistry: transformation and fate of particles, organic contaminants, nutrients and metals released to coastal waters.

CVEN7829
Decision Support Systems in Water Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Principles of decision support systems and their application in decision making in water resources, expert systems, GIS concepts, an introduction to introduction to hydroinformatic concepts, and error analysis.

CVEN7830
Physical Aspects of Contaminated Groundwater
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Sources of groundwater contamination; diffusion and dispersion; tracer tests; review of organic chemistry; contamination by light non-aqueous phase liquids (LNAPL) and dense non-aqueous phase liquids (DNAPL); gas chromatographic analysis techniques; case studies of LNAPL and DNAPL contaminant investigation.

CVEN7831
Chemical and Biological Aspects of Contaminated Groundwater
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

The source and sink mechanisms for inorganic and organic groundwater contaminates are described along with an insight into the mechanisms of critical chemical and microbiological transformations. The nature of groundwater microbes in natural and artificially contaminated systems are explained against a background focused on chemical and microbiological remediation of groundwater contaminants. Case examples are worked through for a range of contaminated sites.

CVEN7832
Advanced Environmental Life Cycle Assessment and Life Cycle Costing
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Life Cycle Assessment (LCA) is one of five emerging international standards within AS/ISO 14000 series that is becoming increasingly significant both in Australia and internationally for industy, government and NGOs. LCA is used by decision-makers for benchmarking of products and services by investigating environmental impacts over their entire life cycle.This course explains in detail all elements of LCA. Case studies are carried out combined with computer modelling. Additionally, environmental LCA is combined with Life Cycle Costing.

CVEN7833
Isotope Techniques: applications to industry and the environment
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Basic nuclear and radiation physics; detection and measurement of radioactivity; radiation protection; sources of environmental and artificial radioisotopes; applications of isotope techniques illustrated with case studies in the fields of industry, hydrology and environmental engineering.

CVEN7834
Radioactivity: Environmental Monitoring and Remediation
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Basic radioactivity - measurement and monitoring; sources of radioactive waste; transport of nuclear contamination throught the environment; health physics (radiation protection); the scientific basis for regulation and international standards; case studies selected from the mining industry, the problem of naturally occurring radioactive material (NORM) and the impact of nuclear activities.

CVEN8414
Transport Systems Part 1
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Definition of basic traffic elements, zero flow travel time, capacity, impedance flow relationship. Transport networks. the determination of shortest path, maximum flow, in networks. The topological description of networks. Location theory applications in relation to transport networks. System parameters, performance. application of network analysis to existing road, rail and air transport systems.

CVEN8415
Transport Systems Part 2
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Historical introduction to transport systems and development of various transport modes, road (vehicles, pedestrains, cycles), conveyor, rail, sea and air. Analysis of the opertational charactersitics of vehicles in the transport modes of road, rail and air. Analysis of congestion-related issues using queuing theory, development of optimum criteria for the distribution of cargo and passenger traffic. Terminals and mode transfer facilities. Development of system opertational models. Energy consideration, new systems.

CVEN8421
Fundamentals of Traffic Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Traffic flow, concentration and speed. Fundamental diagram of traffic. Measurements, data collection presentation and statistical analysis. Traffic surveys; volume, composition, speed and travel time. Highway capacity and level of service; multi-lane and two-way-two-lane roads, urban roads, HCM-software calculations. Economic analysis of transport investments.

CVEN8422
Traffic Management and Control
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Unsignalised intersections; operating characteristics, capacity and delay. Signalised intersections; capacity and timing analysis. Signal coordination. Intersection analysis with computer softwares (SIDRA, INTANAL). The functional hierarchy of urban road networks. Arterial road traffic managment. Local Area Traffic Management, Traffic Calming. Travel Demand Management.

CVEN8701
Engineering Economics and Financial Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Project initiation and development, feasibility studies, planning; economics, review of practical decision making problems and relevant techniques, benefit/cost analysis, methods of economic appraisal; consideration of inflation and taxation in investment decisions; depreciation; management decision processes, decision theory, utility; life-cycle costing, value management; models and techniques to assist the manager, forecasting; optimisation; applications; multiple objective planning; project delivery systems; financial planning, accounting.

CVEN8702
Project Planning and Control
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

The planning process; time estimating; the link between planning and control; control systems; the critical path method, networks, resource levelling, resource constrained scheduling, network compression, overlapping relationships, applied cpm, cost influences, project control, legal considerations, simulation in networks, stochastic networks, project management, applications.

CVEN8703
Quality and Quality Systems
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Quality management principles, practice and responsibilities; applications; quality systems documentation, manuals, implementation and procedures; quality assurance; quality control; relevant codes on quality; total quality management, quality circles and related approaches; quality requirements in contracts; continuous improvement.

CVEN8706
Human Resources Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

The development of skills for the management of people and their workplaces; industrial relations, health and safety issues, the recognition of people as the basic unit of engineering productivity and engineering organisations; negotiating theory and practices; the structure and function of organisations, management of group action; work delegation across organisational boundaries; interpersonal skills, conflict management; learning curves; motivation.

CVEN8707
Contracts Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Elements of contract law and a contract; contracts; contract documents including specifications; procurement methods (contract or project delivery strategies); tendering; time in contracts; variations; payments; rights and obligations, planning and programming; risk management and insurance; dispute resolution and dispute avoidance; claims.

CVEN8710
Management of Risk
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Introduction to the concept of risk and decision making under conditions of uncertainty; project objectives and planning, risk/factors affecting project performance; risk identification in engineering processes; human error, natural hazards and unforeseen risks; risk evaluation and quantification methods; relevant statistical techniques; risk avoidance and minimisation; financial risk, portfolio theory, risk sharing and financing; ambient and acceptable risk levels; insurances.

CVEN8714
Resource Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

The management of non human (inert) resources such as equipment, plant, materials infrastructure and assets, including maintenance management, asset management, fleet management and related topics; resource acquisition, maintenance and repair policies; procurement, inventory, supply management and control; optimisation, applications; resource planning; resource disposal.

CVEN8717
Marketing in Technology and Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

The interface of technology and engineering with marketing. Marketing of professional consultant services; promoting; advertising; pricing of services. Client management; briefs. Marketing for contractors; competition, competitive bidding; tendering and proposals. Winning and securing work and commissions. Entrepreneurship. Marketing research; environment; products; distribution; strategies.

CVEN8718
Strategic Management in Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Strategic management for engineering and technology based organisations. Strategic versus operational planning; approaches to developing strategies. Influence of environment, resources (people, materials, plant/equipment), opportunities, competition. Strategic change, implementation, control. Influence of organisation size and type.

CVEN8720
Problem Solving and Decision Making
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Problem solving, decision making, innovation, creativity, modelling. Systems approach or thinking to tackling problems. A unified approach and solution of managerial and technical problems. A way of looking at, and the development of multidisciplinary problems.

CVEN8723
Design of Construction Operations
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Design theory as applied to construction processes; application to selected areas of the construction industry, building construction; queueing and simulation models; work study (method study and work measurement) procedures; productivity; job planning, layout planning, capacity planning; planning and design of production systems (construction oriented); reliability, availability, applications.

CVEN8727
Construction Estimating and Tendering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Estimating procedures, estimating cost of labour plant and materials, indirect costs and overheads, profit; preparation of cost estimates for engineering projects; the conversion of an estimate into a tender; bidding strategies and models; the tendering process; marketing.

CVEN8730
International Project Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

International project management practices and a comparison with local practices. Managing projects overseas. Multicultural managment including values, human resources, negotiations and diversity. Globalisation. Technology transfer. Appropriate technology. Joint ventures. The management of time, costs, quality, risk, resources and people in an international setting. International contracts and dispute resolution. International marketing.

CVEN8731
Project Management Framework
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

An overview of project management; the nature of technical and non-technical projects; the project life cycle; the project team, organisational and behavioural aspects; the project manager; the organisation and management of project resources; project success evaluation techniques; project delivery; management information and decision support systems; case studies in project management; management theory and processes; relationship to general management; functions of project management.

CVEN8793
Geomechanics
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

CVEN8798
Fundamentals of Geomechanics
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3

Fundamentals of Geomechanics for geologists and other professionals who wish to work in geotechnical engineering, engineering geology and environmental engineering. Classification of soil, phase relationships, flow of water in soil. The principle of effective stress. Consolidation theory, stress distribution and settlement. Mohrs Circle, failure criteria, stress paths and strength of soils. Lateral earth pressures. Compaction of soil.

CVEN8799
Geotechnics Waste Disposal and Site Remediation
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Soil and contaminant chemistry, soil-contaminant interaction, movement of water and contaminants through the saturated and vadose zones, advection and dispersion of contaminants, gas flow and diffusion, contaminated site investigation management, risk assessment, soil and groundwater remediation, landfill leachate and gas management, and mine waste disposal and management, dredged waste disposal and management, field trip to inspect an landfill and/or a mining project.

CVEN8827
Composite Steel-Concrete Structures
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Behaviour and design of composite steel-concrete structures. Behaviour of composite beams and slabs with full and partial shear connection for strength and serviceability. Concept of partial interaction in composite beams and slabs. Behaviour of composite columns and beam-columns for strength and stability. Continuous composite beams for strength and serviceabiltity including design of semi-rigid connections. Design procedures according to Australian standards, British Standards, Eurocodes and American Standards.

CVEN8851
Unit Operations in Water and Waste Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Theory and principles of physical, chemical and hydraulic unit processes which are common to both water and wastewater treatment; energy dissipation and modelling; mixing; sedimentation; flotation; filtration; aeration; coagulation and flocculation; gas transfer; disinfection; heat transfer; combustion; sludge characterisation, thickening and dewatering; and activated carbon.

CVEN8855
Water and Wastewater Analysis and Quality Requirements
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

The effects of impurities in water and wastewater on its suitability for various beneficial uses, and methods used for detecting impurities. Analytical methods used in water and wastewater treatment for monitoring and process.

CVEN8856
Water Treatment
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Integrated design of facilities for the treatment of various types of raw water to meet specified water quality, with emphasis on water for municipal supply, including: chemical selection, dosing and mixing; coagulation - flocculation - clarification - filtration and disinfection technology. Processes for water softening, iron and manganese removal and demineralisation, including precipitation oxidation, ion exchange reverse osmosis. Taste and odour control. Disposal of water treatment residuals.

CVEN8857
Wastewater Treatment
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Principles and applications of aerobic and anaerobic biological processes for treatment of wastewaters and sludges. Design of integrated systems of biological, physical, chemical and sludge treatment processes to satisfy effluent quality objectives. Effluent disposal and reuse. Stabilisation, processing, disposal and utilisation of treatment residuals.

CVEN8872
Solid Waste Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Characterisation of municipal solid waste; collection; transfer stations; waste minimisation and recycling; waste treatment, including size reduction, composing, incineration, emerging technologies; landfill disposal, including preparation of landfill management plans and operational aspects; introduction to planning of waste management systems.

CVEN8881
Hazardous Waste Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Waste audits and characterisation of hazardous wastes in regions and industries; control of generation and transport of hazardous waste, manifest systems; waste minimisation; on-site treatment methods; integrated off-site treatment facilities; management of residues from treatment facilities; introduction to planning of regional hazardous waste management systems. Characteristics of individual waste types (dioxins, PCBs, pesticides, heavy metal, etc.) and waste management in individual industries (steel, pulp and paper, petro-chemical, food processing, etc.).

CVEN8884
Environmental Engineering Science 1
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Application of chemical principles to aqueous systems; pH and alkalinity, solubility and precipitation, complexation, redox and surface chemistry. Chemical equilibrium modelling. Introduction to chemical reaction kinetics. Introduction to Microbiology; Structure and metabolism of cells and micro-organisms; monitoring methods for pathogens and indicator organisms; impact of water and wastewater treatment on disease transmission.

CVEN8885
Environmental Engineering Science 2
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Processes controlling transformation and fate of chemicals in the environment. Measurement and prediction of contaminant behaviour in natural and engineered systems. Fundamentals of dispersion common to all environmental media (air, water, soil). Air chemistry; interaction and degradation of gaseous pollutants in the atmosphere. Dispersion processes; nature of dispersion processes, advection and diffusion. Modelling of dispersion in the atmosphere, water bodies and soils.

CVEN8888
Environmental Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Spectrum of modern environmentalism and sustainable development; environmental impact statement techniques and EIA procedures; environmental management systems; tools for the analysis and management of environmental impacts of engineering projects, including environmental risk assessment, environmental and waste audits, Life Cycle Assessment and other materials accounting techniques.

CVEN8895
Fundamental Knowledge in Environmental Management: Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

Systems approach to defining environmental problems and developing engineering solutions; simplified models of real world processes; introduction to a range of technologies for environmental protection and resource conservation; applications of science principles to engineering; engineering interfaces with science and sociology.
Note/s: This is a servicing course for MEM students.

CVEN8901
Special Topic in Civil and Environmental Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

This syllabus changes to allow presentation of a special topic of currrent interest particularly by visitors with recognised expertise in the topic.

CVEN8930
Masters Project
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC12 S1 S2

A minor research investigation involving analysis and interpretation of data, or a critical review and interpretation of literature on a selected topic, or a design project, and the presentation of same in a thesis format.

CVEN9405
Urban Transport Planning Practice
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Analytical techniques for urban land use/transport planning practice. Planning methodology: traffic generation, trip distribution, modal-choice, traffic assignment, evaluation. Land use forecasting: calibration and verification of behavioural models, application of mathematical programming models, case studies, public transport problems.

CVEN9407
Transport Systems Design (Non-Urban)
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Process of location of road, railway and airport facilities. Data collection, alternative routes, public discussion, methods, techniques, aids, plans and diagrams produced. Geometric form; differences between road, railway and airport carriageway layout. Optical guidance, design models, landscape, provision for surface-water, signposting, fencing and posts.

CVEN9414
Transport Systems Part 1
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Definition of basic traffic elements, zero flow travel time, capacity, impedance flow relationship. Transport networks. The determination of shortest path, maximum flow, in networks. The topological description of networks. Location theory applications in relation to transport networks. System parameters, performance. Application of network analysis to existing road, rail and air transport systems.

CVEN9415
Transport Systems Part 2
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Historical introduction to transport systems and development of various transport modes, road (vehicles, pedestrians, cycles), conveyor, rail, sea and air. Analysis of the operational characteristics of vehicles in the transport modes of road, rail and air. Analysis of congestion-related issues using queuing theory. development of optimum criteria for the distribution of cargo and passenger traffic. Terminals and mode transfer facilities. Development of system operational models. Energy consideration, new systems.

CVEN9421
Fundamentals of Traffic Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Traffic flow, concentration and speed. Fundamental diagram of traffic. Measurements, data collection presentation and statistical analysis. Traffic surveys; volume, composition, speed and travel time. Highway capacity and level of service: multi-lane and two-way-two-lane roads, urban roads, HCM-software calculations. Economic analysis of transport investments.

CVEN9422
Traffic Management and Control
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Unsignalised intersections; operating characteristics, capacity and delay. Signalised intersections; capacity and timing analysis. Signal coordination. Intersection analysis with computer softwares (SIDRA, INTANAL). The functional hierarchy of urban road networks. Aterial road traffic management. Local Area Traffic Management, Traffic Calming. Travel Demand Management.

CVEN9500
Engineering Geology and Geotechnical Models
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

A framework for recognising the important geotechnical features of the various geological environments: namely igneous, volcanic, metamorphic, sedimentary and carbonate. Superimposed onto this stratigraphic base are the overprinting effects of geological structure and environmental effects including stress, valley bulging, tectonic setting, glaciation, weathering and alteration; and Holocene geology. The lectures cover the continuous spectrum from soil to high strength rock. Geomorphology, the surface expression of the underlying geology and geological processes is a key part of the course. These elements and relationships are brought together within the umbrella of modern engineering concepts such as Total Geology. The final section of the course and probably the most important deals with geotechnical engineering models, what they comprise and how are developed.

CVEN9501
Geotechnical Site Investigation Methods
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21
Corequisite/s: CVEN9500.

Planning of site investigations and the parameters required, drilling, trenching and in-situ permeability of soil and rock. In-situ testing of soil, including SPT, CPT, piezocone, vane shear. Laboratory testing of soil including triaxial, direct shear and ring shear. Field instrumentation for pore pressure and displacement. Basics of geotechnical models.

CVEN9502
Geotechnical Engineering of Foundations
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Principles of foundation types and design. Shallow foundations - general bearing capacity equations for vertical and inclined loads, settlement calculation, foundations in sand, rock and reactive clays. Pile foundations - pile types and construction, ultimateload capacity, equation, ultimate capacity from pile driving formulae, settlement analysis; lateral loading; use of code for design of piles. Earth pressures, retaining walls.

CVEN9503
Advanced Foundation Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Piles - advanced analysis of pile capacity, group analysis, dynamic integrity testing and analysis. Cast in-situ piles, sheet piles, diaphragm walls, anchored and strutted walls, barettes - analysis and construction methods, Pile - raft foundations. Analysis of soil nailing and anchors in excavations. Design of shallow footings for dynamic loads.

CVEN9504
Foundation Engineering Construction Methods
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3
Prerequisite/s: CVEN9502.

Principles of design of dwatering excavations. Ground improvement methods and their application - dynamic compaction, vibroflotation, stone columns, jet grouting, ground freezing. Analysis of reinforced soil, soil nails. Proprietary piling techniques and their applications. Geotextiles, geomembranes and geocomposites in civil and geotechnical engineering.

CVEN9506
Geotechnical Mapping
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

The course deals with all key elements of mapping and logging, everything from collecting the data to processing, understanding and presenting the results. Materials range from soil to rock. Data and sampling biases; together with the shortcomings of each method are addressed.In the mapping section the different genetic maps are covered including geological, structural, geotechnical, geomorphological, air photo, specialised vector maps and landslides. The logging is an extension of the surface mapping and deals with techniques for gatherin data in the other dimension; from pits, tunnels, trenches and cuttings; 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.The course covers four days and each course is split approximately evenly between field and laboratory/lecture room time. Field work will be at sites in the Greater Sydney area. Students should plan to allow up to a further 1 to 2 days in the field to complete the field work.

CVEN9507
Advanced Geotechnical Site Investigations
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21
Prerequisite/s: CVEN9500, CVEN9501.

In-situ testing of soil and rock - pressuremeters, plate bearing dilatometers, core orientation, borehole imaging. Environmental investigations - sampling of groundwater and contaminated soil, sample storage testing. Geophysical techniques - an overview of surface and downhole methods and thier application and limitations. Geological/geotechnical investigations and models in a wide range of geological environments and for different types of structures.

CVEN9508
Rock Slope Instability and Stabilization
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21
Prerequisite/s: CVEN9773.

Rock slope stability analysis including stereographic methods for planar, wedge and toppling modes. Probabillistic methods in rock slope stability analysis. Rock slope stabilization by anchors, bolts, cables and drainage. Pre and post failure deformations of excavated rock slopes.

CVEN9509
Pavement Materials
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21

Properties and usage of soil and rock as pavement materials. Response of pavement materials to traffic and environmental factors. Concepts of durability. Stabilization using cement, line and bitumen. Selection and characterization of subgrade, sub-base and base materials. Specifications and acceptance testing. Quality control. Properties and usage of bitumens, and asphalts. Polymers and other additives. Manufacture and use of bituminous concrete. Mix design. Sprayed seals. Concrete for rigid pavements and sub-bases. Lean concrete.

CVEN9701
Engineering Economics and Financial Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Project initiation and development, feasibility studies, planning; economics, review of practical decision making problems and relevant techniques, benefit/cost analysis, methods of economic appraisal; consideration of inflation and taxation in investment decisions; depreciation; management decision processes, decision theory, utility; life-cycle costing, value management; models and techniques to assist the manager, forecasting; optimisation; applications; multiple objective planning; project delivery systems; financial planning, accounting.

CVEN9702
Project Planning and Control
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

The planning process; time estimating; the link between planning and control; control systems; the critical path method, networks, resource levelling, resource constrained scheduling, network compression, overlapping relationships, applied cpm, cost influences, project control, legal considerations, simulation in networks, stochastic networks, project management, applications.

CVEN9703
Quality and Quality Systems
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Quality management principles, practice and responsibilities; applications; quality systems documentation, manuals, implementation and procedures; quality assurance; quality control; relevant codes on quality; total quality management, quality circles and related approaches; quality requirements in contracts; continuous improvement.

CVEN9706
Human Resources Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

The development of skills for the management of people and their workplaces; industrial relations, health and safety issues, the recognition of people as the basic unit of engineering productivity; the structure and function of organisations, management of group action; work delegation across organisational boundaries; interpersonal skills, conflict management; learning curves; motivation.

CVEN9707
Contracts Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Elements of contract law and a contract; contracts; contract documents including specifications; procurement methods (contract or project delivery strategies); tendering; time in contracts; variations; payments; rights and obligations; planning and programming; risk management and insurance; dispute resolution and dispute avoidance; claims.

CVEN9708
Asset Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

The management of infrastructure assets. Regulatory requirements. Asset management plans, goals and approaches. Life cycle principles. Strategies, creation/acquisition, accounting/economics, operations and maintenance, conditions and performance monitoring, renewal/ rehabilitation/replacement/ /augmentation, disposal/rationalisation, audits. Valuation, capitalisation. Heritage assets.

CVEN9710
Management of Risk
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Introduction to the concept of risk and decision making under conditions of uncertainty; project objectives and planning, risk/factors affecting project performance; risk identification in engineering processes; human error, natural hazards and unforeseen risks; risk evaluation and quantification methods; relevant statistical techniques; risk avoidance and minimisation; financial risk, portfolio theory, risk sharing and financing; ambient and acceptable risk levels; insurances.

CVEN9718
Strategic Management for Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Strategic management for engineering and technology based organisations. Strategic versus operational planning; approaches to developing strategies. Influence of environment, resources (people, materials, plant/equipment), opportunities, competition. Strategic change, implementation, control. Influence of organisation size and shape.

CVEN9723
Design of Construction Operations
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Design theory as applied to construction processes; application to selected areas of the construction industry; building construction; queueing and simulation models; work study (method study and work measurement) procedures; productivity; job planning, layout planning, capacity planning; planning and design of production systems (construction oriented); reliability, availability, applications.

CVEN9730
International Project Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

International project management practices and a comparison with local practices. Managing projects overseas. Multicultural managment including values, human resources, negotiations and diversity. Globalisation. Technology transfer. Appropriate technology. Joint ventures. The management of time, costs, quality, risk, resources and people in an international setting. International contracts and dispute resolution. International marketing.

CVEN9731
Project Management Framework
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

An overview of project management; the nature of technical and non-technical projects; the project life cycle; the project team, organisational and behavioural aspects; the project manager; the organisation and management of project resources; project success evaluation techniques; project delivery; management information and decision support systems; case studies in project management; management theory and processes; relationship to general management; functions of project management.

CVEN9733
Performance Management Skills
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6

This course addresses the most challenging issues that professionals face when they make the transition from the functional to the role of a manager. It is not a full coverage of all the skills required to be an effective manager. Rather, this course builds on people's existing skills and backgrounds and seeks to present a consistent approach to management situations. It introduces a range of skills that experience has revealed many professionals stuggle to come to terms with. These skills have a profound effect on confidence and therefore effectiveness in making the transition into management. The content is divided into 4 sections: leadership, power and influence; managing performance; producing results; learning and continuous improvement.

CVEN9734
Commercial Evaluation of Projects
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW42

Provides a detailed study of the commercial evaluation techniques that private companies and public sector organisations apply to all capital expenditure projects to ensure that they meet the return on investment profitability criteria. The economic tools that a technical professional will require to gain a full appreciation of the wealth creation process are dissected in detail. Also covered are equipment replacement analysis, application of risk techniques, capital budgeting, economic appraisal for public sector projects and return on investment as a mangerial tool.

CVEN9770
Introduction to Numerical Methods in Civil Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3

Introduction to finite element and boundary element methods. Mathematical formulation of finite elements. Two and three dimensional elements. Linear and nonlinear analysis. Steady state and transient field problems - heat conduction, seepage etc. Dynamic analysis - frequency domain and time domain.

CVEN9773
Introduction to Rock Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3

Introduction to rock engineering including the engineering description of rocks, discontinuities and rock mass; the strength of rock substance, defects and rock mass; laboratory testing of rock, defect surveys, data presentation and hemispherical projections; in-situ stress and its measurement; stresses about underground openings; classification systems and introductory tunnel support requirements.

CVEN9775
Numerical Methods in Geotechnical Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3
Prerequisite/s: CVEN9770.

Introduction to computer programs based on finite element, boundary element and finite difference methods. Theory and application of FEM, BEM, FDM to foundations, slopes, embankments, dams, tunnels, seepage and consolidation.

CVEN9776
Rock Engineering for Tunnels and Underground Structures
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3
Prerequisite/s: CVEN9773.

A lecture and problem based course on the investigation, design and construction of tunnels and other underground structures, rock and rock mass strength and deformability. In-situ stresses; stresses about underground openings by elastic and numerical methods; classification systems for prediction of support requirements, including NATM; design of support elements including bolts, dowels, mesh and anchors. Measurement of in-situ stresses; instrumentation and monitoring; squeezing and swelling ground. Tunnel excavation methods and their applicability, including drill and blast, heading and bench, tunnel boring machine, road headers.

CVEN9783
Pavement Materials
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Properties and usage of soil and rock as pavement materials. Response of pavement materials to traffic and environmental factors. Concepts of durability. Stabilisation using cement, line and bitumen. Selection and characterisation of subgrade, sub-base and base materials. Specifications and acceptance testing. Quality control. Properties and usage of bitumens,and asphalts . Polymers and other additives. Manufacture and use of bituminous concrete. Mix design. Sprayed seals. Concrete for rigid pavements and sub-bases. Lean concrete.

CVEN9784
Pavement Analysis and Design
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW6

Types of pavement, selection on basis of cost and performance. Sub-grade conditions, working platforms. Role of environmental factors including temperature and moisture. Soil moisture equilibria and drainage requirements. Prediction and characterisaton of traffic loadings. Stress distribution in flexible and rigid pavements. Computer-based and approximate methods of analysis. Principles of mechanistic design. Comparative evaluation of design criteria and design procedures for flexible and rigid pavements for roads. Concrete block paving.

CVEN9785
Pavement Evaluation and Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3

Types of pavement distress, their origins and remedy. Evaluation and prediction of pavement condition. Pavement instrumentation and monitoring. Routine monitoring using deflection, role of accelerated trafficking tests. Measurement and reporting of physical distress including cracking, rutting and roughness. Measurement and prediction of skid resistance. Environmental factors. Pavement maintenance for flexible and rigid pavements. Over-lays and membranes. Recycling. Maintenance scheduling and management.

CVEN9786
Industrial, Airport and Heavy Duty Pavements
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3

Functions of airport, industrial and heavy-duty pavements. Airport and port pavements, container facilities, bulk cargo areas, factory and warehouse floors and hardstand operation requirements. Economic considerations. Types of industrial pavement. Advantages and disadvantages of flexible, rigid and segmental pavements. Types of load, aircraft and industrial vehicles, container stacking, bulk cargo. Load equivalency concepts, port area wheel loads, standard design aircraft and vehicles, formulation and application of loading spectra. Subgrade improvement and characterisation. Selection of pavement materials. Pavement design procedures.

CVEN9788
Geotechnical Site Investigations
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Geotechnical mapping and logging. Introduction to terrain evaluation, airphoto interpretation, remote sensing and engineering geophysics. Drilling, trenching, sampling and in-situ permeability testing of soil and rock. In-situ testing of soil, including SPT, CPT, piezocone, vane shear, dilatometer, pressuremeter, plate load. Laboratory testing of soil including triaxial, direct shear, ring shear, consolidation. Geotechnical model and design parameters. Field instrumentation for pore pressure and displacement. Environmental investigations - sampling of groundwater and contaminated soil, sample storage, testing.

CVEN9790
Soil Slope Instability and Stabilisation
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3
Prerequisite/s: CVEN9500.

Landslide classifiction and recognition; relation to topography and geology. Site investigations for landslides - the specific issues. Analysis of stability; selection of shear strengths, shear strength fo fissured clays; review of limit equilibrium analysis, back-analysis; slope stabilization, pre failure deformations of soil slopes. Slope stabilization techniques including geometry change, control of piezometric pressures, anchoring, retaining walls, reinforced soil. Design of slopes in soft clay, including pre-loading, wick drains. Desing of slopes for earthquake, including liquefaction. Slopes which require particular analysis approaches. Quantitative Risk Analysis, including assessment of the probability of failure, travel distance, risk estimation and risk acceptance criterial.

CVEN9792
Foundation Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Principles of foundation design. Design of conventional and special footings such as combined, cantilever etc, load capacity and settlement of single piles and pile groups subjected vertical and lateral loads, raft foundations, pile-raft systems, foundations on difficult soils, lateral earth pressure and sheet pile walls.

CVEN9793
Geomechanics
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

The fundamentals of the effective stress concept, clay mineralogy, seepage analysis and Laplace Equation, basic and advanced theories of consolidation, nonlinearity and Biots theorem, critical state soil mechanics, fundamentals of continium mechanics, theory of elasticity, constitutive relationships and failure criteria for real soils, soil plasticity and Cam-clay model, theorem of collapse, fundamentals of unsaturated soils mechanics.

CVEN9794
Geotechnical Engineering of Dams
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3
Prerequisite/s: CVEN9500, CVEN9501.

Geotechnical engineering for embankment and concrete dams. Zoning of embankment dams. Site investigations planning, and techniques, seepage control measures, and the design and specification and constuction of filters. Stability analysis under normal loads for embankment and concrete gravity dams. Foundation preparation, cleanup and grouting. Detailing of embankment dams. Specification and quality control. Design of embankment dams for earthquake; earthquakes in Australia, selction of design earthquake; general design principles, defensive design. Analysis of dynamic stability, and deformations of embankment dams. Assessment of liquefaction potential and post liquefaction behaviour. Design of remedial measures. Mine and industrial tailings dams.

CVEN9795
Design of Dams for Earthquake
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3

Assessment of existing and design of new embankment and concrete gravity dams for earthquake. Earthquakes in Australia, selection of design earthquake, risk assessment approach to design. General design principles, defensive design. Analysis of dynamic stability, and deformations of embankment and concrete gravity dams. Assessment of liquefaction potential and post liquefaction behaviour. Design of remedial measures.

CVEN9798
Fundamentals of Geomechanics
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3

Fundamentals of Geomechanics for geologists and other professionals who wish to work in geotechnical engineering, engineering geology, and environmental engineering. Classification of soil, phase relationships, flow of water in soil. The principle of effective stress. Consolidation theory, stress distribution and settlement. Mohrs Circle, failure criteria, stress paths and strength of soils. Lateral earth pressures. Compaction of soil.

CVEN9799
Geotechnics of Waste Disposal and Site Remediation
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Soil and contaminant chemistry, soil-contaminant interaction, movement of water and contaminants through the saturated and vadose zones, advection and dispersion of contaminants, gas flow and diffusion, contaminated site investigation management, risk assessment, soil and groundwater remediation, landfill leachate and gas management, and mine waste disposal and management, dredged waste disposal and management, field trip to inspect a landfill and/or a mining project.

CVEN9802
Structural Stability
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Euler strut; uniform and non-uniform cross sections. Eccentric loading; stressing beyond the elastic limit. Struts continuous over several supports. Stability of frames.

CVEN9806
Prestressed Concrete Design
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Introduction to prestressed concrete. Design for serviceability. Design for strength. Statically indeterminate beams. Behaviour and design of two-way slabs. End block design.

CVEN9809
Reinforced Concrete Design
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3
Design of reinforced concrete structures. Topics covered will be chosen from: design of beam-columns, non-symmetric sections, flexure-shear-torsion, serviceability and detailing. Special provisions for the use of high strength concretes, strut and tie modelling and collapse load methods for the design of reinforced concrete slabs.

CVEN9818
Bridge Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Introduction to bridge engineering; site selection, type selection, bridge hydraulics, design philosophies. Transverse load distribution. Simple supported and continuous slabs on beam bridges. Box girder bridges. Cable-stayed.

CVEN9820
Computational Structural Mechanics
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Stiffness analysis of structures. Basis of finite elements: principle of virtual work, variational theorems, constraint equations. Effects of inplane rigid floors and axially rigid members on the behaviour of multi-storey frames.

CVEN9822
Steel Structures
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Introduction to limit states design. Design of compression members. Effective lengths of columns. Tension members. Local buckling. Design of plate girders. Lateral buckling of beams. Design by buckling analysis. Behaviour of beam-columns. Introduction to connection design.

CVEN9824
Advanced Materials Technology
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Concrete: high performance concrete; new methods of workability measurement; methods of placing-pumping, spraying; mix design methods; special concrete mixes. Fibre Reinforced Plastics (FRP): advanced polymer composites for structures; polymer matrix materials; fibres used properties of polymers; properties of fibres; structural applications; durability of FRP.

CVEN9827
Composite Steel-Concrete Structures
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Behaviour and design of composite steel-concrete structures. Behaviour of composite beams and slabs with full and partial shear connection for strength and serviceability. Concept of partial interaction in composite beams and slabs. Behaviour of composite columns and beam-columns for strength and stability. Continuous composite beams for strength and serviceability including design of semi-rigid connections. Design procedures according to Australian Standards, British Standards, Eurocodes and American Standards.

CVEN9851
Unit Operations in Water and Waste Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Theory and principles of physical, chemical and hydraulic unit processes which are common to both water and wastewater treatment; energy dissipation and modelling; mixing; sedimentation; flotation; filtration; aeration; coagulation and flocculation; gas transfer; disinfection; heat transfer; combustion; sludge characterisation, thickening and dewatering; and activated carbon.

CVEN9855
Water and Wastewater Analysis and Quality Requirements
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

The effects of impurities in water and wastewater on its suitability for various beneficial uses, and methods used for detecting impurities. Analytical methods used in water and wastewater treatment for monitoring and process.

CVEN9856
Water Treatment
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Integrated design of facilities for the treatment of various types of raw water to meet specified water quality, with emphasis on water for municipal supply, including: chemical selection, dosing and mixing; coagulation - flocculation - clarification - filtration and disinfection technology. Processes for water softening, iron and manganese removal and demineralisation, including precipitation, oxidation, ion exchange and reverse osmosis. Taste and odour control. Disposal of water treatment residuals.

CVEN9857
Wastewater Treatment
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Principles and applications of aerobic and anaerobic biological processes o treatment of wastewaters and sludges. Design of integrated systems of biological, physical, chemical and sludge treatment processes to satisfy effluent quality objectives. Effluent disposal and reuse. Stabilisation, processing, disposal and utilisation of treatment residuals.

CVEN9872
Solid Waste Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Characterisation of municipal solid waste; collection; transfer stations; waste minimisation and recycling; waste treatment, including size reduction, composing, incineration, emerging technologies; landfill disposal, including preparation of landfill management plans and operational aspects; introduction to planning of waste management systems.

CVEN9881
Hazardous Waste Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Waste audits and characterisation of hazardous wastes in regions and industries; control of generation and transport of hazardous waste, manifest systems; waste minimisation; on-site treatment methods; integrated off-site treatment facilities; management of residues from treatment facilities; introduction to planning of regional hazardous waste management systems. Characteristics of individual waste types (dioxins, PCBs, pesticides, heavy metal, etc.) and waste management in individual industries (steel, pulp and paper, petro-chemical, food processing, etc.).

CVEN9884
Environmental Engineering Science 1
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3
Excluded: CVEN7825, CVEN7826

Application of chemicals principles to aqueous systems; pH and alkalinity, solubility and precipitation, complexation, redox and surface chemistry; chemical equilibrium modelling; introduction to chemical reaction kinetics. Introduction to microbiology; structure and metabolism of cells and micro-organisms; monitoring methods for pathogens and indicator organisms; impact of water and wastewater treatment on disease transmission.

CVEN9885
Environmental Engineering Science 2
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3
Excluded: CVEN7827, CVEN7828

Processes controlling transformation and fate of chemicals in the environment. Measurement and prediction of contaminant behaviour in natural and engineered systems. Fundamentals of dispersion common to all environmental media (air, water, soil). Air chemistry; interaction and degradation of gaseous pollutants in the atmosphere. Dispersion processes; nature of dispersion processes, advection and diffusion. Modelling of dispersion in the atmosphere water bodies and soils.

CVEN9888
Environmental Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Spectrum of modern environmentalism and sustainable development; environmental impact statement techniques and EIA procedures; environmental management systems; tools for the analysis and management of environmental impacts of engineering projects, including environmental risk assessment, environmental waste audits, Life Cycle Assessment and other materials accounting techniques.

CVEN9895
Fundamental Knowledge in Environmental Management: Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

Systems approach to defining environmental problems and developing engineering solutions; simplified models of real world processes; introduction to a range of technologies for environmental protection and resource conservation; applications of science principles to engineering; engineering interfaces with science and sociology.
Note/s: This is a servicing course for MEM students.

CVEN9901
Special Topic in Civil and Environmental Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

This syllabus changes to allow presentation of a special topic of currrent interest particularly by visitors with recognised expertise in the topic.

CVEN9902
Special Topic in Civil and Environmental Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3

This syllabus changes to allow presentation of a special topic of current interest particularly by visitors with recognised expertise in the topic.

CVEN9930
Masters Project
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC12 S1 S2

A minor research investigation involving analysis and interpretation of data, or a critical review and interpretation of literature on a selected topic, or a design project and the presentation of same in a thesis format.

ECON5103
Business Economics
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1 S2 X1

An introduction to economic analysis and policy, with particular application to decision-making in business. The course provides students with the tools to use economic principles in decision-making and an understanding of the broader economic environment in which business decisions must be made.

ECON5104
International Economics
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3
Prerequisite/s or Corequisite/s: ECON5103.

Primarily a theoretical treatment of international trade and finance. This course 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, international and external balance; foreign exchange markets; international monetary system; international monetary system; foreign investment.

ECON5108
Public Finance
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s or Corequisite/s: ECON5103.

Public expenditure and taxation, budgetary policy and federal-state financial relations; partial and general equilibrium analysis of taxation; incidence and resource allocation effects of income taxes, wealth taxes and outlay taxes.

ECON5109
Business Economics
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S1
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457
Excluded: ECON5109

An understanding of economics is essential for the long-term viability of a business. The economic environment in which business operates will have a vital bearing on day-to-day decisions. Business Economics lays the foundations for such knowledge. It provides a basic introduction to those economic principles which are important for business, as well as providing general economic literacy to enable participants to read and understand economic reports and to be able to communicate with and understand business people, economists and policy makers.

ECON5114
Superannuation and Retirement Benefits
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON5103, ECON5203
Excluded: ACTL5002

This course provides a comprehensive analysis of superannuation and retirement benefits, primarily in Australia. Topics include: alternative superannuation arrangements, taxation and regulation of superannuation, risk management and investment strategies for superannuation, design of retirement benefits, the retirement decision, policy developments and controversies and international comparisons.

ECON5115
Natural Resource Economics
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s or Corequisite/s: ECON5103.

An introduction to the exploitation of natural resource systems within an economic framework, particularly forestry, fisheries, water, oil and other minerals. Policies required to ensure improved management without exploitation of these renewable and non-renewable resources under different property rights regimes.

ECON5116
Environmental Economics
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s or Corequisite/s: ECON5103.

This course 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.

ECON5121
Topics in Business Economics
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s or Corequisite/s: ECON5103.

This course consists of two seven-week modules chosen from a prescribed list. The modules are self-contained and examine important economic issues. Possible module topics include economics of climate change, project analysis.

ECON5123
Economics of E-Business
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s or Corequisite/s: ECON5103.

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.

ECON5125
Fundamental Knowledge in Environmental Management: Economics
School of Economics
Staff Contact: H Harding
UOC6 HPW3 S2

This course is specially designed for students undertaking the University-wide Master of Environmental Management. It is one of 6 "Fundamental Knowledge" courses which form core courses in the MEM. It is designed for people without a background in Economics. The course provides a basic understanding of economic principles and of the roles of economics in environmental management. The course will also explore the economics of ecologically sustainable development. Microeconomics topics include: markets, supply and demand, pollution, environmental assessment, benefit cost analysis, renewable resources and price incentives for environmental improvements. Macroeconomic topics include: sustainable development and inflation, employment versus the environment, and economic growth, development and the environment. The course will explore and critically examine both market and non-market approaches in the attempt to analyse solutions to major environmental problems.

ECON5153
International Macroeconomics
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3
Prerequisite/s: ECON5103

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.

ECON5154
Microeconomic Analysis 1
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1

Consumer theory: utility maximisation, duality, household production theory, revealed preference, measuring welfare changes, choice under uncertainty. Production theory: profit maximisation, cost minimisation, factor demands. Market structure: competition, monopoly, oligopoly, monopolistic competition. Markets in general equilibrium: competition, the two-sector model, welfare economics.

ECON5156
International Trade
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2
Prerequisite/s or Corequisite/s: ECON5154

The theory and practice of international trade. The course will emphasise 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.

ECON5158
Economics of Labour Markets
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s or Corequisite/s: ECON5154.

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.

ECON5159
Industrial Organisation
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s or Corequisite/s: ECON5154.

Topics covered will be from amongst the following. Theory of the firm, production costs, monopoly, dominant and fringe firms, cartels, oligopoly and monopolistic competition, differentiated products, regulation, advertising, horizontal and vertical integration, strategic behaviour by firms, and R &D. Both theoretical and empirical results will be covered in the course.

ECON5164
Economic Reasoning
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2

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, you will be able to apply economics logically to practical problems.

ECON5174
Macroeconomic Analysis 1
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1

Advanced analysis of macroeconomic issues. Topics include: the structure of macroeconomic models, growth theory and capital accumulation, the structure of short run classical and Keynesian models, equilibrium and disequilibrium models of the business cycle, open economy models, fiscal policy and deficits, monetary policy and stabilisation theory.

ECON5176
Business Cycles and Growth
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2
Prerequisite/s or Corequisite/s: ECON5174.

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 sources of business cycle fluctuations, endogenous growth theories, and cross-country growth analysis will be considered.

ECON5185
The Economics of Health and Medical Care
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s or Corequisite/s: ECON5154.

The course provides an economic approach to the analysis of health and medical care markets. Topics covered include the production of health, the production and consumption of medical care, the relationship between health and wealth, the health workforce and the training of health professionals, social insurance and the organisation of health insurance markets. Throughout the course reference is made to current government health policy.

ECON5197
Project Report
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW3 S1 S2

ECON5198
Economics Research Seminar
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2

Students enrolled in ECON5198 are required to present a seminar on their research topic

ECON5203
Statistics for Business
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1 S2 X1

The aim of this course is to provide students with an appropriate basic knowledge of statistical tools used in business. Topics will include: descriptive analysis of statistical data, sampling distributions, statistical estimation; hypothesis testing; simple linear regression; introduction to time series analysis; forecasting; index numbers.

ECON5204
Mathematics for Business
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1

The aim of this course is to provide students with the appropriate mathematical tools for application to applied problems and current research in business. Topics will include: calculus, basic optimisation techniques, mathematics of finance, matrix algebra, introduction to linear programming. This course will emphasise practical aspects of mathematics in business applications.

ECON5207
Elements of Econometrics
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON5203

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.

ECON5233
Operations Research
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON5204, ECON5203

Introduces operations research as the systematic application of quantitative methods to the analysis of problems involving decision making in economics and related disciplines. Linear programming, quadratic programming, and dynamic programming with applications to transportation, inventory, portfolio selection and other fields related to economics. In addition, students are required to undertake a case study requiring data collection and analysis.

ECON5248
Business Forecasting
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON5203

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.

ECON5251
Applied Econometrics
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON5207

This course considers alternative analytical approaches to applied econometric work. Various empirical problems are considered and the relative merits of available solutions are assessed. Specific attention is given to diagnostic testing in an LM framework, dynamic specification, influential data and non-stationarity. Practical experience is gained through replicating and extending published applied studies.

ECON5252
Advanced Econometric Theory
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2
Prerequisite/s: ECON5251

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.

ECON5254
Econometric Theory
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3
Prerequisite/s: ECON5207

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 auto correlation and heteroskedasticity.

ECON5255
Computational Statistics and Econometric Modelling
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON5207

Statistical and econometric modelling enhances our understanding of the behaviour of individuals, firms and other economic agents. This may simply involve the quantification of relationships between important driving forces within the economy but more fundamentally statistical and econometric models can provide evidence that will help discriminate between alternative views of how economic agents behave. Over the last 20 years computing power has increased dramatically and led to the development of statistical and econometric methods that utilize this power to more directly model behavioural relationships. The purpose of this course is to introduce computationally intensive statistical and econometric methods to carry out inference - estimation, hypothesis testing, confidence intervals and prediction - for complex models used in the Social Sciences. The course will provide an introduction to Bayesian inference using Markov Chain Monte Carlo simulation, simulated methods of moments estimation, and bootstrap methods. Examples and case studies of the applications of the methodology will also be provided. Actual applications will be drawn from economics, finance and marketing, but similar methods can be applied to statistical problems in the physical sciences and engineering.

ECON5298
Econometrics Research Seminar
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1 S2

Students enrolled in ECON5298 are required to present a seminar on their research topic.

ECON5299
Project Report
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW6 S1 S2

ECON5391
Project Report
School of Economics
Staff Contact: School Office
Enrolment requires School approval
UOC12

ECON7105
Business Economics (International)
School of Economics
Staff Contact: G Bradley
UOC6 S1 S2

Note: Only offered to students in the International Professional Accounting Program Beijing ACCTES8405.

ECON7203
Statistics for Business (International)
School of Economics
Staff Contact: G Bradley
UOC6 S1 S2
Note: Only offered to students in the International Professional Accounting Program Beijing ACCTES8405.

ECON8105
Business Economics (International)
School of Economics
Staff Contact: G Bradley
UOC6 S1 S2

Note: Only offered to students in the International Professional Accounting Program Guangzhou ACCTES8403.

ECON8203
Statistics for Business (International)
School of Economics
Staff Contact: G Bradley
UOC6 S1 S2

Note: Only offered to students in the International Professional Accounting Program Guangzhou ACCTES8403.

EDST5014
Science and Humanities: Bridging the Two Cultures
School of Education
Staff Contact: M Matthews
UOC12 HPW2 S2

Examination of the practice and theory of some major curriculum reforms in Britain, the US and Australia that are attempting to bridge the traditional gap between the sciences and humanities. The present crisis in science education in all western countries is considered. A tradition of theoretical debates and curriculum programs that have emphasised a contextual approach to the teaching of science whereby the social, cultural, historical, technological and philosophical dimensions of science are interwoven into the teaching of science will be detailed.

EDST5015
Modes of Thought and Their Instructional Implications
School of Education
Staff Contact: J Sweller
UOC12 HPW4 S1 S2

Cognition and instruction. The manner in which instructional material is designed and taught can be guided usefully by cognitive theory. Current findings based on schema theory and cognitive load theory suggest that many commonly used instructional techniques are ineffective. The same theories and findings provide alternatives structured to facilitate learning, thinking and problem solving. Procedures for designing instruction that accords with our mental processes, and research techniques to test the effectiveness of novel instructional methods are central issues that are discussed.

EDST5016
Knowledge Stuctures in Mathematical Problem Solving
School of Education
Staff Contact: R Low
UOC12 HPW4 S1

It has become increasingly recognised that although computation and calculation are necessary steps in achieving a solution, they are by no means sufficient. Cognitive processing at the presolution stage, particularly in relation to an understanding of the structure of the problem to be solved, is important. Surveys the research on knowledge structures that are necessary for effective problem solving. Topics include the role of schematic knowledge in problem solving, expert-novice differences, and measures of schematic knowledge. Application of research findings to classroom teaching and learning is also discussed.

EDST5020
Education of Intellectually Gifted Students
School of Education
Staff Contact: M Gross
UOC12 HPW4 S1 S2

The development of the concept of giftedness and the extent to which it is culturally determined is traced. The rationale, selection procedures and structure of programs established for students gifted in music, sport and athletics are compared with those for intellectually and academically gifted students. The development and influence of policies on gifted and talented education are examined, including federal and state government policies and the policies of the political parties, education authorities, teacher unions and parent groups. Students review the research on the traits and competencies of successful teachers of gifted students, and the effects of teaching training and inservice in gifted education. Identification procedures, teaching strategies and program structures which facilitate or impede the full development of high potential are critically examined. Specific attention is paid to the research on the needs and characteristics of gifted students in minority and disadvantaged groups.

EDST5025
Organisational Learning and Research
School of Education
Staff Contact: P Jin
UOC12 HPW4 S1 S2

Topics include: criteria of organisational effectiveness; identifying an organisation's learning disability; single-loop and double-loop learning; methods of enhancing the learning capacity of an organisation; principles of holographics design for self-regulating organisations; organisational restructuring and transformation; learning to use different leadership styles; team learning; and organisational creativity. Examines organisational learning issues in the educational context and other workplace settings so that feasible intervention projects based on diagnosis and evaluation can be formed.

EDST5027
Advanced Educational Measurement in the Social Sciences
School of Education
Staff Contact: P Knapp
UOC12 HPW4 S1 S2
Prerequisite/s: EDST5108

Rash measurement models have been the focus of much recent work in psychology, sociology and education. Introduces participants to measurement models which govern scale construction in the social sciences, particularly the Extended Logistic Model (ELM) which is a generalisation of the Single Logistic Model for the case of more than 2 ordered response categories. Similarities and differences between Thurstone, Guttman and Likert approaches to attitude measurement are also examined. Participants will become familiar with microcomputer programs to analyse data using the ELM. Primarily takes the form of a research seminar series and is therefore particularly suited to students preparing research theses or dissertations involving the construction and validation of measurement scales.

EDST5031
Research Methods 1
School of Education
Staff Contact: J Sweller
UOC6 HPW2 S1 S2

A compulsory program of study prescribed to meet individual needs which takes account of the student's background in research methods.

EDST5032
Research Methods 2
School of Education
Staff Contact: J Sweller
UOC6 HPW2 S1 S2

Continuation of the program prescribed in EDST5031 which is finalised after discussion with the student's supervisor.

EDST5101
Introduction to Design and Analysis
School of Education
Staff Contact: P Jin
UOC8 HPW2 S1
Excluded: EDST2101, EDST3101

Characteristics of sets of scores; descriptive statistics. Sampling, estimation, inference. Probability and its estimation. Sampling distributions. The unit normal distribution. Analysis of data from 'two-sample experiments': Student's t-test, the Mann-Whitney U test, Wilcoxon's matched-pairs signed-ranks test. Contingency tables. Correlation and its estimation: Pearson, Spearman and Goodman indices. Chi-squared test of independence. Introduction to the analysis of 'variance'. Simple regression analysis.

EDST5103
Multivariate Design and Analysis
School of Education
Staff Contact: P Jin
UOC8 HPW2 S2
Prerequisite/s: EDST5101;
Excluded: EDST2103, EDST3103.

Explores issues of research design in considerable depth and focuses on more advanced statistical applications. General linear models and nonlinear relationships. The extraction and rotation of common factors by graphical and analytic means. Factor analysis as a tool in the construction of educational and psychological inventories. Structural equation modelling. The extension of factorial analysis of variance designs to include many dependent variables. Application of factor analysis and multivariate analysis of variance to educational research problems. Meta analysis, computer analysis of qualitative data. Use of computer package programs.

EDST5104
Educational Assessment and Measurement
School of Education
Staff Contact: P Knapp
UOC8 HPW2 S1
Excluded: EDST2104, EDST3104

Purpose of assessment and measurement; educational objectives and the validity of assessment. Construction and administration of achievement tests: essay tests, objective tests, other tests (eg psychomotor, attitude, aptitude and personality tests). Cognitive levels; tables of specification. Characteristics of different types of objective test items. Brief review of descriptive statistics. Coefficients of correlation. Test validity and reliability. Improvement of test quality through item analysis including the validity and reliability of test scores, norms and profiles. Norm-referenced and criterion-referenced assessment. Descriptive factor analysis and its use in test construction. Likert scales; semantic differential technique. Personality, 'intelligence', 'achievement', attitude, leadership-style, vocational interest and other tests. Evaluation of teaching and other professional performance. Higher School Certificate scoring, scaling and reporting. University selection; University Admissions Index.

EDST5120
Qualitative Research Methodology
School of Education
Staff Contact: M Varvaressos
UOC8 HPW2 S1

Focuses on the examination of the different types of qualitative method in educational research. Various aspects of investigation are treated: ethnographic methods, interview techniques, formation of questionnaires, data collection (and what to do with it), processes of inquiry and ways of communication (multi-media). Emphasises the construction of text, written, verbal and non-verbal (art, music), discourse and content analysis, the types of discourse formation and the relationship between information and theory.

EDST5201
Philosophical Issues in Education
School of Education
Staff Contact: M Matthews
UOC8 HPW2 S2
Excluded: EDST2201, EDST3201

Philosophical views underlying educational practices and debates. Examines topics such as aims in education, the ideal of an educated person, neutrality and indoctrination in teaching, authority relations in schooling, curriculum construction, intelligence testing, learning and understanding, and other topics, in order to develop philosophical competence and knowledge. The work of one educational theorist is examined.

EDST5204
History and Philosophy in Science Education
School of Education
Staff Contact: M Matthews
UOC8 HPW2 S2
Excluded: EDST2204, EDST3204

Examines some central philosophical questions raised by the Scientific Revolution - the role of authority in science, the place of mathematics in science, the relation of sensory evidence to theory, the place of metaphysics in science, the construction and interpretation of experiments and how these can bear upon school history and science courses. Examines the extent to which individual learning recapitulates the history of science.

EDST5303
Human Cognitive Architecture
School of Education
Staff Contact: J Sweller
UOC8 HPW2 S1
Excluded: EDST2303, EDST3303

How cognitive structures are organised into a coherent architecture and how that architecture allows human beings to learn, think, reason and solve problems. The major concepts methods, and research findings which have been produced over the last half century, along with relevant applications.

EDST5306
Child Growth and Development
School of Education
Staff Contact: R Low
UOC8 HPW2 S1
Excluded: EDST2306, EDST3306

An examination of the principles of child development and how these principles interact with the educational process, including a study of individual differences and the manner in which these differences relate to education. Analysis of learning and how learning principles can be translated into educational practice is also discussed.

EDST5307
Mental Processes and Instructional Procedures
School of Education
Staff Contact: J Sweller
UOC8 HPW2 S2
Excluded: EDST2307, EDST3307

Factors which affect learning and problem solving. Cognitive theories that can guide us in designing instruction. How to format instruction so that it accords with students' mental processes. Techniques designed to hasten the development of problem solving expertise.

EDST5312
Using Technology in the Workplace
School of Education
Staff Contact: P Chandler
UOC8 HPW2 S1
Excluded: EDST2312, EDST3312

Investigates the consequences of adopting modern technology in the workplace. Concentrates on maximising the use of computers and other technology in everyday working situations. Examines and discusses theory driven research in a range of technology areas (eg, multi-media computing) in detail. Demonstrates how the most recent industry and vocational research findings can be used in developing a set of instructional packages designed to enhance learning and make optimal use of technology. Allows flexibility to focus on individual technological needs of participants.

EDST5314
Stress Management Research and Practice in the Workplace
School of Education
Staff Contact: P Jin
UOC8 HPW2 S2

Emphasises multifaceted approaches to stress management research and practice. Evaluation of various stress management procedures. Includes cognitive, behavioural and transactional models. Discusses applications in different social settings and developmental stages. Examines the role of the educator/manager as a helper, and also global and specific prevention programmes, crisis management, and recent developments in dealing with different types of anxiety and tension. A kit of readings will be provided.

EDST5320
Individual Differences and Education
School of Education
Staff Contact: R Howard
UOC8 HPW2 S1
Excluded: EDST2320, EDST3320

Examines ability and personality differences and their effects in school, university and workplace training educational settings. Examines general intelligence, specific abilities, cognitive and learning styles, creativity, and such personality traits as extraversion and anxiety level. Examines theories of intelligence. Looks at advantages and disadvantages of ways in which educational institutions deal with individual differences.

EDST5432
Administrative and Organisational Behaviour in Education
School of Education
Staff Contact: J McCormick
UOC8 HPW2 S1
Excluded: EDST4102, EDST4302

Deals with the contexts, roles and functions of management in educational institutions: team work, decision-making, communication, planning and policy-making, human resource management, staff motivation and satisfaction, exercising power/authority/influence, structuring and organising, problem solving, quality assurance and total quality management, managing learning and teaching, and managing physical resources. Study of research into these issues in educational settings.

EDST5433
Organisation Theory in Education
School of Education
Staff Contact: J McCormick
UOC8 HPW2 S1
Excluded: EDST4103, EDST4303

The application of organisation theory to educational administration. Scientific management theory, bureaucracy and professional educators, human relations, open systems theory. Contemporary critiques of conventional theories of educational organisations. Educational goals, organisational culture, educational technology, the educational environment, interorganisational linkages, organisational effectiveness. Alternative theories of educational organisation.

EDST5436
Development and Evaluation of Educational Programs
School of Education
Staff Contact: K Barnett
UOC8 HPW2 S1
Excluded: EDST4206, EDST4306

Develops students' understanding of the theories and models of program development and evaluation in the context of education. Examines the nature, goals and content of educational programs,personnel involved, organisational processes and administrative tasks in program development. Considers the meaning, purposes and nature of evaluation, models of evaluation, uses of evaluation information, planning evaluations, evaluation methods, data collection, analysis and reporting of evaluatuion findings , ethical issues and audiences of evaluation.

EDST5438
Leadership Theory, Research & Practice
School of Education
Staff Contact: K Barnett
UOC8 HPW2 S2
Excluded: EDST4208, EDST4308

Develops students' understanding of leadership theories, current research and practice. Considers the major approaches to leadership such as trait, behaviour, contingency and transformational leadership theory. Also considers current research and practice in the context of education.

EDST5439
Legal Aspects of Educational Administration
School of Education
Staff Contact: J McCormick
UOC8 HPW2 S2
Excluded: EDST4209, EDST4309

Sources of law in the context of a historical overview of the evolution of State and Commonwealth responsibility for education; analysis of current New South Wales statutory responsibility for education; legal rights, obligations and duties of students and parents/guardians with emphasis on litigious areas such as negligence, discipline and privacy; review of administrative decisions by educators by the Supreme Court generally and in specific areas such as the Ombudsman, anti-discrimination, copyright and freedom of information; the interplay of State/Commonwealth education funding; overview of employer/employee relationships, both common law and statutory appointments, promotions, transfers, professional misconduct.

EDST5445
Supervised Fieldwork in Educational Administration
School of Education
Staff Contact: J McCormick
UOC8 S1 S2
Excluded: EDST4215, EDST4315

On-the-job administrative training for a specified period under the joint supervision of a practising educational administrator and the Coordinator of the Master of Educational Administration course. Available to students by individual arrangement; placements depend on the needs and interests of students and on availability of suitable locations. Intended to give the student experience in a new administrative context. Written report required on completion.
Note/s: Students must contact the MEdAdmin Coordinator before enrolment.

EDST5451
Politics of Education
School of Education
Staff Contact: M Varvaressos
UOC8 HPW2 S2

Offers deep insights into the political nature of our educational institutions. The implications of this research are of great benefit to educational administrators as well as students of educational management and organisations. Explores the relationship between theory and practice with direct reference to the political nature of policy making and policy implementation. Critically reviews the ideological implications of the power of political play in education policy and draws upon the work of theorists who have examined the relationship between knowledge and power.

EDST5608
Effective Teaching and Effective Schools
School of Education
Staff Contact: P Ayres
UOC8 HPW2 S1

Focuses on the literature and research into effective teachers and schools. Examines the educational outcomes used to measure effective teachers and schools. Analyses the methods used to identify effective teachers including public examination data. Examines the qualities associated with effective teachers and how these attributes are developed. Explores the classroom techniques employed by effective teachers across the disciplines and the relationship between effective schools and effective teachers. Examines the various national and international government policies to foster a climate of quality teaching and effective schools.

EDST5704
Contemporary Issues in Education
School of Education
Staff Contact: School Office
UOC8 HPW2 S1 S2
Excluded: EDST2704, EDST3704

Opportunity for students to study a course under visiting professors or lecturers with special experience and competence in selected aspects of education not offered elsewhere in the program.

EDST5800
Current Issues in the Education of Intellectually Gifted Children
School of Education
Staff Contact: M Gross
UOC8 HPW2 S1 S2
Excluded: EDST2800, EDST3880

Focuses on Australian and international attitudes to the education of children of high intellectual potential. Explores the concept of giftedness from an analysis of its historical and cultural roots to an examination of the current focus on domains and levels of giftedness. Evaluates a range of techniques for identifying giftedness and talent in primary and secondary students, including those from minority and disadvantaged groups. Explores research on the academic, social and emotional needs of gifted children and investigates teaching strategies and school organisational structures which assist or impede the full development of high potential.

EDST5803
Developing and Evaluating Programs for Intellectually Gifted Children
School of Education
Staff Contact: K Hoekman
UOC8 HPW2 S1
Prerequisite/s: EDST5800;
Excluded: EDST2803, EDST3803.

Focuses on current research on the components of appropriate program development for gifted and talented children. Critical evaluation of program models currently used in Australia and internationally. Students are required to conduct needs analyses, develop and design programs appropriate for gifted students within the education system of NSW. Examines research on the effectiveness of 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.

EDST5805
Curricula and Teaching Strategies for Intellectually Gifted Children
School of Education
Staff Contact: K Hoekman
UOC8 HPW2 S2
Prerequisite/s: EDST5800;
Excluded: EDST2805, EDST3805.

Focuses on current research on appropriate curriculum design, teaching methodologies and resources for gifted and talented children. Critical evaluation of enrichment paradigms currently used in Australia and internationally. Development of differentiated curricula appropriate for use with academically gifted students in the regular classroom or in special settings. Examines closely research on the effectiveness of various enrichment paradigms with particular attention to the methods of evaluating the appropriateness and effectiveness of various teaching strategies and resources.

EDST5888
Project
School of Education
Staff Contact: School Office
UOC8 S1 S2
Excluded: EDST3888

Individual research on a topic approved by the Head of School with appropriate consultation and supervision. Intended to prepare students for further research at doctoral level.
Note/s: Project topic and supervisor must be registered with the Administrative Officer.

ELEC8350
Optical Fibres (Distance Learning)
School of Electrical Eng and Telecommunications
Staff Contact: G Peng
UOC6 S1
Excluded: TELE4313 AND ELEC9350

Wave propagation in optical fibres. Gaussian approximation of fields in single-mode fibre, spot-size, equivalent step index fibre. Material, waveguide and intermodal dispersion. Polarisation and birefringent fibres. Ray theory, in multimode fibre. Optical fibre measurement and characterisation. Launching efficiencies in fibres. Fibre-based devices. Nonlinear and anisotropic effects.

ELEC8355
Optical Communication Systems
School of Electrical Eng and Telecommunications
Staff Contact: G Peng
UOC6 S2
Excluded: ELEC9355

Active optical devices: optical sources and detectors. Optical modulation techniques. Optical amplification and fibre amplifier. Optical transmitter and receiver analysis and design. Launching efficiency Fibre splicing and connection. Fibre measurement and sensing. Optical fibre cables. Digital optical communication systems. Analogue optical communication system. Optical and Wavelength Division Multiplex. Passive optical components. Optical nonlinearities. Optical fibre local area networks.

ELEC8505
Microsystems Technology
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC6 S2
Excluded: ELEC9505

Interdisciplinary overview of MST (MicroElectroMechanical Systems - MEMS). Transducer definition: Sensors and Actuators. Micromachining techniques including silicon bulk micromachining, silicon surface micromachining, stiction problems, bonding processes, LIGA technique, micromachined mould template and electroplating, sealed cavity formation, stereolithography, chemical mechanical polishing for planarisation, electric discharge micromachining, laser micromachining, focused ion beam micromachining. Properties of materials for micromachining. Mechanical transducers. Optical transducers.Thermal transducers. Magnetic transducers. Chemical and biological transducers. Microfluidic devices. Circuit interfaces to transducers. System considerations. Case studies. Technology trends.

ELEC9201
Electricity Industry Planning and Economics
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC6 HPW3

The nature of the electricity & gas industries; climate change and the electricity industry; objectives & options for restructuring; insights from electricity pricing theory; wholesale electricity market design; Australia's restructured electricity industry; National Electricity Market design & performance; the role of electricity networks in a restructured electricity industry including market representation, network pricing and network regulation; ancillary services; design & implementation of retail electricity markets; electricity industry regulation.

ELEC9202
Power System Operation and Control
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC6 HPW3

Induction to the evolving electricity industry drivers of restructuring, technological developments and environmental concerns, and their impact on power system operation. Conventional approaches and tools for economic dispatch, unit commitment, hydroscheduling, production costing, reliability measures and operations planning in traditional industry structures. Power system operation within restructured electricity industries-wholesale spot electricity markets, bilateral trading, forward markets and full retail competition. Operation of power systems with renewable energy resources.

ELEC9213
Electrical Energy Systems
School of Electrical Eng and Telecommunications
Staff Contact: T Blackburn
UOC6 HPW3 S1 S2

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.

ELEC9214
Power Systems Equipment
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC6 HPW3

A detailed coverage of the common features of major items of power delivery equipment, including analysis of the field properties and its use in determining insulation design, magnetic circuit design and analysis, thermal design and operation of equipment and the design of both static and dynamic contact systems for equipment.Detailed coverage of the design and operation of specific items of equipment including: Transformers (power and instrument), switchgear, protection systems, cables, overhead lines, surge arresters, earthing systems and condition monitoring and testing.

ELEC9226
Electrical Services in Building
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC6 HPW3

The course coverage will include the following aspects of commercial and industrial electrical systems. Regulatory aspects, switchboard design and operation, (HC and LV) cabling systems, earthing, electrical safety issues including personnel protection and fire protection, protection of electrical systems (including both overcurrent and surge protection), lightning protection, electrical lighting systems. Equipment operation and energy efficiency will also be covered, together with condition monitoring aspects of major plant. Transformers and switchgear operation and monitoring. Power quality and the effect of voltage and current Larmonics. Power frequency magnetic fields and their impact in building and industrial sites.

ELEC9231
Electrical Drive Systems
School of Electrical Eng and Telecommunications
Staff Contact: C Grantham
UOC6 HPW3 S2
Excluded: ELEC4216

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.

ELEC9232
Motion Control Systems
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC6 HPW3

This course contents the review of elementary mechanics; Force and torque balance, Characteristics of motion elements; Parameter measurement; Elements of a Motion Control System; System requirements; Position, velocity and torque/acceleration controls; Sensors in Motion Control: Position, velocity and acceleration sensors; voltage and current sensors; Force and torque sensors; Motion Actuators: Analysis of the dynamics of induction, brushless dc and synchronous machines. Scalar VS vector control, parameter sensitivity and identification. Stepping and switched reluctance motors, static and dynamic characteristics, Piezoelectric motors; Motion systems modeling; machine, converter and controller modeling; Motion Control System Design: Stability; hierarchical design techniques, Error analysis and elimination; Disturbance rejection.

ELEC9233
Electrical Safety
School of Electrical Eng and Telecommunications
Staff Contact: C Grantham
UOC6 HPW3 S1

Effects of electric current passing through the human body; factors normally providing protection from electric shock; lightning hazards; earthing of power supplies; earthing of electrical enclosures; the need for bonding; protection of personnel: RCDs, effects of electric and magnetic fields and electromagnetic radiation; electrosurgical hazards; electrical fires and their investigation; electrical discharges; electrical safety and the law; hazardous areas and their classification; gas grouping; temperature classification; Exd, Exi, Exe, Exn, Exp, Exs methods of protection; dust ignition proof; cabling and terminations for hazardous atmospheres; certification, marking, quality control and maintenance requirements for hazardous atmospheres.

ELEC9240
Power Electronics
School of Electrical Eng and Telecommunications
Staff Contact: F Rahman
UOC6 HPW3 S1
Excluded: ELEC4240.

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.

ELEC9340
Electronic Communication Systems
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC6 HPW3

Review of signal, spectra and modulation techniques. Electronic building blocks for modulation and demoduation. Analog/digital AM modulation and demodulation. Phase lock loop design analysis and techniques for modulation and demodulation. Design of VCO, phase detectors, mixers etc. FM modulation and demodulation. S/N performance of AM and FM systems. Noise. Design of LNA. RF amplifiers.

ELEC9342
Digital Signal Processing and Applications
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC6 HPW3
Excluded: ELEC4042

Processing of analogue and digital signals, design of digital filters and their realisation, filter stability, frequency and phase responses, finite word length effects in digital filters. Comb filters, adaptive filters. Autocorrelation and crosscorrelation. Convolution and deconvolution. Multi-rate signal processing, Decimation and interpolation. Time - frequency analysis. Wavelets. Applications include: tone detection, noise reduction, pitch estimation, speech compression and auditory modeling.

ELEC9344
Speech and Audio Processing
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC6 HPW3

Fundamentals of speech production, speech analysis: pitch and period extraction, formant estimation, voiced - unvoiced decision. Non-linear smoothing. Linear prediction. Inverse filtering. Implementation of speech/speaker recognition systems. Auditory modelling, auditory masking. Audio signal processing. Speech and audio compression. Compression standards. Speech enhancement.

ELEC9350
Optical Fibres
School of Electrical Eng and Telecommunications
Staff Contact: I Skinner
UOC6 HPW3 S1
Excluded: TELE4313 N ELEC8350

Wave propagation in optical fibres. Gaussian approximation of fields in single-mode fibre, spot-size, equivalent step index fibres. Material, waveguide and intermodal dispersion. Polarisation and birefringent fibres. Ray theory, in multimode fibre. Optical fibre measurement and characterisation. Launching efficiencies in fibres. Fibre-based devices. Nonlinear and anisotropic effects.

ELEC9353
Microwave Circuits: Theory & Techniques
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC6 HPW3

The general flow of the course is Applications, Systems, Components. Applications of microwaves: (terrestrial and satellite communications, radar, remote sensing, wireless). System requirements for elements are to be analysed. Propagation modes (TEM, TE, TM, quasi-TEM), attenuation, dispersion, S-parameters are parts of general fundamentals. Analysis of circuit components and MIC are to be introduced.

ELEC9355
Optical Communications Systems
School of Electrical Eng and Telecommunications
Staff Contact: G Peng
UOC6 HPW3 S2
Excluded: ELEC8355

Review of Single Mode and Multimode Optical Fibre Theory; Source to Fibre Coupling;Optical Fibre Lasers and Amplifiers; Wavelength Division Multiplexing; Other Multiplexing Systems Photonic Components; Analog Optical Communication Systems; Digital Optical Communication Systems; Signal to Noise Ratio in Optical Communication systems; Optical Networks; Optical sources and detectors; Optical Fibre Cables; Nonlinear Optical Effects in Optical Fibres; Current Topics of Optical Communications.

ELEC9370
Digital Image Processing Systems
School of Electrical Eng and Telecommunications
Staff Contact: D Taubman
UOC6 HPW3 S1

The fundamentals of digital image processing with topics selected from the following: image models and physical imaging systems; visual perception; rendering systems; linear filtering; linear transforms; mathematical morphology; compression; tomographic image reconstruction; inverse problems in imaging; image enhancement; edge detection; feature extraction; and geometric diffusion.

ELEC9403
Real Time Computing and Control
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC6 HPW3

Examines the implementation of modern control techniques and associated instrumentation using distributed computers. Practical hardware aspects, including measurement and actuation, data conditioning, acquisition and transmission, microprocessor devices, and other distributed computing components. Commercial realisations ranging from PLCs to full process control computing systems. Software: executive operating systems, concurrency, control algorithms, numerical problems, languages and development tools in the real-time context. Design of the man-machine interface using interactive computer display systems. The role of simulation and other CAD tools. Steps of engineering development from concept to commissioning. The viewpoint of industrial design is maintained throughout.

ELEC9405
Human Movement Control Topics
School of Electrical Eng and Telecommunications
Staff Contact: P Neilson
UOC6 HPW3 S2

We will explore, from a control-engineering point of view, the structure and function of neural circuits responsible for controlling several hundred functional muscles and coordinating the impedances, forces and displacements of some 110 elemental movements of the human body. The muscles, biomechanical and external systems controlled by the brain can be modelled as multivariable, redundant, varying, potentially unstable, nonlinear dynamical processes. The nervous system displays an impressive ability to stabilise and control this complex system. Clearly, solutions have evolved to problems of control which are only just being recognised in control engineering. To achieve such versatility the brain functions as a family of self-organising, adaptive, optimal, feedforward-feedback controllers and can switch smoothly from one controller to another depending on the task. We will study, with neuroanatomical and neurophysiological detail, the neural circuits and signal processing algorithms that might underlie the development of human movement control systems, from conception to the mature nervous system.

ELEC9411
Introductory Physiology for Engineers
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC6 HPW3
Excluded: ELEC3402

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.

ELEC9412
Biomedical Instrumentation and Informatics
School of Electrical Eng and Telecommunications
Staff Contact: B Celler
UOC6 HPW3 S2
Excluded: ELEC4483.

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.

ELEC9421
Robust and Linear Control Systems
School of Electrical Eng and Telecommunications
Staff Contact: V Solo
UOC6 HPW3 S1

Rationale for the study of linear methods. Continuous and discrete LTI systems (tf,zpk and ss), discrete-time approximations. Controllability, canonical forms, pole placement (state feedback design). Observability. Lyapunov stability applied to linear systems. Basic robustness (SISO), sensitivity and complementary sensitivity, classical loop shaping, SISO dynamic controller design using polynomial methods. Robustness (MIMO), singular value decomposition, loop shaping analysis and loop shaping (state feedback). Basic least squares theory as basis for LQR and LQE. The optimal linear regulator, discrete and continuous. Kalman filter and predictor (discrete, continuous). Advanced loop shaping, LTR (continuous time). Advanced robustness, disturbance rejection, H-infinity. Decoupled MIMO controller design. Recursive least squares identification.

ELEC9422
Analysis and Design of Nonlinear Controls
School of Electrical Eng and Telecommunications
Staff Contact: D Clements
UOC6 HPW3 S2

The course is taught in two halves. The first half covers basic nonlinear control, design and analysis. The second half is devoted to robotic applications. The nonlinear control will cover topics drawn from analysis and design. Analysis includes: general state description of nonlinear systems, linearisation techniques, Lyapunov stability, constrained linear systems, constrained optimisation, multimode control. Design includes: actuator saturation, linearisation and gain scheduling, feedforward control, interactions and LQG control, sliding mode control, adaptive control. The above will be developed with illustrative simulation studies and CAD, and both physical modelling and systems identification will be covered. The robotics material will cover topics drawn from: manipulator kinematics and dynamics, velocity propagation and Jacobians, linear and nonlinear control of manipulators.

ELEC9450
Engineering Finance: From Random Processes to Derivative Pricing
School of Electrical Eng and Telecommunications
Staff Contact: V Solo
UOC6 HPW3 S2

The course aims to provide a grounding in random processes leading to a solid but understandable treatment of derivative pricing and the mathematics behind it; but all done from an 'engineering' point of view. Spreadsheet and matlab software will be used for illustration and exercises. It is expected there will be guest lectures from experts. The course is in three parts. (1) Random Process background: including topics such as Markov processes, Kolmogorov forward and backward equations, Brownian motion; simulation studies will be used to assist the theoretical material. (2) Elementary Finance Background: including topics such as futures, options, swaps, futures pricing and arbitrage methods. (3) Derivative Pricing: including topics such as binomial tree-based option pricing; Ito calculus and risk neutral pricing; pricing of European and American options; and a selection from pricing of stock indices, currency exchange instruments, interest rate instruments.

ELEC9501
Advanced Semiconductor Devices
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC6 HPW3

Overview of the current status of VLSI chip technology and its limits, including Moore's Laws. The principles of semiconductor band-gap engineering and the use of advanced heterostructure materials such as GaAs and SiGe. Applications of band-gap engineering in devices such as high-electron mobility transistors (HEMTs), resonant tunneling diodes (RTDs) and semiconductor lasers. Future trends using quantum principles, such as quantum wire devices, single electron transistors (SETs) and quantum computers. Semiconductor nanofabrication technologies for advanced devices.

ELEC9502
VLSI Technology
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC6 HPW3

Introduction to silicon VLSI technology. Future trends in VLSI technology. Technology limitations. Basic technology modules include: crystal growth and wafer preparation; mask generation techniques; lithography; diffusion process; ion implantation; oxidation; etching techniques - wet etching and plasma etching; thin film deposition - epitaxial growth, chemical vapor deposition techniques, metallisation; clean room technology; Advanced process integration for CMOS, BiCMOS and Bipolar fabrication; Failure analysis techniques.

ELEC9503
Microelectronics Design
School of Electrical Eng and Telecommunications
Staff Contact: C Kwok
UOC6 HPW3 S1
Properties and modelling of BJT and MOS devices and circuit components, SPICE circuit simulation, Layout rules, Basic analog building blocks, 2 stage op-amps, DRAM design, Yield, Reliability, Low power low voltage designs, Subthreshold design, Charge-redistribution and oversampled A/D conversion, Cascode and fully differential op-amps, Switched op-amp, Switched capacitor filters, Gm-C filters, Transconductors, Sample/Hold circuits and Reference sources.

ELEC9505
Microsystems Technology: Design and Microfabrication
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC6 HPW3
Excluded: ELEC8505

Interdisciplinary overview of MST (MicroElectroMechanical Systems - MEMS). Transducer definition: Sensors and Actuators. Micromachining techniques including silicon bulk micromachining, silicon surface micromachining, stiction problems, bonding processes, LIGA technique, micromachined mould template and electroplating, sealed cavity formation, stereolithography, chemical mechanical polishing for planarisation, electric discharge micromachining, laser micromachining, focused ion beam micromachining. Properties of materials for micromachining. Mechanical transducers. Optical transducers.Thermal transducers. Magnetic transducers. Chemical and biological transducers. Microfluidic devices. Circuit interfaces to transducers. System considerations. Case studies. Technology trends.

ELEC9912
Project Report A
School of Electrical Eng and Telecommunications
Staff Contact: C Kwok
Enrolment requires School approval
UOC6 HPW6 S1 S2

The project is done in a major area, in which it is offered under the supervision of an academic member of staff. Where the work is carried out externally a suitable co-supervisor may be required. Projects can take many forms such as the design and construction of experimental equipment or a theoretical investigation. Work is to be carried out over 2 sessions. At the end of the work a comprehensive project report giving an account of the student's own research must be submitted.

ELEC9913
Project Report B
School of Electrical Eng and Telecommunications
Staff Contact: C Kwok
Enrolment requires School approval
UOC6 HPW6 S1 S2

The project is done in a major area, in which it is offered under the supervision of an academic member of staff. Where the work is carried out externally a suitable co-supervisor may be required. Projects can take many forms such as the design and construction of experimental equipment or a theoretical investigation. Work is to be carried out over 2 sessions. At the end of the work a comprehensive project report giving an account of the student's own research must be submitted.

ELEC9930
Project Report (12 UOC)
School of Electrical Eng and Telecommunications
Staff Contact: School Office
UOC12

The project is done in a major area, in which it is offered under the supervision of an academic member of staff. Where the work is carried out externally, a suitable co-supervisor may be required. Projects can take many forms such as the design and construction of experimental equipment or a theoretical investigation. At the end of the work a comprehansive project report giving an account of the student's own research must be submitted.

ENGL5000
Individual Reading Program
School of English
Staff Contact: R Madelaine
Enrolment requires School approval
UOC8 S1 S2

Designed to accommodate, where possible, students with particular interests not served elsewhere. The program is designed in consultation with the Head of School and may be substituted for one elective by students who have completed three MA courses in English with a Distinction average. The Reading Program requires the special permission of the Head of School and involves writing a 6,000 word essay.

ENGL5001
Critical Theory A
School of English
Staff Contact: B Olubas
UOC8 HPW2 S1

Introduces students to some key issues in contemporary critical post-structuralist theory including psychoanalytic, post-colonial, feminist, postmodern and cultural studies approaches. A central concern will be the possibilities that these approaches open up for political critique.

ENGL5002
Critical Theory B
School of English
Staff Contact: P Kuch
UOC8 HPW2 S2

We begin by observing how Plato, Aristotle, Horace, and Longinus respond to the following questions: what is literature? what is an author? how does one judge the quality of a work of literature? what does literature do to the reader? We then observe how major English poets and critics from the Renaissance to the early twentieth century respond to these questions. Emphasises how the English serve, exploit, enrich, and negate the classical texts and thereby establish Renaissance, Neo-Classical, Romantic, Victorian, and Modern theories of literature and criticism. We will also attend to how a knowledge of these texts is helpful in understanding contemporary discussions of disciplinarity, cultural studies, rhetorical theory, canon formation, literary history, ideologies of the aesthetic, and the practice and theory of creative writing.

ENGL5009
Shakespeare and Revenge
School of English
Staff Contact: R Madelaine
UOC8 HPW2 S1

Shakespeare made vital contributions to the genre of revenge (which remained the most popular genre on Elizabethan and Jacobean stages) not only with the notoriously horrible Titus Andronicus and the best-known revenge play of all, Hamlet, but also with major revenge comedies like Twelfth Night and The Merchant of Venice. Examines Renaissance attitudes to revenge, justice and providence, and the search by Shakespeare and some of his contemporary dramatists for appropriate forms in which to express these attitudes, under the influence of the Senecan tradition.

ENGL5023
Contemporary Australian Literature
School of English
Staff Contact: W Ashcroft
UOC8 HPW2 S1

Examines Australian writing of the last decade. A major object will be to investigate some of the more recent trends in contemporary literature.
Note/s: This is an online course.

ENGL5031
Post-colonial Representations
School of English
Staff Contact: W Ashcroft
UOC8 HPW2 S2

Examines a number of issues or 'problems' in post-colonial studies through theoretical, literary, visual and film texts. Issues such as the term 'post-colonial', representation, resistance, language and history, which may be problematic for one reason or other because they generate much debate, will be investigated collaboratively by students.
Note/s: This is an online course.

ENGL5032
Precocious Writing: A Study of Literary Juvenilia
School of English
Staff Contact: C Alexander
UOC8 HPW2 S2

Juvenilia, or writings by youthful authors, are not by their nature inferior literature but, rather, a legitimate part of the process of growth, of the literary apprenticeship of the youthful writer maturing into the adult author. The purpose of this course is to ask questions about the nature of writing by children particularly those gifted children (like Jane Austen, Charlotte Bronte and C.S. Lewis) who are famous for their childhood writings. Others (like George Eliot, Robert and Elizabeth Barret Browning, John Ruskin, Rudyard Kipling, Evelyn Waugh and Katherine Mansfield) are known today only for their adult works. The child writings of these authors will be looked at in terms of the individual psychologies of the children who wrote them, and the social-cultural context in which they were written. There will also be the opportunity to edit a juvenile manuscript for publication, an exercise that will involve teamwork and an introduction to editing.

ENGL5300
Poetry Plus
School of English
Staff Contact: P Dawson
UOC8 HPW2 S1

Focuses on the development of technical skills in writing contemporary poetry and relates practice to theory. Students are encouraged to be adventurous and experimental, to write many different kinds of poetry, and to combine poetry with other genres. Also explores the intersection of poetry with other media in performance texts, sonic and visual writing, and hypertext.

ENGL5301
Innovative Fiction
School of English
Staff Contact: P Dawson
UOC8 HPW2 S2

Focuses on techniques for writing fiction and their relationship to narrative theory. Ranges through realism, experimental narratives, satire and hyperrealism. Particularly focuses on the way in which postmodern fiction has redefined narrative form, and includes advice on structuring large-scale work.

ENGL5302
Intergeneric Writing
School of English
Staff Contact: A Brewster
UOC8 HPW2 S2

Generic hybridity is a feature of much contemporary literature. This course explores a range of experimental writing methodologies which use inter- or cross-generic strategies including collage and fictocritical writing (a term used to describe writing projects which combine 'creative' and fictional/poetic modes with those of criticism and commentary - the latter being drawn in particular from post-structuralist theory).

ENGL5303
Writing Workshop
School of English
Staff Contact: A Brewster
UOC8 HPW2 S1

Provides an opportunity for students to workshop their own work intensively in the productive and stimulating environment that postgraduate work at UNSW provides. At the beginning of the session students individually draw up 'contracts' in consultation with their tutor in which they develop a project proposal for the session. They subsequently meet weekly in a workshop group to work through their projects as they develop.

ENGL5305
Literary Controversies
School of English
Staff Contact: P Dawson
UOC8 HPW2 S2

Covers some of the major literary scandals of the twentieth century, involving obscenity trials, religious fatwas, censorship debates, hoaxes and public controversies. Explores such topics as the nature of censorship, particularly in relation to pornography; the ethics of 'hoaxology'; the responsibility of authors (to society or to art?); the relationship of literature to other forms of public discourse; the notion of literary 'taste'; and the implication of literature in the construction of ethical identities at an individual and social level.

ENGL5600
Introduction to Cultural Studies
School of English
Staff Contact: A Johnson
UOC8 HPW2 S1

Provides a history of the emerging discipline and of some of the major approaches which have grown out of it. Addresses such questions as the relationship between so-called 'high' and 'popular' cultures, significant areas of cultural theory and their key terms. While the course is designed for anyone wishing to refresh their approach to literary studies, its specific points of reference cater to the needs of secondary school teachers engaging with the new English syllabus and will make specific reference where appropriate to current HSC texts.

ENGL5601
Critical Approaches to Reading Texts
School of English
Staff Contact: S Kossew
UOC8 HPW2 S2

This course is designed to enable teachers, particularly those teaching the new HSC English syllabus, to find strategies for teaching critical analysis and study of texts. Using the HSC set texts, we will examine different approaches to the syllabus Modules, Area of Study and Electives. By providing practical and theoretical ways of approaching the teaching texts and focus areas for the Standard, Advanced and Extension HSC English courses, this course will refresh the critical skills of teachers and facilitate their engagement with the challenges of the new syllabus.

ENGL5602
Epic: Homer, Virgil, Milton
School of English
Staff Contact: W Walker
UOC8 HPW2 S1

Examines Greek, Roman and English achievements in the genre. Studies various theories of epic and what the poems have in common with the aim of establishing a strong understanding and definition of the genre. Studies how they differ from each other with the aim of assessing the notions of western culture and a tradition of epic poetry. Considers the meaning and legitimacy of judgements that these poems are strong, sublime, noble and great.

FINS5510
Personal Financial Planning and Management
School of Banking and Finance
Staff Contact: D Gallagher
UOC6 HPW3 S1 S2

Provides the knowledge necessary to effectively manage personal financial resources and needs in the context of globalised financial and stock markets. Considers the whole range of personal financial affairs and the planning required to optimise available opportunities to enhance individual wealth.

FINS5511
Corporate Finance
School of Banking and Finance
Staff Contact: K Pham T Pham
UOC6 HPW3 S1 S2 X1
Prerequisite/s or Corequisite/s: ACCT5901 or ACCT5930, ECON5103

Essential aspects of financial decision-making in business. Designed to enable the student to usefully employ the following concepts in a business environment: investment decisions under uncertainty; cost of capital structure; mergers and takeovers; and working capital management.
Note/s: Does not meet disciplinary requirements for Finance.

FINS5512
Financial Markets and Institutions
School of Banking and Finance
Staff Contact: J Zein J Parwada
UOC6 HPW3 S1 S2

Serves as an introductory course. Focuses on major financial markets, including the equity, money, bond, exchange rate and derivatives markets. The basics of financial instruments in these markets, such as bank bills, treasury bonds, futures and options are taught. Exposure to the tools of analyses and the roles and innovations of major financial institutions, eg the banks and non-banks, such as finance companies, building societies and credit unions, life and insurance companies and funds management companies.

FINS5513
Investments and Portfolio Selection
School of Banking and Finance
Staff Contact: J Wang F Foster
UOC6 HPW3 S1 S2 X1
Prerequisite/s: ECON5103, ECON5203; Currently enrolled in program 8404 or 8923 or 8007 or 7355 or 5391

Develops a basic conceptual framework to understand modern investments. Students learn to evaluate alternative investment strategies, develop a more complete understanding of the risk-return relation, and discuss recent developments in investment management. Surveys various financial markets and provides a review of the instruments used to allocate capital and manage risk. Topics include measuring risk and return, designing portfolios, pricing risk, valuing equities, valuing fixed income securities, hedging with derivatives. Students are assessed through a variety of means; including quizzes and exams, computer exercises, and case study discussions.

FINS5514
Capital Budgeting and Financial Decisions
School of Banking and Finance
Staff Contact: R Powell K Lau
UOC6 HPW3 S1 S2
*Prerequisite/s or Corequisite/s:*FINS5513

Primarily concerned with the major financial decisions faced by the firm. These decisions can be broadly classified as the investment decision, the financing decision, the dividend decision and the restructuring decision. Examines the main theories and empirical evidence surrounding these decisions. This body of knowledge is then used to help solve typical 'real 'problems faced by senior finance managers. Special emphasis is given to group project work and computer applications.

FINS5515
Issues in Corporate Finance
School of Banking and Finance
Staff Contact: J Suchard
UOC6 HPW3 S2
Prerequisite/s: FINS5513, FINS5514

Focuses on studying corporate finance topics such as cost of capital estimation, forecasting and valuation, initial public offerings, seasoned equity offerings, debt issuance and refinancing, use of lease and convertibles, stock repurchase, mergers and takeovers, financial distress and divestiture. Mini-cases and local companies of different ownership structures are used for illustration. There are emphases on applying current empirical evidence in estimation and problem solving, as well as spreadsheet modeling of all aspects of corporate finance.

FINS5516
International Corporate Finance
School of Banking and Finance
Staff Contact: F Moshirian
UOC6 HPW3 S1 S2 X1

Management of the financial functions for firms operating in several separate countries. Necessary theory and evidence basic to an understanding of international capital and foreign exchange markets, the benefits of international diversification, use of the capital asset pricing model in foreign investment decisions and cost of capital for multinational corporations, financial management of multinational corporations, foreign direct investment and financial and political risks, the role of multinational banks and the financial benefits of Euro-currencies and Euro-bonds, international equity markets and financial management of multinational corporations in new regions such as APEC, NAFTA and the EU.

FINS5517
Applied Portfolio Management and Modelling
School of Banking and Finance
Staff Contact: T Henker
UOC6 HPW3 S1 S2 X1

Provides the foundation for the analysis of active funds management: the dynamic management of equity and fixed-income portfolios. Emphases are model construction (including forecasting), data analysis, the use of derivative securities (such as options, futures, FRAs, swaps), both international and domestic diversification benefits, performance and risk measures, and risk management and control.

FINS5522
Emerging Financial Markets
School of Banking and Finance
Staff Contact: J Wang
UOC6 HPW3 S2
Prerequisite/s: FINS5513

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.

FINS5523
Entrepreneurial Finance
School of Banking and Finance
Staff Contact: B Gibson
UOC6 HPW3 S1
Prerequisite/s: FINS5513

Examines various aspects of entrepreneurial finance for small and medium enterprises. Financial theories associated with entrepreneural and closely held firms are analysed. Including: how to value new start-up firms/projects; optimal financing strategy; finance investment and innovation; asymetric information and credit rationing; financing intellectual property rights; venture capital, business angles and pooled development funds; equity and debt capital from the public and private sectors.

FINS5530
Financial Institution Management
School of Banking and Finance
Staff Contact: I Sharpe
UOC6 HPW3 S1 S2
Prerequisite/s or Corequisite/s: FINS5513

The application of modern finance theory and financial modelling techniques to financial decision-making and risk management in financial institutions. Includes: (i) Uniqueness of financial institutions; (ii) Application of portfolio, arbitrage pricing, option pricing and corporate finance theories to the management of assets, liabilities, capital structure and off-balance sheet operations; (iii) Interest rate risk management and financial futures; (iv) Liquidity risk management; (v) Loan portfolio management, credit evaluation models, loan pricing and credit rationing; (vi) Capital adequacy and prudential regulation and management.

FINS5531
Risk and Insurance
School of Banking and Finance
Staff Contact: A Sim
UOC6 HPW3 S1 S2
Prerequisite/s or Corequisite/s: FINS5513

Introduces the discipline of risk management and precedes advanced work in the risk management and insurance major. Focuses on the principles associated with corporate risk management and provides a structured and well-reasoned methodology in the identification and analysis of risk. Investigates the management of identified risk through both risk control and risk financing techniques. Introduces the basic principles of insurance products, as one possible risk-financing tool.

FINS5533
Real Estate Finance and Investment
School of Banking and Finance
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: FINS5513

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.

FINS5534
Strategic Management of Credit Risk and Loan Policy
School of Banking and Finance
Staff Contact: T Edwards
UOC6 HPW3 S1 S2
Corequisite/s: FINS5513

Concerned with risk and policy in the loan funds markets, and has two basic themes: (i) the assessment of risk in the selection process in an imperfect market via a review of credit analysis, industry, country, firm, and management risk: (ii) the design and structure of loan policy in a risk return framework. Loan policy is examined as it relates to the corporate market, the consumer market, agriculture, real estate, small business and trade finance.

FINS5535
Derivatives and Risk Management Techniques
School of Banking and Finance
Staff Contact: R Bhar J Henker
UOC6 HPW3 S1 S2 X1
Prerequisite/s: FINS5513

Focuses on approaches to valuing standard and non-standard derivatives and on using derivatives for hedging. Theoretical, with some practical examples. Topics considered include: Forwards and futures pricing and hedging, swaps and swap valuation, numerical procedures for option pricing and hedge ratio calculation, continuous time (Black-Scholes) pricing of options and hedge ratio calculations, and introduction to exotic options.

FINS5536
Fixed Income Securities and Interest Rate Derivatives
School of Banking and Finance
Staff Contact: D Colwell
UOC6 HPW3 S1 S2
Prerequisite/s: FINS5513

Studies pricing, hedging and risk management of fixed income securities and interest rate derivatives. Includes: 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 and swaps), the interaction between interest rate risk and credit risk, mortgage-backed securities and value-at-risk, the concepts of general collateral, an accessible treatment of the arbitrage-free models of the term structure, including the concept of state prices and no-arbitrage.

FINS5541
Advanced Investment and Funds Management
School of Banking and Finance
Staff Contact: R Bhar
UOC6 HPW3 S1 S2
Prerequisite/s: FINS5517,
Prerequisite/s or Corequisite/s: FINS5535

Covers advanced techniques of modern funds management. Includes asset allocation decisions, integration of equities and bonds, domestic versus international fund components. Covers issues in pension funds management, investment in real assets and introduces hedge funds. Structure consists of lectures, computer aboratory work and may include speakers from the funds management industry.

FINS5542
Applied Funds Management
School of Banking and Finance
Staff Contact: R Guido
UOC6 HPW3 S1
Prerequisite/s or Corequisite/s: FINS5541

Laboratory and theoretical based course that develops fundamental concepts of asset valuation in a world with time varying risk, in order to construct and manage an investment portfolio. The course focuses on the recent advances in quantitative finance including risk modelling, forecasting, portfolio construction and evaluation. The aim is to provide students with a practitioner-orientated view of asset management where concern is based on generating superior returns. Topics focus primarily on empirical and practical tools required to actively manage an investment over time through the extensive use of computer spreadsheets.

FINS5550
International Banking Management
School of Banking and Finance
Staff Contact: S Kim
UOC6 HPW3 S1 S2
Prerequisite/s: FINS5513

Provides students with an understanding of international banking and finance in the contemporary environment. Due to the dynamic nature of the international banking environment, it is necessary to develop skills to effectively identify and understand the effects of current developments. Firstly, the international banking functions are presented; international trade financing, participation in the interbank foreign exchange and eurocurrency markets, international investment banking services, and sovereign lending. In addition, other important topics are presented; international money laundering, international banking and debt crises, regulation of international banking activities, and offshore banking markets. Some of the topics covered may vary over time.

FINS5551
International Insurance Management
School of Banking and Finance
Staff Contact: D Li
UOC6 HPW3 S1
Prerequisite/s or Corequisite/s: FINS5513

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. 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 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. Deals with insurance with a focus on global risk management.

FINS5560
Fundamentals of Corporate Finance
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S1 S2
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

This course stresses the fundamentals of corporate financial decision-making with special reference to investment, financing and dividend distribution. The course develops distinct conceptual frameworks and specialised tools for solving real-world financial problems at both the personal and corporate level. Examples include funds management, mergers and acquisitions, capital raisings, portfolio selection of financial securities, public floats and the pricing of assets in the stock market. Illustrations from real-life corporate practices are used to highlight the importance and relevance of financial management to the realisation of personal and corporate financial objectives.

FINS5566
Electronic Financial Trading
School of Banking and Finance
Staff Contact: J Parwada
UOC6 HPW3 S1 S2

Looks at the development of electronic financial trading, examines the various issues regarding electronic transactions. Covers role of electronic trading network in the automation of financial markets, market microstructure issues, and its competition with traditional trading systems. Two case studies namely, (i) the replacement of the trading pit by an electronic trading system at Sydney Futures Exchange; and (ii) the introduction of an electronic outcry system alongside the traditional open-outcry trading pit at the Chicago Board of Trade. The emergence of new electronic financial exchanges, and its many ramifications for regulation, supervision and other broad market issues.

FINS5567
Banking & Financial Innovation
School of Banking and Finance
Staff Contact: School Office
UOC6 HPW3

Examines the foundations of electronic banking and analyses, the reasons for the enormous growth of electronic banking, its impact particularly upon costs, pricing policies, system efficiency gains and likely future directions of banking including financial globalisation and convergence of technologies. Examines related issues concerning regulation, bank interchange issues, banking products and delivery platforms.

FINS5574
Foundations of Financial Decision Making Under Uncertainty
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Excluded: FINS3774, FINS4774

Provides an intermediate exposition of the fundamentals of portfolio selection and corporate finance. Examines: (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.

FINS5575
Research Methods in Finance 1
School of Banking and Finance
Staff Contact: J Reeves R Kohn
Enrolment requires School approval
UOC6 HPW3 S1 S2
Excluded: FINS3775, 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.

FINS5576
Advanced Topics in Asset Pricing
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Excluded: FINS4776

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.

FINS5577
Advanced Topics in Corporate Finance
School of Banking and Finance
Staff Contact: R Powell
Enrolment requires School approval
UOC6 HPW3 S1
Excluded: FINS4777

The main emphasis is exposure to the latest research on selected topics in corporate finance. The topics covered will primarily be selected on the basis of the lecturer's area of expertise, but will 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 will be used, including group projects, case studies and student presentations. Assumes a sound knowledge of the theories relating to the foundations of finance.

FINS5578
Recent Developments in Banking Research
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3
Prerequisite/s or Corequisite/s: FINS5530
Excluded: FINS4778

Focuses on recent developments in theory and empirical research relating to banking and bank management. Topics include: the development of banking models; the 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.

FINS5579
Research Methods in Finance 2
School of Banking and Finance
Staff Contact: R Kohn
Enrolment requires School approval
UOC6 HPW3 S1 S2
Prerequisite/s or Corequisite/s: FINS3775 or FINS4775 or FINS5575;
Excluded: FINS4779

A more advanced course in empirical methodology in finance covering general methodological aspects, testing of hypotheses, 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, volatility estimation.

FINS5591
Special Topic in Finance
School of Banking and Finance
Staff Contact: S Kim
Enrolment requires School approval
UOC6 S1

FINS5599
Project Report
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC12 S1

FINS6610
Advanced Finance Research Topic 1
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW3 S1 S2

Designed for students enrolled in the PhD program in Finance. Materials included in Advanced Finance Research Topic 1 and Topic 2 draw from Asset Pricing, Banking, Corporate Finance, Funds Management, Risk and Insurance, Portfolio Management and Quantitative Finance. May also cover advanced research tools, e.g. stochastic processes, partial differential equations, advanced econometrics, advanced theoretical economics, games theory, programming etc.

FINS6611
Advanced Finance Research Topic 2
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW3 S1 S2

Designed for students enrolled in the PhD program in Finance. Materials included in Advanced Finance Research Topic 1 and Topic 2 draw from Asset Pricing, Banking, Corporate Finance, Funds Management, Risk and Insurance, Portfolio Management and Quantitative Finance. May also cover advanced research tools, e.g. stochastic processes, partial differential equations, advanced econometrics, advanced theoretical economics, games theory, programming etc.

FINS7511
Corporate Finance
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2

Essential aspects of financial decision-making in business. Designed to enable the student to usefully employ the following concepts in a business environment: investment decisions under uncertainty; cost of capital structure; mergers and takeovers; and working capital management.

FINS7513
Investments and Portfolio Selection
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3

Develops a basic conceptual framework to understand modern investments. Students learn to evaluate alternative investment strategies, develop a more complete understanding of the risk-return relation, and discuss recent developments in investment management. Surveys various financial markets and provides a review of the instruments used to allocate capital and manage risk. Topics include measuring risk and return, designing portfolios, pricing risk, valuing equities, valuing fixed income securities, hedging with derivatives. Students are assessed through a variety of means; including quizzes and exams, computer exercises, and case study discussions.

FINS7514
Capital Budgeting and Financial Decisions
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3
Prerequisite/s: FINS7513

Primarily concerned with the major financial decisions faced by the firm. These decisions can be broadly classified as the investment decision, the financing decision, the dividend decision and the restructuring decision. Examines the main theories and empirical evidence surrounding these decisions. This body of knowledge is then used to help solve typical 'real 'problems faced by senior finance managers. Special emphasis is given to group project work and computer applications.

FINS7515
Issues in Corporate Finance
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3
Prerequisite/s: FINS7513, FINS7514

Focuses on studying corporate finance topics such as cost of capital estimation, forecasting and valuation, initial public offerings, seasoned equity offerings, debt issuance and refinancing, use of lease and convertibles, stock repurchase, mergers and takeovers, financial distress and divestiture. Mini-cases and local companies of different ownership structures are used for illustration. There are emphases on applying current empirical evidence in estimation and problem solving, as well as spreadsheet modeling of all aspects of corporate finance.

FINS7516
International Corporate Finance
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3
Prerequisite/s: FINS7513

Management of the financial functions for firms operating in several separate countries. Necessary theory and evidence basic to an understanding of international capital and foreign exchange markets, the benefits of international diversification, use of the capital asset pricing model in foreign investment decisions and cost of capital for multinational corporations, financial management of multinational corporations, foreign direct investment and financial and political risks, the role of multinational banks and the financial benefits of Euro-currencies and Euro-bonds, international equity markets and financial management of multinational corporations in new regions such as APEC, NAFTA and the EU.

FINS7517
Applied Portfolio Management and Modelling
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: FINS7513

Provides the foundation for the analysis of active funds management: the dynamic management of equity and fixed-income portfolios. An emphasis is placed on model construction (including forecasting), data analysis, the use of derivative securities (such as options, futures, FRAs, swaps), both international and domestic diversification benefits, performance measures, risk measures, and risk management and control.

FINS7531
Risk and Insurance
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: FINS7513

Introduces the discipline of risk management and precedes advanced work in the risk management and insurance major. Focuses on the principles associated with corporate risk management and provides a structured and well-reasoned methodology in the identification and analysis of risk. Investigates the management of identified risk through both risk control and risk financing techniques. Introduces the basic principles of insurance products, as one possible risk-financing tool.

FINS7535
Derivatives and Risk Management Techniques
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3
Prerequisite/s: FINS7513

Focuses on approaches to valuing standard and non-standard derivatives and on using derivatives for hedging. Theoretical, with some practical examples. Topics considered include: Forwards and futures pricing and hedging, swaps and swap valuation, numerical procedures for option pricing and hedge ratio calculation, continuous time (Black-Scholes) pricing of options and hedge ratio calculations, and introduction to exotic options.

FINS7550
International Banking Management
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: FINS7513

Provides students with an understanding of international banking and finance in the contemporary environment. Due to the dynamic nature of the international banking environment, it is necessary to develop skills to effectively identify and understand the effects of current developments. Firstly, the international banking functions are presented; international trade financing, participation in the interbank foreign exchange and eurocurrency markets, international investment banking services, and sovereign lending. In addition, other important topics are presented; international money laundering, international banking and debt crises, regulation of international banking activities, and offshore banking markets. Some of the topics covered may vary over time.

FINS8511
Corporate Finance
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2

Essential aspects of financial decision-making in business. Designed to enable the student to usefully employ the following concepts in a business environment: investment decisions under uncertainty; cost of capital structure; mergers and takeovers; and working capital management.

FMAT6301
Introduction to Mathemtical Finance
School of Mathematics
Staff Contact: School Office
UOC6 HPW3 S1

This course provides the basic mathematics and statistics that is essential background for modern mathematical finance. Topics include: conditional probability, conditional expectation, multivariate normal, covariance and correlation, linear estimation and maximum likelihood, Brownian motion, martingales and other stochastic processes, revision of multivariable calculus, ordinary and partial differential equations, stochastic calculus (including stochastic integrals and the Ito formula), stochastic differential equations and their connections to partial differential equations and finance.

FMAT6302
Mathematics of Security Markets
School of Mathematics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: FMAT6301

This course will focus on the mathematical interpretation of financial models. We will present key definitions and results in martingale theory and stochastic calculus to develop the financial notions of self-financing, replication, admissibility, completeness and arbitrage. The Black-Scholes partial differential equation is derived by three different methods. The aim is to integrate advanced mathematical techniques with finance.

FMAT6303
Mathematics of Term Structures and Credit Risk
School of Mathematics
Staff Contact: School Office
UOC6 HPW3
Prerequisite/s: FMAT6302

This course is a continuation of Mathematics of Security Markets. It will include a discussion of models of term structure of interest rates, Libor rate models and credit risks.

FMAT6304
Computational Methods in Finance
School of Mathematics
Staff Contact: School Office
UOC6 HPW3
Prerequisite/s: FMAT6301

Finite difference methods for partial differential equations, in particular the Black and Scholes PDE, with different boundary conditions. Simulation and calculating expected values via numerical integration, Monte Carlo and quasi- Monte Carlo methods. Excel linked to C and/or C++ libraries, MATLAB (matrix calculations), Maple/Mathematica (symbolic calculations), numerical libraries (LAPACK, NAG, IMSL).

FOOD1517
Chemistry, Biochemistry and Physics of Foods
School of Chemical Sciences
Staff Contact: J Paterson
Enrolment requires School approval
UOC3 HPW3 S1

An introduction to the chemical, physical and biochemical properties of foods; food proteins, lipids, carbohydrates, nucleic acids, vitamins, minerals, pigments; food enzymes, main classes and factors affecting their activity; food rheology and texture; heat transfer in foods; effect of processing upon the properties of foods; basic techniques for the analysis of food components and properties.

FOOD1577
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.

FOOD1587
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.

FOOD1597
Unit Operations in Food Processing
School of Chemical Sciences
Staff Contact: R Driscoll
UOC6 HPW6 S2
Prerequisite/s: FOOD1577, FOOD1587

The principles introduced in FOOD1577 and FOOD1587 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.

FOOD1657
Postharvest Physiology and Handling of Fruit and Vegetables
School of Chemical Sciences
Staff Contact: School Office
UOC6 HPW6
Prerequisite/s: FOOD1597

Biochemistry and physiology of metabolism in fresh fruit and vegetables; respiration measurements as an index of metabolism, maturation and senescence; concept of climacteric and non-climacteric produce; physiological and metabolic changes occurring during ripening. Effect of temperature on metabolism; constraints of high and low temperatures; role of humidity control and water loss in quality maintenance; use of atmosphere control to delay senescence and ripening. Physiological disorders of stored produce; microorganisms of importance to post-harvest tissue; physical and chemical methods of control; post-harvest disinfestation and quarantine measures. Examination of current commercial storage and marketing operations.

FOOD1667
Postharvest Storage of Foods
School of Chemical Sciences
Staff Contact: J Paton
UOC6 HPW6 S2
Prerequisite/s: FOOD1597

Pre-harvest considerations, post-harvest physiology and biochemistry, post-harvest factors affecting quality, methods of storage and handling, marketing strategies for selected food commodities.

FOOD1677
Product Design and Development
School of Chemical Sciences
Staff Contact: J Paton
UOC6 HPW6 S2

Consumer, commercial and national needs for new products, types of new products, the steps in the product development process; development team, idea generation; market research: its role, specific tasks, techniques, and limitations; roles of advertising and supermarkets in new product success; product lifecycles, reasons for new product failure and preventative strategies; ingredient and additive properties and contributions to foods, effects of processing on their properties and functionality; optimisation of quality and acceptability of foods by manipulation of formulations; packaging and processing for food acceptability; sensory 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.

FOOD1697
Advanced Food Chemistry
School of Chemical Sciences
Staff Contact: J Paterson
UOC6 HPW6 S1
Prerequisite/s: CHEM3811 or equivalent

Chemistry and analysis of volatile food components; qualitative and quantitative analysis, fractionation of proteins, starch and its derivatives, non-starch polysaccharides, dietary fibre constituents and lipids using advanced methods; detection and measurement of mycotoxins; analysis of selected vitamins; application of advanced separation techniques to food components.

FOOD1747
Special Topics in Food Science and Technology
School of Chemical Sciences
Staff Contact: K Buckle
Enrolment requires School approval
UOC6 HPW6 S1 S2

An individually supervised program of investigation in specialised aspects of food science and technology not otherwise offered. Embraces a literature review, laboratory work and/or industrial liaison as may be appropriate. Available only to appropriately qualified students.

FOOD1757
Topics in Food Science and Technology
School of Chemical Sciences
Staff Contact: K Buckle
Enrolment requires School approval
UOC3 HPW3 S1 S2

An investigation similar to but shorter than that outlined in FOOD1747.

FOOD1767
Reading Assignment
School of Chemical Sciences
Staff Contact: K Buckle
Enrolment requires School approval
UOC3 HPW3 S1 S2

A reading assignment in an area supporting the candidate's major disciplines or commodity interests. Presentation of a seminar may be required.

FOOD1777
Food Choice: Psychology, Preference and Acceptability
School of Chemical Sciences
Staff Contact: J Paton
UOC6 HPW4 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 (eg. anorexia, bulimia); diet and consequences for physical and mental activity (eg. sports diets); implications for food product development, process development, marketing, advertising and diet design.

FOOD1787
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.

FOOD2627
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 food-borne 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; sub-lethal injury; standard methods for determination of total plate counts, indicator organisms, food-borne pathogenic species, principal spoilage species. Microbiological quality assurance: specifications and standards; decision criteria; hazard analysis and critical control point (HACCP) concept; cleaning and sanitation.

FOOD2637
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.

FOOD2647
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 - bacteria, fungi, viruses, algae, 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; safety in the workplace.

FOOD2657
Analytical Microbiology
School of Chemical Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW6

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.

FOOD2667
Advanced Food Microbiology
School of Chemical Sciences
Staff Contact: G Fleet
UOC6 HPW3 S2
Prerequisite/s: FOOD2627

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, 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.

FOOD3567
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.

FOOD3577
Advanced and Applied Nutrition
School of Chemical Sciences
Staff Contact: J Arcot
UOC6 HPW6 S2
Prerequisite/s: FOOD3567

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.

FOOD4617
Advanced Food Engineering
School of Chemical Sciences
Staff Contact: R Driscoll
UOC6 HPW6 S1
Prerequisite/s: FOOD1577, FOOD1587

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, membrane processes.

FOOD5117
Minor Project
School of Chemical Sciences
Staff Contact: K Buckle
Enrolment requires School approval
UOC6 HPW6 S1 S2

The aim of this course is to provide students with an opportunity to undertake independent study of a particular aspect of food science and technology through critical evaluation of literature or the performance of limited laboratory work. Students will be expected to present the results of their investigation in a thesis-style report and in a research seminar. Students will select a project in consultation with the course authority within the program of study in which they are enrolled.

FOOD5127
Research Project
School of Chemical Sciences
Staff Contact: K Buckle
Enrolment requires School approval
UOC12 HPW12 S1 S2

The aim of this course is to provide students with an opportunity to undertake independent study of a particular aspect of food science and technology through performance of laboratory-based research work. Students will be expected to present the results of their investigation in a thesis-style report and in a research seminar. Students will select a project in consultation with the course and/or program authority, within the program of study in which they are enrolled.

GBAT7100
Technology Management and Innovation
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6

GBAT9101
Project Management
Graduate Programs in Business and Technology
Staff Contact: S Ligakis
Enrolment requires School approval
UOC6 HPW1.5 S1 S2 X1
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

Project management involves the overall planning, control and coordination of a project. It is the process by which the responsibility for all phases is combined within one multi-disciplinary function. This course introduces you to the project management skills needed during the lifetime of a project by working through a chronological model. It explores key concepts of project management from the beginning to the termination of the project.

GBAT9102
Management of Manufacturing Systems
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S1
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

Management of Manufacturing Systems presents an integrated and coherent account of new production management philosophies to give managers a sound grounding in the modern principles and techniques of managing manufacturing companies. There is strong emphasis on strategic perspectives of manufacturing, the relationship between manufacturing and business strategies, and the implications of a given manufacturing strategy for detailed manufacturing management decisions, plans, policies and performance measures.

GBAT9103
Environmental Management
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S2
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

Environmental Management provides an overview of the range of environment issues facing our community, and the responsibilities of managers in addressing those issues. Via an understanding of the big picture, managers can make sound economic decisions compatible with a commitment to a sustainable environment. The more specific issues and control strategies discussed provide insights into environmental control techniques and methods for handling environmental problems ranging from legal aspects to quantitative risk assessment.

GBAT9104
Management of Innovation and Technical Change
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S1 S2
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

Managers must have a deep understanding of how innovation works, and how people interact with changed circumstances. Implementation of new ideas, new strategies and new technology is one of the most complex of any organisation's tasks. Most good ideas fail because the implementation strategy fails, not because the idea itself is not valid. This course introduces you to a wide perspective on innovation and technical change. It highlights the tools and techniques necessary to ensure success when bringing new processes and different strategies into an organisation.

GBAT9105
Risk Management
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S1 S2
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

All managers must manage risk because decisions must be made in a fast changing and uncertain world. Organisations are increasingly implementing integrated risk management programs in which the same process is applied to all types of risk whether financial or technical. This course follows the risk management process described by AS/NZS 4360 Risk Management, and discusses how it is applied to issues of interest to the class. The particular focus is on risks that arise in a technical context such as project management, outsourcing, liability, IT, the environment and safety. Participants undertake a case study of relevance to their particular interests.

GBAT9106
Information Systems Management
Graduate Programs in Business and Technology
Staff Contact: K Brooke
Enrolment requires School approval
UOC6 HPW1.5 S1 X1
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

Information Systems Management addresses current management issues in the deployment of information systems and information technology. It deals with the relationship between the organisation and its information systems, strategic and tactical planning for information systems and the management and acquisition of systems and technology. Attention is paid to issues such as outsourcing, business continuity planning and the provision of information for decision-makers. The focus is on management, not the technology itself.

GBAT9107
Asset Management
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S2
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

This course is designed to appeal to participants from a broad cross-section of industry and interests, including government and non-profit organisations, as well as from the services and IT sectors. It examines how managers should interact with the physical world, and in particular the assets that are used by a business to generate wealth. It examines issues such as asset management strategy and establishing the asset management business case. It also covers defining asset performance, improvement methodologies and risk analysis. The variety of assets covered includes public assets and intangible assets such as intellectual property.

GBAT9109
Energy Management
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S1
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

Energy Management examines the role of energy in business and our society. It discusses the use of major energy resources and technologies. It gives an insight into the role of markets over the price and availability of energy fuels and sources, the impacts of energy use on the natural environment and the application of an energy management program in a corporate setting.

GBAT9111
Organisation for Quality Improvement
Graduate Programs in Business and Technology
Staff Contact: S Ligakis
Enrolment requires School approval
UOC6 HPW1.5 S2 X1
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

In the past few years, organisations have radically changed the way they design and produce goods and services; they have redesigned jobs and work systems, quality management systems, material management and inventory systems, and they have changed the technologies they use. We cannot avoid seeing how quality has developed into the most important competitive weapon. This course covers the strategic importance of quality and its role in lean production, concurrent engineering, cellular production, flexible manufacturing systems and related methods, analytical tools for the real world.

GBAT9112
Managing Occupational Health and Safety
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S2
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

Workplace injury involves organisations in insurable costs (workers' compensation premiums) and uninsurable costs (productivity losses, low morale, reputation damage, equipment losses and downtime). The MOHS course concentrates on the prevention of workplace injury and associated costs and losses through the application of effective management systems. Industry case studies are used as are analysis and application of management techniques.

GBAT9113
Strategic Management of Business and Technology
Graduate Programs in Business and Technology
Staff Contact: S Ligakis
Enrolment requires School approval
UOC6 HPW1.5 S1 S2 X1
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

Strategic Management of Business and Technology is an integrative course designed to pull together many of the key business and technology learnings from other MBT courses and helps participants develop a view of both business and technology from a strategic perspective. It involves analysing forces within and external to the organisation affecting how organisations answer the key strategic questions: 'where are we now, where are we going and how do we get there?' This course challenges participants to develop skills in analysis, strategic thinking, evaluation, scenario planning, understanding strategic competencies and how to develop strategic advantage.

GBAT9114
Marketing for Technical Managers
Graduate Programs in Business and Technology
Staff Contact: K Brooke M Brennan
Enrolment requires School approval
UOC6 HPW1.5 S1 S2 X1
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

Marketing for Technical Managers is a course designed to introduce managers working in technological environments to basic marketing concepts and theories. The course covers a diverse range of topics including marketing strategy and planning, the marketing environment and how to monitor it, market segmentation, consumer and organisational behaviour, new product development, pricing, distribution and promotion. The course places particular emphasis on how to manage profitable exchange processes in the context of the dynamic environments characterising contemporary economics. Participants are required to tackle real life case studies and to regularly apply classroom knowledge to their own work situations.

GBAT9115
Information Technology for Managers
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S1 S2
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

Information Technology for Managers has the principle objective of giving line managers an understanding of how information technology might be able to assist them in their day to day tasks and the capabilities and drawbacks of that technology, including changes to the workplace. In addition the course will ensure that knowledge/ information workers take away a range of essential skills including use of computers, decision support tools, database query languages, presentation tasks and tools and an understanding of the Internet covering some of the opportunities and problems it presents.

GBAT9116
Advanced Information Technologies for Managers
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S2
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

The ongoing information technology revolution presents major challenges for managers. Inadequate understanding of the opportunities and risks associated with the use of new technologies often inhibits a manager's ability to use these to maximum benefit. This course explores advanced information technologies and their application in modern organisations. It looks at both the advantages and limitations of some of the leading-edge information technology architectures (solutions). The course also covers the latest IT trends, outlining new technologies on the horizon and provides a forward-looking perspective for managers of the 21st century.

GBAT9117
E-Business Strategy & Management
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S1 S2
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

Drawing on the application of information technology for competitive advantage, this course looks at the potential effects of e-business on the value chain, product differentiation, strategic relationships and market share. Important technologies are emerging in the vital areas of data transfer and personal interaction and these will set the foundations for the future management of e-business. Topics include the potential impact of e-business in both business-to-business and business-to-consumer transactions, security and communications, legal and ethical issues, EDI and electronic payments systems and revenue-generation strategies.

GBAT9118
Managing Risk In The Public Sector
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S1
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

This course, developed as a joint initiative between GIO General Ltd and UNSW, is designed to assist managers and future managers, particularly those working in the public sector, to meet their managerial and organisational objectives through focussing on the management of overall risk. It provides managers with a series of options to enhance their decision-making capabilities and so minimise risk and losses through the utilisation and integration of risk management principles.

GBAT9201
Major Project
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC12

GEOH9011
Environmental Impact Assessment
Built Environment Geography
Staff Contact: J Sammut
UOC6 HPW4 S1
Excluded: GEOG9011

Environmental planning legislation and decision making processes in Australia with special reference to NSW. The content and structure of Environmental Impact Statements and the stages in the granting of development consent. Approaches to EIA with reference to the assessment of impacts on the natural, social and economic environments. Case studies exemplifying procedures, techniques, methods, and issues. Trends in EIA in Australia and selected other countries.

GEOH9015
Population Health and Environment
Built Environment Geography
Staff Contact: I Burnley
UOC6 HPW4 S2
Excluded: GEOG9015

Relationship between environmental factors and disease morbidity and mortality is examined by consideration of the epidemiological transition in different countries, and the spatial and occupational-specific variation in disease incidence in Australia. Methodology for standardising, testing for significance and data quality.

GEOH9018
Transportation Applications of Geographical Information Systems
Built Environment Geography
Staff Contact: B Parolin
UOC6 HPW3 S2
Prerequisite/s: GEOG9016 or GEOS9016
Excluded: GEOG9018

This course provides an overview and hands-on experience in the design, use, and interpretation of Geographic Information Systems for Transportation (GIS-T s). Topics covered include transportation layers, transportation related referencing systems, data structures, network structures, urban transportation planning models, logit and other spatial models. At the end of the course, the student will have a sound working knowledge of transportation GIS and an ability to work directly with real problems in government and private sectors.

GEOH9019
Special Topic in Geography
Built Environment Geography
Staff Contact: B Parolin
UOC6 HPW3 S1 S2

Selected topics may be pursued in the forum of individually supervised readings and assignments linked to studies in postgraduate programs offered through the School
Note/s: This course requires prior approval of the Supervisor.

GEOH9530
Project
Built Environment Geography
Staff Contact: B Parolin
UOC12 S1 S2
Excluded: GEOG9530

An investigation of a problem in environmental management, remote sensing or geographical information systems which may involve an identifiable research component. Such an investigation should be related to the research interests of particular Schools within the Faculty of Science and Technology.

GEOL0310
Image Processing of Spatial Data Sets
School of Biological, Earth & Environ Sciences
Staff Contact: G Taylor
UOC6 S1 S2

Data sources and formats, remotely sensed, geophysical, geochemical and topographic. Image display systems; data pre-processing, image rectification, spatial filtering and enhancement techniques. Statistical analysis, classification and image display as a tool for data integration.

GEOL0360
Remote Sensing Applications in Geoscience
School of Biological, Earth & Environ Sciences
Staff Contact: G Taylor
UOC6 S1 S2

The physics of various remote sensing techniques. Consideration of various sources of imagery; Landsat, TM, SPOT, aircraft scanners etc. Spectral properties of rocks, soils and vegetation. Geological applications of visible, infrared, thermal and multi-parameter microwave imagery in resource exploration, tectonic studies, geological hazard recognition and environmental monitoring. Mapping and data integration methodologies.

GEOL9053
Hydrogeochemistry
School of Biological, Earth & Environ Sciences
Staff Contact: J Jankowski
UOC3 S1

Chemical composition of natural and contaminated groundwaters. Inorganic parameters in natural waters. Calculation and presentation of hydrochemical data as a basis for interpretation. Chemical reactions and processes in groundwater systems. Chemical evolution of groundwater. Aqueous geochemistry. Equilibrium and disequilibrium. Dissolution and precipitation of minerals. Carbonate system.

GEOL9054
Analysis and Interpretation of Hydrogeochemical Data
School of Biological, Earth & Environ Sciences
Staff Contact: J Jankowski
UOC3 S1

Oxidation and reduction processes. Redox conditions and redox zonation of natural and contaminated groundwaters. Water-rock interaction. Ion exchange and sorption reaction. Weathering and water chemistry. Mass balance. Groundwater salinity. Corrosion and incrustation in groundwater bores. Analysis and interpretation of hydrochemical data using graphical techniques. Study of chemical reactions and processes using field and laboratory data.

GEOL9055
Hydrogeochemical Modelling
School of Biological, Earth & Environ Sciences
Staff Contact: J Jankowski
UOC3 S1

Review of isotope theory and methodology. Stable and radioactive isotope studies. Review of modelling theory. Hydrogeochemical modelling using speciation and mass balance modelling codes (NETPATH, WATEQ-4F, PHREEQC, MINTEQ-A2). Case studies and applications in natural and contaminated groundwater systems. Application of hydrogeochemical modelling in dryland salinity, seawater intrusion, mining, water-rock interaction and landfill studies.

GEOL9111
Groundwater Environments
School of Biological, Earth & Environ Sciences
Staff Contact: J Jankowski
UOC3 S1

Study of the detailed occurrence and the environmental problems associated with groundwater in aquifer systems of importance to Australia. Environments will include karst hydrogeology and hydrogeochemical processes in karst terrains, natural saline groundwaters, deep sedimentary basins, groundwater-surface water interaction, fractured rock, alluvial plains, and unconsolidated sediments.

GEOL9112
Investigation and Management of Salinity
School of Biological, Earth & Environ Sciences
Staff Contact: J Jankowski
UOC3 S1

Fresh water saline water interaction in coastal aquifers. Occurrence and salinity mechanisms of naturally occurring saline groundwaters. Saline lakes and playa brines. Dryland salinity mechanisms; occurrence and management. Irrigation induced salinity; mechanisms and management. Case studies.

GEOL9124
Groundwater Project
School of Biological, Earth & Environ Sciences
Staff Contact: J Jankowski
UOC12 S1 S2

A project equivalent to 10HPW study for one session which will require the student to carry out a detailed investigation relating to groundwater or hydrogeology. The study may relate to the student's field of employment.

GEOL9151
Petroleum Geology
School of Biological, Earth & Environ Sciences
Staff Contact: C Ward
UOC6 S1 S2

Petroleum generation, including kerogen types and maturation, entrapment and degradation processes; sedimentology of petroleum-bearing sequences; features of sedimentary rocks, with special reference to reservoir materials; primary and secondray porosity; introduction to clay minerals; structural and stratigraphic traps, including diapirs and fractured rock reservoirs; coal-bed methane, oil shale and other non-conventional petroleum sources; geological setting of Australian petroleum basins; exploration and evaluation of petroleum deposits, including an introduction to geophysical techniques.
Note/s: External only.

GEOL9152
Petroleum Geophysics
School of Biological, Earth & Environ Sciences
Staff Contact: D Palmer
UOC6 S1 S2

Principles and applications of gravity, magnetic refraction and reflection methods; nature and properties of seismic waves; acquisition of seismic data in land and marine environments; fundamentals of signal processing; processing of seismic reflection data; three-dimensional and four-dimensional (time-lapse) seismic methods; inversion of seismic traces; amplitude variation with offset (AVO); vertical seismic profiling (VSP); integration of geology and geophysics in petroleum exploration and development programs.
Note/s: External only.

GEOL9252
Groundwater Quality and Protection
School of Biological, Earth & Environ Sciences
Staff Contact: J Jankowski
UOC3 S1

Water quality determinations and standards. Principles of water quality control. Monitoring and sampling methods. Field and laboratory studies. Groundwater contamination evaluation. Site assessment and investigation. Risk assessment and risk management. Aquifer protection and rehabilitation. Remediation. Case studies.

GEOS9012
Remote Sensing Applications
School of Biological, Earth & Environ Sciences
Staff Contact: R Merton
UOC6 HPW3 S1

Using a diverse range of case studies, this course demonstrates broad remote sensing applications in forestry, agriculture, natural resource management, wildlife conservation, environmental change, pedology, oceanography, geology, meteorology, and politics. Specific applications relate to the assessment of tropical and sub-tropical land cover change, ecosystem dynamics and biogeochemical cycles, vegetation biophysical properties, wetlands management and monitoring, fire, pollution, urban studies and cold region hydrology. Computer-based laboratories allow the students to explore a range of optical, thermal and radar data appropriate to particular applications, and provide exposure to practical image processing and interpretation techniques including classification, change detection, formulation of indices and derivation of empirical relationships. Practical experience with IDL ENVI and Erdas Imagine is provided.

GEOS9016
Principles of Geographic Information Systems and Science
School of Biological, Earth & Environ Sciences
Staff Contact: S Laffan
UOC6 HPW3 S1 S2

Approximately 80% of all data collected have associated geographic attributes, and there is an increasing need for people with the skills and abilities to manipulate and make sense of that information. This course provides an introduction to, and understanding of, the basic principles, structures, procedures and applications of geographic information systems and science. Topics covered in the course provide a comprehensive overview and practical experience in the analytical treatment of geographical information, covering: information sources; data storage, representation and visualisation; projections and coordinate systems; the analysis of spatial data to genrate new information; and the dissemination of such digital information through avenues including the internet.

GEOS9017
Advanced Geographic Information Systems and Science
School of Biological, Earth & Environ Sciences
Staff Contact: S Laffan
UOC6 HPW3 S2
Prerequisite/s: GEOG9016 or GEOS9016

Geographic information systems have improved considerably over the past decade in response to a world that has become very much richer in digital geographic information. The requirement to build complex applications and simulations has become more urgent with the need to plan for a changing climate, to feed an increasing population and to provide pinpoint marketing analysis for business. This course explores a toolbox of conceptual approaches and methods to model and analyse a range of highly complex, often non-deterministic problems. It provides a true enabling techonology for the natural sciences and a rich source of computational and representational challenges for the computer sciences. Topics covered include spatial dynamic spatio-temporal modelling; geostatistics; error analysis and data accuracy; network analysis; and machine learining and artificial intellingence methods in GIS

GEOS9019
Special Topic in Geography
School of Biological, Earth & Environ Sciences
Staff Contact: S Laffan
UOC6 HPW3 S1 S2

Selected topics may be pursued in the forum of individually supervised readings and assignments linked to studies in postgraduate programs offered through the School
Note/s: This course requires prior approval of the Supervisor.

GEOS9021
Image Analysis in Remote Sensing
School of Biological, Earth & Environ Sciences
Staff Contact: R Merton
UOC6 HPW3 S2

This course, which is largely laboratory based, provides an in'depth understanding of image processing, analysis and interpretation. Topics include human vision and colour, the construction, display, enhancement and filtering of images, geometric, radiometric and atmospheric correction, supervised and unsupervised classification, principal components analysis, and spatial modeling. The course also demonstrates the theory of hyperspectral and radar remote sensing through lectures and practical computer-based processing. The course provides training in both remote sensing and GIS software, including ERDAS, ENVI, ArcView and Arc/Info.

GEOS9530
Project
School of Biological, Earth & Environ Sciences
Staff Contact: D McLeod S Laffan
UOC12 S1 S2

An investigation of a problem in environmental management, remote sensing or geographical information systems which may involve an identifiable research component. Such an investigation should be related to the research interests of particular Schools within the Faculty of Science and Technology.

GMAT9106
Special Topic in Geomatic Engineering A
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S1 S2

This syllabus changes to allow presentation of a special topic of current interest particularly by visitors with recognised expertise in the topic.

GMAT9107
Special Topic in Geomatic Engineering B
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S1 S2

A special course taken by an individual student or a small group of students by private study in conjunction with tutorial sessions with the member(s) of staff in charge of the course.

GMAT9121
Network and Deformation Analysis
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S1

Selected topics from: Geodetic datum and invariant quantities, measures of accuracy, testing of hypotheses, outlier detection, internal and external reliability and sensitivity criteria, variance component estimation, design and optimisation of deformation monitoring networks, two-epoch analysis, multi-epoch analysis, case studies of monitoring networks.

GMAT9211
Introduction to Geodesy
School of Surveying & Spatial Information Systems
Staff Contact: A Kearsley
UOC6 HPW3 S2

Selected topis from: The earth's gravity field. The earth's motion in space. Coordinate and time systems used in geodesy. Horizontal and vertical control networks. Earth satellite motion. Principles of satellite positioning. Gravimetric geodesy. Space geodetic methods. Variations of geodetic positions with time.

GMAT9212
GPS Satellite Surveying
School of Surveying & Spatial Information Systems
Staff Contact: C Rizos
UOC6 HPW3 S2

Introduction to GPS, satellite positioning, the GPS system, field planning and office procedures, GPS instrumentation, modelling, GPS observables, introduction to data processing, use of software, ambiguity resolution, modern GPS surveying techniques, baseline adjustment within networks, transformations, height determination. Tutorials and field exercises will focus on mathematical modelling issues, understanding GPS performance using commercial hardware/software systems.

GMAT9533
Land Use Mapping and Administration
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S1

Physical, social, economic factors affecting rural and urban land use around the world. Land use administration procedures. Data/information needs. Land use classification systems; capability; resource inventory surveys. Mapping tools; properties of photogrammetric and remotely sensed images. Image geometry, analysis procedures and interpretation; photogrammetric mapping procedures. Topographic and thematic map production. Various uses of map products and GIS.

GMAT9600
Principles of Remote Sensing
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S1

History and development. Definition and physics of basic electromagnetic radiation quantities. Basic-energy matter relationship. Spectral signatures of surfaces. Atmospheric considerations and the reduction of atmospheric effects. Sensor concepts including film and electro-optical sensors. An introduction to data processing and enhancement, including image interpretation procedures.

GMAT9604
Land Information Systems
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S2

Land information as maps and records. Methods of data collection. Integrated surveys and coordinate systems. Legal boundaries. Land tenure. Identifiers. Computerisation of land information. Data input methods. Data storage methods. Data processing and manipulation, including management, searching, existing data base languages, and interactive data editing. Data output, including computer graphics, line printer maps, and digital plotters. Application of Arc-Info LIS software.

GMAT9606
Microwave Remote Sensing
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S2

Use of passive and active (radar) microwave techniques in remote sensing of earth resources. Topics include: real and synthetic aperture radar systems; passive microwave radiometry; energy-surface interactions; interpretation of microwave image data: applications in agriculture, geology, oceanography and hydrology; issues in signal and image processing; characteristics of airborne and spaceborne microwave sensors.

GMAT9608
Cadastral Systems
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S1

Components, administration and principles of cadastral systems. Systems of land tenure. Cadastral parcel identification systems. Cadastral surveys and adjudication; title searching, survey marking and preparation of plans: statutes and regulations; quality control of cadastral practitioners; accuracy control procedures. Reference systems: local survey and national geodetic datums. Title definition by metes and bounds or coordinates, and GPS in cadastral surveys. Cadastral reform: international case studies.

GMAT9609
Land Registration Systems
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S2

Classification and historical background of registration systems - especially current systems in Australia and Asia. Deed and title registration, hybrid systems. First registration, qualified and limited titles. State land titles, owners and state rights, adverse possession. Land transactions, processes and record keeping: regulations for various dealings and transfers of land. Record keeping. Assessment of implementation and acceptance of various land registration systems.

GMAT9610
Reform in Land Titling and Registration Systems
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S2

Introduction to the characteristics, purposes and outcomes of reform. Social, economic, political and institutional influences; Planning and impact: current land use, ownership, registration, traditions, and methods of survey, resistance to change and community involvement, appeal structures. Schedules of implementation, man-power requirements. Examples of overseas land reforms (Thailand Land Titling project). Change options and comparisons: impact of advanced measurement techniques and information storage and transfer methods.

GMAT9611
Land Law for Land Administration
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3

Principles and historical development; legal foundations of land administration and ownership in established and developing countries. Customary and legal rights: state vs. individual in different jurisdictions. Relationships of land law to other arms of the law. Interests in land; responsibilities under land laws. International perspectives - comparative land law, nature and sources of international law, relationship between international and domestic law; international agreements and litigation.

GMAT9906
Major Assignment
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC12 HPW3 S1 S2

GMAT9950
ModernTechnology in Geomatic Engineering
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3

Introduction to geodetic reference systems; coordinate systems for satellite orbits, global positions, maps; geoid models. Contemporary computing techniques. New developments in field survey equipment. Satellite positioning and processing for surveying and navigation. Data acquisition for GIS, including field surveys, map digitising, photogrammetry and remote sensing. An introduction to GIS database design, development and applications.
Note/s: By distance learning.

GMAT9951
Land Information Systems
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S2

Land information as maps and records. GIS development and implementation. Selected topics from system life cycles, economics and cost-benefit analysis, methods of data collection, data refinement, data storage, data analysis and manipulation, data presentation, programming. Application of GIS technology. Land management and administration, cadastral systems, land tenure, identifying issues in Land Information Systems, data issues, software, hardware, standards, institutional issues, coordinate systems, data validation, quality.
Note/s: By distance learning.

GMAT9952
GPS Surveying
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3

Introduction to GPS and satellite positioning, the GPS system; field planning and office procedures; GPS instrumentation; modelling GPS observables; introduction to data processing and the use of software; ambiguity resolution; modern GPS surveying techniques; baseline adjustment with networks; transformations; height determination. Tutorials and field exercises will focus on the mathematical modelling issues, as well as understanding GPS performance using commercial hardware/software systems.
Note/s: By distance learning.

GMAT9953
Principles of Remote Sensing
School of Surveying & Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S1

History and development of remote sensing. Definition and physics of basic electromagnetic radiation quantities. Basic energy-matter relationship. Spectral signatures of surfaces. Atmospheric considerations and the reduction of atmospheric effects. Sensor concepts including films and electro-optical sensors. Principles of thermal infrared and microwave remote sensing. An introduction to data processing and enhancement, including image interpretation procedures.
Note/s: By distance learning.

HIST5204
Politics and Society in Indonesia
School of History
Staff Contact: J Gelman Taylor
UOC8 HPW2 S1

The Indonesian response to colonial domination in the 20th century, the impact of Japanese occupation, the Indonesian Revolution which culminated in the defeat of the Dutch in 1949, and the search for a new political order down to the 'coup' of 1965. Emphasis on the communists, the Muslims and the populists, and attempts to create political linkages between the elites and the masses. Analysis of those forces for and against an economic and social revolution in Indonesia and of the emergence of the military as a dominant force in Indonesian society.

HIST5222
Australian Images of Asia
School of History
Staff Contact: D Reeve
UOC8 HPW2 S2

An examination of the key issues involved in the way Australians have looked at Asia since the nineteenth century. Examines both official and popular perceptions of, and attitudes towards, Asia and Asians through to the present day.

HIST5233
Modern China: History and Historiography
School of History
Staff Contact: A Field
UOC8 HPW2 S1

Examines the transformation of China since its initial contacts with Western imperial powers, through a critical examination of seminal historical interpretations. Consideration will be given to aspects of traditional Chinese culture and society, peasant revolutions, nationalism, the rise of communism and development since the revolution of 1949. Emphasis will also be given to historiographical differences between so-called Western and non-Western understandings of continuity and change in China.

HIST5235
De/Constructing History - 'Japan'
School of History
Staff Contact: H Bowen Raddeker
UOC8 HPW2 S2

Looks at how history, in this case the history of Japan, has been constructed. We deconstruct the 'Japan' of conventional history texts from the points of view of post/structuralist critiques of the discipline and embark on a search for a Japan with a 'difference' via readings of different primary texts - eg, translated works of literature, including plays, manga and animi (comics and animation), legends and oral histories. Of interest to those interested in the theory and practice of History, as well as to Asian/Japan studies specialists; draws on examples from histories of both pre-modern and modern Japan.

HIST5301
Reading Program in History
School of History
Staff Contact: School Office
Enrolment requires School approval
UOC8 HPW2 S1 S2

A student who wishes to pursue an area of historical research may devise a reading program in consultation with a member of staff, to be undertaken by the student under staff supervision.

HPSC5001
Introduction to History and Philosophy of Science
School of History and Philosophy of Science
Staff Contact: J Schuster
UOC8 HPW2 S1

Introduces issues and techniques in the history and philosophy of science, taking the origins of modern science as an extended case study. The content and philosophical presuppositions of the new science are analysed, along with its relations to social, religious and political developments in the period. Emphasis is placed on critical historical thinking and use of tools from the sociology of knowledge. Major interpretations of the rise of modern science by Duhem, Hessen, Koyre, Merton, Kuhn, Popper and Shapin will be assessed.
Note/s: Please consult School before enrolment.

HPSC5002
Environment, Sustainability and Development
School of History and Philosophy of Science
Staff Contact: S Healy
UOC8 HPW2 S1

Introduces relationships between Environmental Policy and Sustainable Development and their links to science, technology and modern society. Key themes: Notions of Sustainable Development; Technical and Social Innovation; Globalisation and Governance; & Eco-politics and Controversy. Topics include: the contested meaning of Sustainable Development; innovations promoted as 'Sustainable Development'; dynamics of globalisation and governance; authority and social relations of science; models of technological and social change; public understanding and participation in technological and environmental controversy. Topics, explored theoretically and through case studies, may include: energy systems, waste, modern genetics and its use in agriculture; conservation of biodiversity, and technologies in everyday life.
Note/s: Please consult School before enrolment.

HPSC5010
Key Themes in the History of Science
School of History and Philosophy of Science
Staff Contact: J Schuster
UOC8 HPW2 S2
Excluded: HPST5400

Introduces students to key issues, methods and debates in the history of science by means of close examination of several case studies of significant turning points in the development of Western science. The critical examination of select primary sources will be stressed, along with the central historiographical debates concerning each case. Related issues in the philosophy of science and sociology of scientific knowledge will be introduced into each case study as appropriate. Case studies will be selected from amongst the following: The Copernican Debate and the demise of the Medieval world-view; Galileo, Science and the Church; the rise of the Newtonian world-view; the Chemical Revolution of the 18th century; the emergence of modern biology and geology in the early 19th century; the Darwinian Revolution; Origins and Development of Molecular biology.

HPSC5020
Supervised Reading Program
School of History and Philosophy of Science
Staff Contact: J Schuster
Enrolment requires School approval
UOC8 HPW2 S1 S2

Allows students to pursue an area of interest in consultation with a supervisor. Involves writing a 6,000 word essay.

HPSC5120
Issues in the History of Life Sciences and Biotechnology
School of History and Philosophy of Science
Staff Contact: N Rasmussen
UOC8 HPW2 S2

Examines some of the historiographic issues surrounding the rise of molecular biology, and in general the development of technologically-oriented life science and industry over the past century. Specific themes may include the political dimensions of biomedical science policy, the evolution of industrial involvement in academic life science and medicine, and the changing social significance of the pharmaceutical and biotechnology industries.

HPSC5130
History and Politics of Medicine and Health
School of History and Philosophy of Science
Staff Contact: P Hardy
UOC8 HPW2 S1

Examines issues relating to the history and politics of medicine and health, with an emphasis on the social context of medical knowledge, practices and institutions including conceptions of medical health and policy, the perception and management of risk, and the use and expansion of medical technology and testing. Topics may include: perceptions and expectations of health and disease; ethics and professionalisation; changes in Western medical theory and practice; public health and preventative medicine.

HPSC5200
Foundations of Cognitive Science
School of History and Philosophy of Science
Staff Contact: P Slezak
UOC8 HPW2 S1
Excluded: HPST5100.

Intended to introduce and provide an overview of foundational issues in the interdisciplinary field of Cognitive Science. The field includes psychology, artificial intelligence, linguistics, neuroscience and philosophy. Topics include: philosophy of mind and psychology from Plato, Aristotle and Descartes to the present; neural nets, finite automata and Turing Machines; Gödel's Theorem, mechanism and the mind - can a computer be conscious?; Chomsky's revolution - rediscovering the mind; from behaviourism to mentalism; representation, symbols and intentionality - the Language of Thought; classical symbolic AI or connectionist neural nets?

HPSC5210
Philosophical Issues in Cognitive Science
School of History and Philosophy of Science
Staff Contact: A Corones
UOC8 HPW2 S2
Excluded: HPST5200.

Examines a range of philosophical issues in cognitive science, including folk psychology, neurological reductionism, levels of explanation, computational approaches to cognition, situated action theory, cognition and evolution, distributed representation, and dynamical systems theory.

HPSC5300
History of Technology: Concepts and Cases
School of History and Philosophy of Science
Staff Contact: D Miller
UOC8 HPW2 S2

Examines key concepts for a sophisticated treatment of technological change, including: invention, innovation and diffusion; technological paradigms; technological systems their 'evolution' and 'momentum'; deterministic versus interactive models of change; interpretive flexibility of technical artefacts and the social construction of technology. Applies these concepts to the understanding of historical cases with contemporary resonances, including: power in the industrial revolution; the electrification of societies since 1850; the industrialisation of food and eating; telephony; and automobility.

HPSC5350
Technoscience Futures
School of History and Philosophy of Science
Staff Contact: G Bindon
UOC8 HPW2 S1

Introduces theories and debates about current and future trajectories of science and technology. Topics include: the concept of 'technoscience' and its uses; debates concerning the links between the laboratory and the world; the claimed collapse of distinctions between 'subject' and 'object', 'natural' and 'social', and 'science' and 'technology'; hard science fiction as precursor to futurology, and attempts at formal forecasting schemes. Topics are framed by consideration of two apparently opposed emerging trends in technoscience analysis: various models of 'social constructionism' versus the 'new naturalism', including evolutionary, complexity, emergence, and game theory.

HPSC5500
Society, Environmental Policy and Sustainability
School of History and Philosophy of Science
Staff Contact: P Brown
UOC8 HPW2 S1
Excluded: SCTS5315

Examines the principles of sustainable development in the social, historical and political context within which they've been devised, and their application in different spheres and programs of government, industry, institutions, and community groups. Students will engage with the social and historical context of modern environmentalism, science and the environment, the precautionary approach, sustainability and the built environment, and the international agreements and national commitments to ecologically sustainable development. As an outcome, participants will gain practical insights into key environmental issues and the capacity to apply this knowledge to policy making and management problems, and to problems arising in planning and design.

HPSC5510
Risk Policy, Decision Making and Communication
School of History and Philosophy of Science
Staff Contact: S Healy
UOC8 HPW2 S2
Excluded: SCTS5316.

Examines risk controversies that highlight a matter of growing prominence in policy more generally. That is the pressure for public involvement in the management of matters of concern, such as climate change or the regulation of genetic engineering that currently rely on expert risk management. Illuminates this state of affairs by examining social theories of risk and work on risk perception. These are used to develop an appreciation of risk policy and decision making, and the related field of risk communication. Also examines public involvement in decision making via a local case study.

HPSC5520
Fundamental Knowledge in Environmental Management: Social Science
School of History and Philosophy of Science
Staff Contact: S Healy
UOC6 HPW3 S1
Excluded: SCTS5317

The social sciences play an integral role in comprehensive environmental management, and their importance has been recognised in recent years. Explains the social, political and historical contexts of organisational and theoretical frameworks within which environmental issues are interpreted and decision making occurs. Investigates the role of science and the influence of technological change on both environmental impacts and environmental management. Uses case studies of important environmental issues to explore social science methods and provide an overview of the contributions made by a range of disciplinary areas.

IBUS5601
Global Business and Multinational Enterprise
School of International Business
Staff Contact: School Office
UOC6 HPW3 S1 S2 X1

The globalisation of business and the challenge of dynamic political, economic, social and technological environments. The impact of cultural differences on international business transactions and international management. The evolution and development of the multinational enterprise and alternative contractual modes including exporting, licensing, franchising and manufacturing, international acquisitions, joint ventures and strategic alliances. Theories of the internationalisation process and foreign direct investment by multinational enterprises. The relationship of multinationals with governments and issues of political risk.

IBUS5602
Cross-Cultural Management
School of International Business
Staff Contact: School Office
UOC6 HPW3 S1 X1

Understanding cultural differences, and effectively managing these differences are critical to working, communicating and transferring knowledge in multi-cultural and international business environments. The aims of this course are to provide conceptual and theoretical frameworks for developing an understanding of the ways in which cultures differ, how these cultural differences impact on organisations and how they constrain communication and knowledge transfer. The course also considers strategies for managing and valuing the diversity within organisations. Topics include the nature and dimensions of culture, challenges in managing cultural differences, issues relating to cross-cultural problem solving, the dynamics of multi-cultural teams, leadership across cultures, cross-cultural perspectives to motivation and decision making, the nature and management of knowledge within different cultures and across cultures, and global approaches to managing conflict and conducting business negotiations. 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 the challenges of managing global careers.

IBUS5603
Global Business Strategy and Management
School of International Business
Staff Contact: School Office
UOC6 HPW3 S2
Corequisite/s: IBUS5601

Formulation of global business strategies including objective setting processes and internationalisation of decision-making. Country location decisions. International market entry mode decisions. Exporting and importing decisions. Investment evaluation of foreign projects. International joint venture and alliance strategies. International acquisition strategies. Managing international business negotiations. Organising operations and managing human resources across borders. Measuring and evaluating international business performance. The study of international business cases is a special feature of this course.

IBUS5604
Asia-Pacific Business and Management
School of International Business
Staff Contact: School Office
UOC6 HPW3 S2
Corequisite/s: IBUS5601

This course provides an in-depth analysis of business development of Asian enterprises in a dynamic institutional context. It considers the business activities of multinational enterprises in the Asia Pacific Region including those from Japan, Korea, China, India, Taiwan, hong Kong and Singapore. Topics include: the policy context of competitive advantage, dynamic learning and innovation in Asian businesses; state guided capitalism; the role of networks, market and non-market institutions; foreign direct investment and export promotion; comparative analysis of business and management systems in East, South East and South Asia.

IBUS5606
Chinese Business and Management
School of International Business
Staff Contact: School Office
UOC6 HPW3 S1

A business and management perspective on the People's Republic of China. The macroeconomic, legal and operational environment of Chinese business enterprises; analysis of business procedures and management in China, and an overview of Australian-Chinese business relations. Topics include enterprise reform, enterprise finance and stock markets, accounting and taxation, foreign trade and internationalisation, enterprise management and Australian trade and investment links with China. Special attention will be given to problems of enterprise reform, the continuing role of the state, Chinese business practices, including "guangxi" and business negotiations, and the management of foreign investment enterprises in China.

IBUS5607
International Entrepreneurship and New Venture Management
School of International Business
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: IBUS5601;
Corequisite/s: IBUS5603;
Excluded: MARK5958.

This course explores entrepreneurship (and intrapreneurship) in both large and small firms, recognising the increasing crucial role of the international dimension. Key questions addressed include: What is an entrepreneur? What opportunities and challenges do entrepreneurs face (or create) in the international arena? How can these opportunities and challenges be managed creatively and effectively? These questions are addressed from both economic and behavioural perspectives. An emphasis is placed on: the processes of innovation and entrepreneurship; identifying opportunities; planning for and managing a growing venture in the international marketplace from a variety of functional perspectives; and developing an entrepreneurial mindset. Central to this course is the integration of theory and oractice, building on previous courses. Student participation through case analyses, experiential exercises and workshops, project work, symposiums with industry practitioners, and reflective learning underpins the course.

IBUS5608
Corporate Strategy in East Asia
School of International Business
Staff Contact: School Office
UOC6 HPW3 S1

An indepth analysis of comparative business systems and corporate strategy in Japan, Korea, and China. Topics include: comparative analysis of business systems and government-business relations in Japanese Keiretsu, Korean Chaebol and Chinese family business and State enterprises in China; corporate governance and human resource management practices; globalisation of firms, headquarter-subsidiary relations and foreign direct investment; impact of culture on management style and decision making; comparative analysis of competition strategy; organisational structures including sub-contracting and buyer-supplier networks, just-in-time management and quality control.

IBUS5609
Geopolitical Risk Management
School of International Business
Staff Contact: School Office
UOC6 HPW3 S1

This course introduces students to the mechanisms by which firms are challenged to account for the social, as well as economic, consequences of their activities. In complex international environments, firms must manage conflicting stakeholder interests. The course sets out theoretical and conceptual frameworks for analysing the choices confronting firms, including issues of corruption, diversity management and the environment.

IBUS5691
Special Topic in International Business
School of International Business
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2
Prerequisite/s or Corequisite/s: IBUS5603

IBUS5699
Project Report in International Business
School of International Business
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW6 S1
Prerequisite/s or Corequisite/s: IBUS5603

IDES1021
Basic Design
Industrial Design Program
Staff Contact: O Demirbilek
UOC6 HPW3 S1

The 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. Studies are undertaken within the context of art and design.

IDES3271
Form Theory
Industrial Design Program
Staff Contact: M Ramirez
UOC3 HPW2 S2
Prerequisite/s: IDES1021

Study of the nature of form and past and current theories. Understanding of the values of the visual language and the signals/tools used to inform the visual language. Exploration of form typographies both theoretical and actual.

IDES5051
Plastics, Materials and Processes
Industrial Design Program
Staff Contact: L Green
UOC3 HPW2 S1

Describes plastics materials and their specification in design. Plastics manufacturing processes such as injection moulding, blow moulding, extrusion and rotational moulding are covered. Also describes costing techniques for plastic assemblies and components.

IDES5091
Perspective and Rendering
Industrial Design Program
Staff Contact: L Green
UOC6 HPW3 S1

The major two and three dimensional media and computer techniques are analysed and demonstrated within the context of industrial design problem solving: orthographic techniques, the Australian Engineering Drawing Standard, graphic art processes, photography, current rendering and illustration techniques, modelling in automotive clay, plastic sheet and rigid foams, timbers and metals. The current state of computer aided design as well as its potential in design and the restructuring of engineering decisionmaking and drafting. Particular emphasis given to each method s role in problem analysis and communication at the concept, detail and final design stages. The social and physiological aspects of communicating design in industry are also examined.

IDES5131
Industrial Design
Industrial Design Program
Staff Contact: L Green
UOC6 HPW3 S2

Industrial design project work intended to integrate the student's previous experience and the course units in preparatory work for the Graduate Project. A part of the course may be undertaken on a group basis.

IDES5141
Industrial Design A
Industrial Design Program
Staff Contact: O Demirbilek
UOC6 HPW3 S1

Project work designed to introduce industrial design research and studio methodologies. Studies undertaken within a broad range of product areas and related to the concurrent coursework.

IDES5152
Manufacturing Technology
Industrial Design Program
Staff Contact: L Green
UOC3 HPW2 S2

Industrial processes and materials, production costing and changing production economics. Objectives and structures of the engineering professions and their integration with industrial design in the product development process.

IDES5153
Computer Graphic Applications
Industrial Design Program
Staff Contact: S Ward
UOC6 HPW4 S1

Development of Computer Aided Design with particular reference to perspective rendering techniques using computing equipment as well as the application of computing to other graphic problems.

IDES5154
Computer Aided Design
Industrial Design Program
Staff Contact: J Talbot
UOC6 HPW4 S2

Computer aided design and drafting systems and their applications in product development. Mathematical optimisation techniques.

IDES6081
Graduate Project (M.Ind.Design)
Industrial Design Program
Staff Contact: O Demirbilek
UOC12 HPW8 S1 S2
Corequisite/s: IDES5131

A project within the practice areas of industrial design, selected by the student subject to the approval of the School; conducted within an approved methodology. Documentation of the methodology, research strategy and techniques, monitoring of the design process, resultant design, and evaluation of the methodology, research and final design. Students should give consideration to the School's specialist areas.

IDES6161
Industrial Design B
Industrial Design Program
Staff Contact: O Demirbilek
UOC6 HPW3 S2
Prerequisite/s: IDES5141

Advanced project work combining the research and practice methodologies of industrial design in product research, development and design, preparatory to undertaking the Graduate Project.

IDES6181
Graduate Project (MSc Ind Design)
Industrial Design Program
Staff Contact: O Demirbilek
UOC12 HPW8 S1 S2
Prerequisite/s: IDES 5141, IDES6161, IDES5091, IDES1021

A project within the practice areas of industrial design, proposed by the student in consultation with the School and conducted within an approved methodology; documentation of the methodology, research strategy and techniques, monitoring of the design process, resultant design, and evaluation of the methodology, research and design.

IEST5001
Frameworks for Environmental Management
Institute of Environmental Studies
Staff Contact: H Harding
UOC6 S1 S2

This course provides an introduction to the Master of Environmental Management program. Participants will gain an appreciation of the complex and transdisciplinary nature of environmental management issues and of the inherent challenges in multi-disciplinary group approaches to environmental management issues. The emphasis is on exploring conceptual and practical frameworks for environmental management. Starting from the premise of sustainability as a current broadly-endorsed framework for environmental management, the following are explored: the development of the concepts of sustainable development and sustainability; problems in practically interpreting and implementing sustainability; disciplinary perspectives on the concepts (eg from philosophy, planning, health sciences etc); the "principles" of sustainable development and experience in their application; responses to the "sustainability framework" at different levels of governance, by different sectors, by corporations, by professional organisations; critiques of sustainability as a framework for environmental management; alternative models.

IEST5002
Tools for Environmental Management
Institute of Environmental Studies
Staff Contact: H Harding
UOC6 S2

Provides an introduction to the wide range of "tools" used in environmental management and for environmental decision-making. These include: environmental impact assessment, social impact assessment, public participation, policy formulation, risk management, environmental management systems, life cycle assessment, materials flux analysis, State of the Environment reporting/accounting, auditing, modelling. Links will be drawn between the "tools" course and material covered in "Frameworks for environmental management" and the "fundamental knowledge" courses. This course will provide an introduction to a number of specialist courses that may be taken as electives (in for example environmental impact assessment).

IEST5003
Addressing Environmental Issues
Institute of Environmental Studies
Staff Contact: H Harding M Jussawalla
UOC6 S1 S2

Brings participants in the Master of Environmental Management together in the final stage of their program to focus on analysis and problem solving in multi-disciplinary teams. Will further illustrate the nature of, and need for, a transdisciplinary approach to addressing environmental problems. Group work will draw on current or recent key environmental issues and will be supported by high level seminars addressed by guest speakers from both within UNSW and externally.

IEST5004
Environmental Management Research Project Part A
Institute of Environmental Studies
Staff Contact: School Office
UOC6 S1 S2

A 6 unit of credit project relevant to the program of study. Students are required to undertake an investigative project under appropriate supervision and present a satisfactory report.
Prerequisite: Completion of 4 courses toward the Master of Environmental Management at a credit level average (ie 65%).

IEST5012
Environmental Management Research Project Part B
Institute of Environmental Studies
Staff Contact: School Office
UOC6 S1 S2

A 6 unit of credit project relevant to the program of study. Students are required to undertake an investigative project under appropriate supervision and present a satisfactory report.
Prerequisite: Completion of IEST5004 at a satisfactory level

IEST5018
Environmental Management Research Project Part C
Institute of Environmental Studies
Staff Contact: H Harding
Enrolment requires School approval
UOC12 S1 S2

A 6 unit of credit project relevant to the program of study. Students are required to undertake an investigative project under appropriate supervision and present a satisfactory report.
Prerequisite: Completion of IEST5004 and 5012 at a satisfactory level.

IMGT5110
Information Retrieval Systems
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s or Corequisite/s: INFS5988

Characteristics and structure of textual records: definition, content, structure and context; elements of record metadata. Databases of textual records: databases as collections of textual records, categorisation of database types, contrast and comparison with other types of databases eg relational, electronic record keeping principles. Textual information retrieval principles: boolean operators, proximity operators, limit operators, truncation, inverted indexes, keyword versus phrase indexing, controlled vocabulary and thesaurus use versus uncontrolled keyword searching, retrieval command languages, set logic and construction for retrieval purposes. Construction and implementation of search strategies: search sequence diagrams, query expansion, broadening and narrowing search results, strategies to avoid information overload. Advanced retrieval features: relevance feedback, introduction to weighting and probabilistic retrieval. Information retrieval systems for specific information environments: libraries, archives, records management systems, etc. Basic design and creation of text-based databases using information retrieval systems: data structures, documentary and management metadata elements and their properties, data entry or conversion requirements, data output techniques. Creation of basic information resources for delivery and access via the World Wide Web.

IMGT5120
Organisation of Knowledge
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1

The primary focus of the course is the organisation of knowledge for effective management and retireval. Students are introduced to systems of classification and representation of knowledge as essential processes for providing systematic knowledge management and resource discovery. Because knowledge management values both explicit and tacit knowledge resources, the course focuses on strategies and processes of organisation of information resources available within an organisation (namely records and internal documents) and resources from the public domain that are essential to an organisation's operations. The course focuses on theories and practice of knowledge organisation as it relates

to meanings, contexts and subjects of information products in whatever form. The methods by which knowledge is created, categorised, classified and represented are studied, as are the standards used internationally for knowledge representation and categorisation. New mechanisms for organising and providing efficient access to the subject content carried by the various media are studied, including traditional print-based materials, electronic documents, and the World Wide Web. For example, particular attention is paid to initiatives such as metadata and global information locator schemes (GILS) as applied to content and document organisation in the electronic media and the World Wide Web.

IMGT5410
Knowledge and Society
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2

This course focuses on the role of information and knowledge management in society. Definitions and multi-disciplinary perspectives on information and knowledge are explored. The course addresses issues of developing and maintaining effective information infrastructures that will enhance effective use of knowledge in a globalised world. Changing notions about the value of information in society are set within historical and cultural contexts and the newer technological factors that shape the use of information in today's world. Practical, social and ethical implications are examined using a range of views about the economic, political and cultural roles of information and recent studies of knowledge generation and use in corporations, government and educational and research environments. Knowledge management as a factor in organisational change and development, and as a catalyst for innovation, is discussed. The course also provides an introduction to the implications of copyright law, intellectual property rights and owernship of intellectual products on information use and education.

IMGT5420
Information Sources: Access, Assessment and Acquisition
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2

An introduction to the ways in which an information service (library, documentation center, database service provider, etc.) brings together information sources with the people who want to use them. The identification of client information needs, and the provision of information services designed to meet those needs. The range of possible information sources (print, electronic, and other formats); the evaluation of them in relation to client needs; the provision of access to them through various information service strategies. Techniques for eliciting client requirements, at the collective level, through the analysis of community needs, and at an individual level, by means of the reference interview. The relative merits of developing a collection of information resources within a library or information service, or of providing alternative outside access. Planning and budgetary aspects of collection development. The evaluation of information services.

IMGT5430
Health Information Management
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1

This course introduces students to the information needs of health professionals including the structure and characteristics of health information sources and their supporting databases. Special emphasis is placed on current indexing, classification and retrieval practice as well as on the design and evaluation of text-book based health information retrieval systems. Models of knowledge-based health information and state-of-the-art approaches to online content and retrieval methods are introduced. Issues related to the clinical narrative in medical records are also discussed including the problems in text processing, semantic pattern matching, clinical vocabularies, alternatives to natural language input of medical data, and future direction for clinical data capture and analysis. The course concludes with a discussion of research topics in automated indexing and retrieval, user interfaces and digital libraries as well as on the future integration of the various information systems in the health sciences.

IMGT5445
Information Management & Business Intelligence for Organisations & Industry
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2

This course aims to provide students with an overview of the information environments of business and industry and their impact on managerial decision-making within a variety of public and private organisations, with an emphasis on the healthcare and biotechnology industries. This information environment includes the discovery, management and transfer of external information, including legal, government and industry regulatory information, statistics and intellectual property. Information held within an organisation's internal depositories, such as records management systems will also be considered. Important information management practices will be covered, including the assessment of managerial information needs, environmental scanning, competitive intelligence, repackaging and other value-added information services. The course emphasises enhanced capacity of organisations to maintain best business practice and business advantage through effective utilisation of information.

IMGT5560
Information Management: Professional Attachment
School of Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2

Students undertake a substantial information management project for the benefit of a host organisation, normally full-time in a 4-week period between University sessions. The emphasis of the attachment is on negotiating and documenting project objectives, process and outcomes, and on critically reflecting on them. Students are required to attend preparatory seminars before undertaking a project, and to present a seminar on their work following the completion of the project.

INFS5848
Information Systems Project Management
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: INFS5988

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.

INFS5885
Management of E-Business Technology
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: INFS5988;

This course aims to provide students with an introduction to the issues that surround the management of E-Business technologies within the business environment. The course will address business issues that impinge on E-Business in a commercial environment. It will give students an introduction to technologies of E-Business that are widely used in Commerce/Industry and an appreciation of the management issues which surround the application and use of these technologies. Case organisation examples will be used throughout the course to illustrate the application of course materials.

INFS5905
Information Systems Auditing
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: INFS5988

Management of information systems audit and the evaluation of IT management. Analysis and review of internal controls in contemporary computer installations and applications. Use of basic and advanced information systems audit techniques and methodologies, including audit software, integrated test facility, and concurrent auditing techniques. Technology audit reviews of the audit requirements for such technologies as LANs, EDI, and expert systems. Legal and professional requirements, amd computer abuse/fraud auditing. Review of future IS audit techniques, methodologies, research and social implications.

INFS5926
Advanced Data Management
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: INFS5992

The principle and practice of data administration in a large organisation. Design, redesign and tuning of database. Distributed databases and database management systems. Reliability, security and integrity of the database.

INFS5927
Knowledge Management Systems and Technology
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: INFS5957

The objective of this course is to provide the student with an understanding of the business of managing the generation, organisation, distribution, maintenance, storage, analysis, application, archiving and disposition 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 meaningful patterns in data.

INFS5928
Software Engineering Management
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: INFS5989.

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.

INFS5953
Information Systems Management
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: INFS5988, INFS5992

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.

INFS5957
Information and Decision Technology
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1

To examine - The role of information and models in 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.

INFS5974
Advanced Database Implementation
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s: INFS5992

This course covers advanced data analysis and modeling concepts, physical design, integrity, security and transaction management issues. Relational, object relational and object-oriented database implementations are considered. Students apply the knowledge learnt in the course to implement a real-life system using a major commercial database management system. The system is implemented using client/ server principles.

INFS5975
Advanced Software Implementation
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: COMP9021

This course applies the concepts and principles of software engineering associated with the implementation of a computer based information system, including its physical design, coding, and testing. The application of management tools in the control and implementation of a quality application system are also considered. Students apply the knowledge learnt in the course to implement a real-life system using a commercial programming language.

INFS5978
Accounting Information Systems
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s or Corequisite/s: ACCT5930

The course aims to provide an introduction to the use and management of information systems used within the realm of accounting. Students will have the opportunity to develop their knowledge and understanding of the role of accounting information systems in organisations, examine the information technology components of information systems and review the means by which organisations acquire and deploy accounting information systems. The course will include hands-on usage of accounting information systems and tools germane to the area. The course also includes a study of contemporary issues confronting accounting information systems, and a consideration of the ethical practices related to the development and use of these systems.
Note/s: Only offered to students in the Accounting Program (ACCTAS8404) and the Professional Accounting Program (ACCTDS8404).

INFS5982
Advanced Data Communications
School of Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2
Prerequisite/s: INFS5983.

Current and emerging technologies for data networking and the internet. Specifications of corporate networks including local and wide area networks. Design and development of distributed application systems.

INFS5983
Business Data Communications
School of Info Systems, Technology & Management
Staff Contact: R De Silva
UOC6 HPW3 S1 S2
Prerequisite/s: INFS5988; Currently enrolled in program 8404 or 8923 or 8007 or 7355 or 5391

Data communication networks, interfaces between networks and computers, data communications software, standard communication protocols, network architectures, distributed databases, design of information systems which include data communications.

INFS5984
Information Systems Security
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: INFS5983, INFS5992

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.

INFS5986
Research Topics in Information Systems 1
School of Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1

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.

INFS5987
Research Topics in Information Systems 2
School of Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2

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.

INFS5988
Business Information Systems
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1 S2

This course aims to provide an introduction to the use and management of information systems in business. Students will have the opportunity to develop their knowledge and understanding of the role of information systems in organisations, study relevant and current topics to the area, and examine the components that interact within information systems. This course also encourages students to consider ethical practices related to the development and use of information systems.

INFS5989
Information Systems Design
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s or Corequisite/s: INFS5988.

An understanding of the role and expectations of a systems analyst in the context of the organisational environment, exploring and using the tools and techniques available to the systems designer, expanding and building on the framework of analysis and design acquired from the other courses and student experiences.

INFS5991
Decision Support Systems
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: INFS5988

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.

INFS5992
Data Management
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1 S2

A review of data management principles including both simple and complex file designs, and the concept of database management systems. Alternative database management system architectures, including network hierarchical and relational approaches. Database query systems, including relational algebra. Case studies and assignments embodying these principles.

INFS5993
Special Topic in Information Systems and Management
School of Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2

A specially assigned project, program or set of readings relating to information systems and management research.

INFS5998
Project Seminar
School of Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC6 S1 S2

INFS5999
Project Report
School of Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW3 S1 S2

IROB5690
Strategic People Management
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S1
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

Strategic People Management examines the different ways in which organisations approach the management of their employees. It explores various facets of strategic human resource management practice and attempts to locate the management of 'people at work' within various theoretical, philosophical, historical and regulatory contexts.

IROB5700
Management Work and Organisation
School of Industrial Relations and Organisational Behaviour
Staff Contact: P Sheldon L Taksa
UOC6 HPW3 S1 S2

Provides a multi-disciplinary introduction to the concepts, processes, practices, issues and debates associated with the management of people in paid employment and the organisation, institutional and market place contexts within which employment relations are played out. Topics covered include the changing nature of work and work organisations, the development of labour management theory and practice, the meaning and purpose of the Human Resource Management approach, current trends and debates in management thinking and methods, the industrial relations context, the role of the state, unions and management strategy, workplace conflict, the nature of managerial work, leadership, gender and work, organisational culture, and employee motivation, remuneration and performance management.

IROB5702
International Employment Relations
School of Industrial Relations and Organisational Behaviour
Staff Contact: I Hampson
UOC6 S1
Prerequisite/s or Corequisite/s: IROB5700

This course explores recent changes in the theory and practice of employment relations in light of the broad recent changes captured in such concepts as 'globalisation'. There are strong concerns that increased corporate mobility and international competition undercut the protective function of formerly national employment relations systems, eroding conditions of work and human rights. The course examines employment relations 'models' in an increasingly globalised context. Topics covered include: globalisation, 'model' employment relations's systems, the international Labour Organisation and the defence of labour standards, international unionism and the future of unions, diverse national management systems, the transfer of 'best practice' work organisation, the relations betwen employment relations systems, the role of 'model' systems in economic performance and social protection.

IROB5705
The Management of Training
School of Industrial Relations and Organisational Behaviour
Staff Contact: I Hampson
UOC6 HPW3 S2
Prerequisite/s or Corequisite/s: IROB5700 or IROB5701.

Training has become an increasingly central component of strategic human resource management and public policy. This course critically examines the theory and practice of training. It builds on and complements nationally recognised qualifications in Assessment and Workplace Training. Opportunities for the development of practical training skills and techniques are provided. 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 Reform Agenda; training and employment policies; management education and development.

IROB5711
Employment and Industrial Law
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s or Corequisite/s: IROB5700 or IROB5701.

Nature and purposes of the legal system and industrial law, the law concerning the contract of employment. Trade union law. Industrial law powers of governments. The Commonwealth and New South Wales conciliation and arbitration systems. Awards. Penal sanctions for industrial law. Industrial torts. Topics and issues of importance in the employment and industrial law field.

IROB5712
Negotiation Skills
School of Industrial Relations and Organisational 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.

IROB5731
Special Topic in Industrial Relations
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1

A specifically assigned project, program or set of readings relating to Industrial Relations.

IROB5732
Special Topic in International and Comparative Industrial Relations
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: Admission to MCom (Honours) degree in Industrial Relations.

A specifically assigned project, program or set of readings relating to Industrial Relations.

IROB5733
Advanced Seminar in Industrial Relations
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: Admission to MCom (Honours) degree in Industrial Relations.

Selected advanced topics from the literature of Industrial Relations theory and application.

IROB5734
Advanced Seminar in International and Comparative Industrial Relations
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: Admission to MCom (Honours) degree in Industrial Relations.

Selected advanced topics from the literature of Industrial Relations theory and application.

IROB5798
Industrial Relations Research Seminar
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
Enrolment requires School approval
UOC8 S1

IROB5800
Technology, Management and Innovation
School of Industrial Relations and Organisational Behaviour
Staff Contact: D Kennedy G Schwarz
UOC6 HPW3 S1 S2

This course examines the interaction between the development of innovative capabilities (i.e. technology sourcing, corporate innovation, corporate entrepreneurship, and internal corporate venturing) and the enactment of technology strategy (i.e. new product development, learning cycles, design-build-test cycles), particularly from the manager's perspective. Integrates the roles of innovation strategy and technology strategy into a strategic management perspective. The course is organised around five (5) major themes: 1) integrating technology and strategy; 2) design and evolution of technology strategy; 3) developing the firm's innovative capacities; 4) creating and implementing a development strategy; and 5) innovation challenges in established firms.

IROB5801
Strategic Management of Technology and Innovation
School of Industrial Relations and Organisational Behaviour
Staff Contact: G Schwarz
UOC6 HPW3 S1 S2
Prerequisite/s: IROB5800

This course aims to provide an understanding of the strategic role that effective management of technological innovation plays in the success of the organisation or autonomous business unit. Because mission-critical technology is a key resource for each organisation, it must be strategically managed for comparative advantage. To do so necessitates first an understanding of the fundamentals of strategic management, then an understanding of how the technology strategy of the firm is aligned with the overall strategy of the firm. To that end, the concepts, techniques, tools, and processes of strategic management are explored, with an emphasis on linking the development of innovative capabilities and technological innovations with strategic outcomes. Topics covered include integrating technology and strategy, assessing technological capabilities, technological evolution and forecasting, technological

entrepreneurship, designing and managing systems for corporate innovation, creating and implementing a development strategy, and management through systems, style and shared values. Special emphasis will be placed on the integration of technology practices with other functional practices (i.e. finance, marketing, operations management, human resource management, etc.). These topics are investigated through a critical examination of relevant literature, documented case studies and contemporary business practices.

IROB5901
Organisational Behaviour
School of Industrial Relations and Organisational Behaviour
Staff Contact: L Taksa
UOC6 HPW3 S1
Excluded: PSYC7100

This course seeks to explain human behaviour within organisations. It draws predominantly from the behavioural science disciplines of psychology and social psychology. Its foci are the individual, the group, and the behavioural processes involved in organisation integration, change and development. Topics covered include personality, attitudes and values, motivation and learning, interpersonal behaviour, group dynamics, leadership and teamwork, decision-making, power and control.

IROB5904
Organisational Transformations at the Speed of E
School of Industrial Relations and Organisational Behaviour
Staff Contact: D Kennedy
UOC6 HPW3 S1

This course examines the human implications of change and transformation in New Economy companies. Topics include: types of organisational change vs. velocity of change; organisational change systems and methodologies; individual and organisational renewal; learning at the speed of E; the organisational psychology of the E culture. Emphasis will be placed on organisational behaviour processes, e.g. learning, innovation, leading, communication, as well as on human resource programs and practices that will need to be transformed in order to more effectively support ongoing organisational processes.

IROB5908
Strategic Human Resource Management
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: IROB5700 or IROB5901 or IROB5800

This course deals with the ways in which strategic thinking can be applied to Human Resource Management in organisations. It aims to provide students with opportunities to synthesise managerial strategy issues with HRM processes, in a considered and reflective manner. Strategic Human Resource Management considers questions such as: What does it mean to be a HR professional? How can we integrate HR concerns into organisational decisions and strategies? How can strategic thinking underpin HRM activities? 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, and aims to introduce strategic human resource management as a new way of thinking about organisations and their stakeholders. Students are given the opportunity to enhance their skills in organisational analysis, issue selling and strategic thinking - through fieldwork, case studies and seminars.

IROB5909
Management Consulting and Organisational Transformation
School of Industrial Relations and Organisational Behaviour
Staff Contact: C Wright
UOC6 S2
Prerequisite/s or Corequisite/s: IROB5700

Management consulting has rapidly emerged as one of the fastest growing professional services of the last decade. In addition to advising over business strategy and implementing organisational change, management consultancies are also a major source of graduate employment in business studies. Management consultancy therefore represents not only a new and growing professional service industry but also a newly emergent form of management knowledge in the globalised economy. The relationships that arise from the use of consultancy expertise span a number of dimensions - the knowledge and competency profile of organisations, the varying nature of the consultancy-client relationship, the internal management of consultancies, wider inter-organisational networks and the diffusion of management knowledge and expertise in the global environment. The growing importance of management consultancies in contemporary business practice is also indicated by the introduction of specialist courses on consulting in competitor universities both in Australia and overseas. This course therefore addresses both the broader issues of the changing nature of management knowledge and organisational change, as well as filling a gap in the existing MCom program.

IROB5910
Towards Corporate Sustainability: Effective Human Resources and Organisations
School of Industrial Relations and Organisational Behaviour
Staff Contact: C Royal
UOC6 HPW3 S2

This course aims to examine the ways in which organisational change can be sustained within the complexity of changing human and organisational systems. It examines the effects of environmental change on organisations and organisational systems. Emphasis is placed on sustaining change by building organisational capability involving human resource and organisational practices and processes which have the potential to sustain the organisation's ability to achieve continuous adaptation. The course will also emphasize a number of emerging corporate competencies required to sustain change and how these can be embedded in every organisation, in every group and every individual by learning, adapting innovating, and interacting with other systems and the environment. A key concern is an on-going organisational response to demands for structural and operational flexibility and change. The course also examines tools of analysis, design, implementation and maintenance of system sustainability, integration, and coordination. Topics include, strategic interventions, approaches to systems, system analysis and design, implementation techniques, monitoring, complementary human assets, contextual relations and linkages. Specific examples are drawn from industry experience and models.

IROB5912
International Business Negotiation
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S2
Prerequisite/s or Corequisite/s: IROB5901 or IBUS5601.

Every aspect of international business negotiation is influeneced by the dimensions of culture. The purpose of this course is to investigate how negotiation, as a process, differs across cultures in terms of cultural conditioning, negotiation style, approaches to problem solving, implied assumptions, and the role of ceremony and formality. The course consists of three modules. The first module builds a framework through which to conceptualise the intercultural dimensions that impact on international business negotiation processes. Taking an Asia-Pacific focus, the second module examines the roots and principles of East Asian strategic thinking that have shaped the negotiation mindset underlying the Asian business cultures of today. In the third module students will be guided in applying the principles of intercultural negotiation derived from the previous modules to formulate specific negotiations strategies for selected case studies. Students will also be given the opportunity to question and evaluate the negotiation approaches of guest specialists involved in international negotiation from different cultural perspectives.

IROB5931
Special Topic in Organisational Behaviour
School of Industrial Relations and Organisational Behaviour
Staff Contact: P Sheldon
Enrolment requires School approval
UOC6 HPW3 S1 S2

Available only to final-year students specialising in organisational behaviour, who have a distinguished record and who wish to carry out specific investigation or project. Approval from the coordinator of the program must be obtained prior to enrolling in this subject. However, before approaching the coordinator for approval, a student must have discussed his or her proposal with a member of staff who might be expected to supervise the project.

IROB5932
Advanced Seminar in Organisational Behaviour
School of Industrial Relations and Organisational Behaviour
Staff Contact: A Junor
Enrolment requires School approval
UOC6 HPW3 S1 S2

Advanced topics chosen each year from recent developments in theories of organisational behaviour.

IROB5941
Special Topic in Human Resource Studies A
School of Industrial Relations and Organisational Behaviour
Staff Contact: T O'Callaghan
Enrolment requires School approval
UOC6 HPW3 S1 S2

A specifically assigned project, program or set of readings relating to Human Resource Studies.

IROB5943
Advanced Seminar in Human Resource Studies A
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1

Selected advanced topics from the literature of Human Resources theory and application.

IROB5944
Advanced Seminar in Human Resource Studies B
School of Industrial Relations and Organisational Behaviour
Staff Contact: T O'Callaghan
Enrolment requires School approval
UOC6 HPW3 S1 S2

Selected advanced topics from the literature of Human Resources theory and application.

IROB5946
Managing Occupational Health and Safety
School of Industrial Relations and Organisational Behaviour
Staff Contact: P Sheldon
UOC6 HPW3 S2
Prerequisite/s or Corequisite/s: IROB5700 or IROB5900

Provides a multi-disciplinary and critical approach to the study of occupational health and safety. Approaches to OHS as a management function and perspectives on the understanding of the phenomena are examined. Also covers hazard identification, the development and nature of legal regulation, the industrial relations of safety and approaches to rehabilitation.

IROB5947
Remuneration and Performance Management
School of Industrial Relations and Organisational Behaviour
Staff Contact: J O'Brien
UOC6 HPW3 S1
Prerequisite/s or Corequisite/s: IROB5700

Examines theories, practices and debates in contemporary remuneration and performance management, with special reference to the trend away from traditional pay-for-position to performance-related remuneration at individual, work group and organisational level. Themes covered include: the concept of the New Pay , theories of employee motivation, competing perspectives on procedural and distributive justice, the ethics and effectiveness of performance-related pay, job-based pay and job evaluation, broadbanding, developing assessing and rewarding individual merit, recognition awards, gainsharing and team-based pay, profit-sharing and employee ownership plane, executive pay, and the development of comprehensive pay and performance management systems. Adopts a critical and multi-disciplinary perspective embracing Human Resource Management, Organisational Studies, Industrial Relations, Sociology, Labour Economics, Psychology and Ethics.

IROB5948
Human Resource Recruitment, Selection and Development
School of Industrial Relations and Organisational Behaviour
Staff Contact: C Royal
UOC6 HPW3 S1
Prerequisite/s or Corequisite/s: IROB5700

Examines the recruitment, selection, training and development of people in organisations. Issues addressed include: staff recruitment procedures, selection practices and procedures, human resource planning, the analysis of skill, competency and training needs, learning systems, training program development, internal and external training policy, career planning and internal labour market and management development.

IROB5949
International Human Resource Management
School of Industrial Relations and Organisational Behaviour
Staff Contact: S Gregson
UOC6 HPW3 S2
Prerequisite/s or Corequisite/s: IROB5700 or IBUS5601.

Examines the impact of culture on the process of managing the human resources in multinational or global corporations. Topics examined include: the conceptual and methodological challenges in international HRM research; the role of culture in shaping managerial perceptions and actions; HRM systems as cultural artefacts; conflict between indigenous HRM frameworks; and the problems of transferring HRM systems across cultural boundaries. Issues such as expatriation versus local management, selecting and preparing for international assignments, intercultural competence, cultural adaptations at the individual and system level, the management of host country nationals and joint venture partnerships, and the influence of globalisation on future HRM practices are also examined. The course also examines the global uniformity/ differentiation policy debate and its implications for global organisations.

IROB5950
Project Report (Organisational Behaviour)
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW3 S1

IROB5952
Project Report (Human Resource Studies)
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW3 S1

IROB5960
Strategic People Management
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3

The broad aim is to enable students to critically evaluate different approaches to the management of human resources and to incorporate these understandings into their management practice. Examines the ways in which organisations seek to manage their employees. Explores various facets of human resource management practice, and attempts to locate the management of 'people at work' within various theoretical, philosophical, historical and regulatory contexts.

JAPN5000
Special Project
Department of Japanese and Korean Studies
Staff Contact: C Thomson
UOC8 HPW2 S1 S2

A project of 8,000 English words or 16,000 Japanese characters on a topic approved by the Department.
Assumed Knowledge:Third-year level proficiency in Japanese or equivalent for those writing in Japanese.

JAPN5001
Features of Language: Japanese
Department of Japanese and Korean Studies
Staff Contact: K Teruya
UOC8 HPW2 S1

Offers a profile of spoken and written Japanese, with specific reference to the meaning of grammatical features interpreted in functional terms and related to the contexts in which they operate. Reference is also made to other languages such as Chinese and English, offering a typological-comparative perspective. Examines major grammatical features eg transitivity, mood and theme.
Note/s: No prior knowledge of Japanese or any language other than English is necessary.

JAPN5002
Trends & Issues in Teaching & Learning Japanese as a Foreign Language
Department of Japanese and Korean Studies
Staff Contact: C Thomson
UOC8 HPW2 S1

Current trends and issues in teaching and learning Japanese as a foreign language are explored. Topics include research, learning resources, teacher roles, learner characteristics, use of technology, assessment, autonomous and collaborative learning and innovative curriculum development. Students will have the opportunity to observe Japanese classes and deliver a micro lesson in one of the undergraduate classes at UNSW.
Assumed Knowledge: Third-year level proficiency in Japanese or equivalent.

JAPN5003
Japanese In-Country Research Project I
Department of Japanese and Korean Studies
Staff Contact: K Teruya
UOC8 S1 S2

Students will be required to study one session at a Japanese university in a program approved by the Department and complete a research report of 12,000 - 15,000 Japanese characters. Upon their return from Japan students will give a presentation and sit an oral exam on their research report.
Assumed Knowledge: Third-year level proficiency in Japanese.

JAPN5004
Japanese In-Country Research Project II
Department of Japanese and Korean Studies
Staff Contact: K Teruya
UOC8 S1 S2

Students will be required to study one session at a Japanese university in a program approved by the Department and complete a research report of 12,000 - 15,000 Japanese characters. Upon their return from Japan students will give a presentation and sit an oral exam on their research report.
Assumed Knowledge:Third-year level proficiency in Japanese.

JAPN5005
Who are the Japanese?
Department of Japanese and Korean Studies
Staff Contact: W Armour
UOC8 HPW2 S2

Explores questions of what, where, when and how 'Japaneseness' is represented and displayed using examples of written, audio-visual text, and face-to-face interactions with Japanese people. Introduces a number of key processes and investigates how they impact on the formation of Japanese identities. Also considers issues surrounding the theory of social constructionism and how it can help (if at all) our interpretation of such texts.
Assumed Knowledge:Third-year level proficiency in Japanese.

JAPN5006
Japanese Sociolinguistics
Department of Japanese and Korean Studies
Staff Contact: H Masumi-So
UOC8 HPW2 S2

Provides an introduction to sociolinguistics showing the relevance of an understanding of the social and cultural context of Japan to the analysis of spoken and written Japanese discourse. Includes methodology, speech varieties, language contact, language change, language behaviour, language attitude, language acquisition and management. Students will examine issues through practical experiences. Focuses equally on issues related to intercultural communication problems in foreigner-Japanese contact situations.
Assumed Knowledge:Third-year level proficiency in Japanese.

JAPN5007
Creative Reading & Writing A: Learning about Semiotic Resources
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC8 HPW2 S1

Offers a multidimensional view of how Japanese works creating meaning through grammar in the context of communication. Provides students with an opportunity to explore their own Japanese language-based experiences through semi-autonomous learning. Students will learn to 'read' and 'write' creatively in order to 'think' and then 'speak' and write in Japanese. Students are expected to give verbal presentations and write a short essay in Japanese (4,000 - 5,000 Japanese characters).
Assumed Knowledge: Third-year level proficiency in Japanese or equivalent.

JAPN5008
Creative Reading & Writing B: Acting on Semiotic Resources
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC8 HPW2 S2
Prerequisite/s: JAPN5007

Builds on what has been achieved in JAPN5007. Helps students develop and further their own academic interest: their research interest will be expanded and enriched into their academic area or specialisation in Japanese. Students are expected to give verbal presentations and write an essay in Japanese (5,000 - 7,000 Japanese characters).

JAPN5011
Japanese Teaching Practicum
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC8 HPW2 S1 S2

Fourteen weeks of practicum teaching (or 6 intensive weeks in summer). Students will be involved in the team teaching of Japanese in the Department of Japanese and Korean Studies, while keeping a detailed journal. Includes observation of lessons conducted by experienced lecturers, participation in course planning meetings, delivery of lessons, and assessment of student learning under the guidance of the lecturer-in-charge.
Note/s: Students need to have completed two JAPN5000 level courses to enrol in this course.

JAPN5012
Foundations in Japanese Studies
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC8 HPW2 S2

Introduces major authors, issues, debates and research in Japanese Studies utilising a multidiscplinary approach. Focuses on issues as: postwar ethnographies on Japan; the developmental state debate; political and social thought in Japan; discussions surrounding national identity and nihonjinjron; and recent research concerning identity, memory, (post)modernity, globalisation, and nationalism.

JAPN5015
Research Methods in Japanese Studies
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC8 HPW2 S1
Excluded: JAPN3901

Introduces students to a variety of research methodologies and techniques for analysis that are relevant to a wide range of research in Japanese Studies. Students will experience some of the components of research, such as micro proposal writing, interviewing, and analysis of a short transcript.

JAPN5016
Japanese Literature as Verbal Art
Department of Japanese and Korean Studies
Staff Contact: K Teruya
UOC8 HPW2 S1

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 a challenge to examine how literary works are constituted as a verbal art by exploring the manner in which the patterns of language function to create the literature. The literary collage consists of a variety of literary texts but it also includes verbal art in drama and films. Students are required to analyse a literary work as verbal art using the framework for exploration presented in the course.
Note/s: Third-year level proficiency in Japanese or equivalent.

JAPN5018
Discourse and Society in Japan
Department of Japanese and Korean Studies
Staff Contact: K Teruya
UOC8 HPW2 S2

Explores various types of discourse located in the socio-cultural contexts that make up Japanese society by interpreting discourse as the verbal manifestation of the social activity. Through our investigation of the nature of discourse, we shed light on the social activities that create meaning in society. The types of discourse dealt with include casual conversation, media discourse, children's literature, professional discourse and academic discourse. Students will be required to analyse a short discourse and its socio-cultural context in terms of the theoretical framework presented in the course.
Assumed Knowledge: Third-year level proficiency in Japanese or equivalent.

JAPN5100
Business Japanese A
Department of Japanese and Korean Studies
Staff Contact: K Okamoto
UOC6 HPW3 S1

Aims to develop basic communicative competence in spoken Japanese and to introduce written Japanese. Provides students with basic ability to interact with Japanese in daily life and business situations.

JAPN5101
Business Japanese B
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: JAPN5100

Designed to continue on from JAPN5100. Aims to continue the development of basic communicative competence in spoken and written Japanese. Concentrates on the application of language skills in a range of specific business activities.

JAPN5102
Professional Japanese A
Department of Japanese and Korean Studies
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: JAPN5101;
Excluded: JAPN5200.

For students who have already had some exposure to Japanese. Aims to develop communicative competence in spoken and written Japanese so that students can interact effectively in daily life and a range of professional and business situations.

JAPN5103
Professional Japanese B
Department of Japanese and Korean Studies
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2
Prerequisite/s: JAPN5102

Designed to continue on from JAPN5102. Aims to develop communicative competence in spoken and written Japanese so that students can interact effectively in a daily life and a range of professional and business situations.

KORE5000
Special Project
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC8 HPW2 S2

A project of 8,000 English words or equivalent Korean words on a topic approved by the Department.

KORE5001
Foundations in Korean Studies
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC8 HPW2 S1

Introduction to Korean studies, with a primary focus on areas relevant to language teaching, including cultural and religious issues, social and family structure, roles of women, education, and Korean language and orthography, approached from historical perspectives.

KORE5002
Creative Reading and Writing A
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC8 HPW2 S1

Offers a multidimensional view of how Korean creates meaning through grammar in the context of communication. Opportunities to explore Korean language-based experiences through semi-autonomous learning: eg learning to 'read' and 'write' creatively in order to 'think' and then 'speak' and write in Korean.

KORE5003
Creative Reading and Writing B
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC8 HPW2 S2

Further consolidation and development of skills acquired in KORE5002. Deals with a broader range of topics/issues relevant to Korean language-based curricula.

KORE5004
Korean In-Country Project I
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC8 HPW2 S1

Participation in 3-4 weeks of intensive language and culture study at a Korean university in a program approved by the Department and completion of a training course specially arranged for them. Upon returning from Korea, students will submit a 2000-3000 Korean word essay on a special topic and sit for an oral examination based on the essay and their in-country learning.

KORE5005
Korean In-Country Project II
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC8 HPW2 S2

Participation in 3-4 weeks of intensive language and culture study at a Korean university in a program approved by the Department and completion of a training course specially arranged for them. Upon returning from Korea, students will submit a 2000-3000 Korean word essay on a special topic and sit for an oral examination based on the essay and their in-country learning.

KORE5008
Korean Teaching Practicum
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC8 HPW2 S1 S2

Designed for those who have little or no experience in teaching Korean. Includes both campus and field-based experience. Students will be introduced to professional practice in an institution where Korean is offered, drawing together theory and practice needed for effective Korean language teaching.

KORE5009
Research Methods in Korean Studies
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC8 HPW2 S1

Introduces students to a variety of research methodologies and techniques for analysis that are relevant to a wide range of research in Korean Studies. Students will experience some of the components of research, such as micro proposal writing, interviewing, and analysis of a short transcript.

KORE5100
Business Korean A
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S1

Aims to develop basic communication competence in spoken Korean and to introduce written Korean. Provides students with basic ability to interact with Korean in daily life and business situations.

KORE5101
Business Korean B
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: KORE5100 or equivalent;
Excluded: KORE5102, KORE5103

A continuation of KORE5100. Aims to continue the development of basic communicative competence in spoken and written Korean. Concentrates on the application of language skills in a range of specific business activities.

KORE5102
Professional Korean A
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: KORE5101 or equivalent
Aims to develop communicative competence in spoken and written Korean so that students can interact effectively in a daily life and range of professional and business situations.

KORE5103
Professional Korean B
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: KORE5102

A continuation of KORE5102. Aims to develop communicative competence in spoken and written Korean so that students can interact effectively in daily life and in a range of professional and business situations.

LAWS3006
Policing
Faculty of Law
Staff Contact: D Dixon
UOC8 HPW2 S1 S2

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 New South Wales 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.

LAWS3032
TV, Radio and New Media
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 S2

In the late 1990s very substantial amendments were made to the legislation which governs broadcasting in Australia, the Broadcasting Services Act 1992, to provide the structure for digital broadcasting and datacasting services. These amendments were highly controversial and further changes are expected. This course covers this highly topical area of law as well as other current regulatory issues associated with media ownership and content regulation. Topics include digital rights management, broadcast rights, classification and defamation. The course aims to provide students with a very practical, applied understanding of the laws in these key areas and the ways they might change in the future.

LAWS3033
Defamation, Privacy and the Media
Faculty of Law
Staff Contact: A Flahvin
UOC8 HPW2 S1

This course deals with the laws which seek to strike a balance between protection of reputation and privacy, on the one hand, and freedom of speech for the media, on the other. Topics include: relevant aspects of constitutional protection of freedom of speech in Australia; the law of defamation (the concept of reputation; what the plaintiff must prove; the available defences; remedies; procedural aspects); other causes of action protecting reputation; criminal libel; legal protection of privacy. Attention is paid to the operation of the relevant laws in practice, to the impact of new technologies of communication and to theoretical, historical, comparative and policy aspects of the various topics.

LAWS3035
Developing Computer Applications to Law
Faculty of Law
Staff Contact: G Greenleaf
UOC8 HPW2 X2
Excluded: LAWS1032

This course covers the theory and practice of developing computer applications for use in the law. It combines critical analysis and 'hands on' experience. It covers the use of text retrieval and hypertext techniques, knowledge-based technologies such as expert systems (systems that give legal advice) and automated legal document generators, with a strong Internet emphasis. Systems in use in public administration and private practice will be demonstrated and discussed critically. Each student will design and implement an internet-based computer application in an area of law. The use of appropriate development tools is taught during the course. Familiarity with the use of a microcomputer and a word processing program is a prerequisite. Familiarity with computerised legal research is desirable. The course will be taught by a combination of seminars, internet delivery and computer lab instruction. Further details are on the web pages (http://www2.austlii.edu.au/cal/).

LAWS3037
Data Surveillance and Information Privacy Law
Faculty of Law
Staff Contact: G Greenleaf
UOC8 HPW2 S1

The course examines laws protecting privacy and regulating data surveillance in both public administration and electronic commerce. Australian laws are examined in their international context. There is emphasis on the role of technologies in both privacy protection and privacy invasion. Topics may include: uses and effectiveness of data surveillance; data surveillance law as a new method of public administration; identification (population registers, smart cards, digital signatures etc); general law and administrative law protection of privacy; 'Information Privacy Principles' as a new general body of privacy law; sector-specific privacy legislation (eg credit reporting, spent convictions, health, telecommunications); personal data exports. Each student will conduct research on the legality, use and effectiveness of data surveillance techniques, and the effects of data protection law, on one area of public administration or commercial practice. The course is supported by extensive Internet resources (see http://www2.austlii.edu.au).

LAWS3039
Law and Internet Cultures
Faculty of Law
Staff Contact: K Bowrey
UOC8 HPW2 S1

U.S. technology powers the internet and disseminates American culture on an unprecedented scale. U.S. law and policy dominates the way we understand the regulatory challenges posed by the technology. Especially for those who are not U.S. citizens, there are important and complex political, economic, social and cultural questions that need to be asked. How is American influence wielded through the internet and its technologies? How is this influence being negotiated? Where and why is it being resisted? This study of cultural and economic issues informs a comparison of U.S., Australian and non western regulatory approaches.

LAWS3040
Internet Content Regulation
Faculty of Law
Staff Contact: G Greenleaf
UOC8 HPW2 S2

This course covers how law regulates the content of Internet (cyberspace) communications. Half the course deals with the protection of content by intellectual property laws and half to forms of liability for supposedly objectionable or harmful content. Various themes recur: the liability of ISP and other third parties for actions by others; the role of technology in providing protection; self-regulatory and co-regulatory models; the emergence of international standards; problems of jurisdiction and regulatory arbitrage. Topics include: Copyright and related protections (hypertext linking, search engines, etc); Internet process patents; database protection (copyright and sui generis rights); law concerning technological protection (DRMS, anti-circumvention and RMI laws); censorship; defamation; and tortious liability (negligent misstatements; trespass to chattels).

LAWS3041
Contempt and the Media
Faculty of Law
Staff Contact: A Flahvin
UOC4 HPW2 S2
Excluded: LAWS3034

This course deals with the laws which seek to strike a balance between protection of the integrity of legal proceedings, on the one hand, and freedom of speech for the media, on the other. Topics include: relevant aspects of constitutional protection of freedom of speech in Australia; the principles of contempt of court, together with associated statutory provisions, in their application to media publications (scandalising the court; the sub judice doctrine; restrictions on reporting court proceedings or jury deliberations; journalists' confidential sources; remedies; procedural aspects). Attention is paid to the operation of the relevant laws in practice, to the impact of new technologies of communication and to theoretical, historical, comparative and policy aspects of the various topics.
Note/s: This course will be taught during the first half of Session 2.

LAWS3042
Censorship and Free Speech
Faculty of Law
Staff Contact: A Flahvin
UOC4 HPW2 S2
Excluded: LAWS3034

This course deals with the laws which prohibit the publication of material on the ground that it is deemed to offend some community standard, such as racial tolerance or respect for religious sensibilities. These laws are evaluated in the light of legal, political and philosophical principles of freedom of speech. Topics include: the concept of freedom of speech; legal protection of freedom of speech; laws directed against vilification on grounds of gender, race or religion; censorship on grounds of obscenity or pornography; the law of blasphemy. Attention is paid to the operation of the relevant laws in practice, to the impact of new technologies of communication and to theoretical, historical, comparative and policy aspects of the various topics.
Note/s: This course will be taught during the second half of Session 2.

LAWS3044
Electronic Commerce Law and Practice
Faculty of Law
Staff Contact: C Connolly
UOC8 HPW2 S2

Electronic commerce is now an accepted way of conducting business. In a relatively short period of time commerce via the World Wide Web and other online platforms has boomed, and a new field of legal theory and practice is now recognisable. This course offers the student a comprehensive overview of the legal and regulatory structure of electronic commerce, including: current legislative and self regulatory responses to electronic commerce, commentary on recent case law; plus an analysis of proposed law reform. The course covers electronic commerce jurisdiction, online contract formation, electronic authentication, online payment systems and transactions, online dispute resolution, security and the determination of liability for unauthorised transactions.

LAWS3051
Telecommunications Competition and Consumers
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 S1

This course explores two major topics, after dealing with a range of threshold issues. The threshold issues are: introduction to policy and regulatory context; communications technologies and business models; industry structure and spectrum management; overview of trade practices and fair trading laws. The major topic areas are: telecommunications competition regulation; consumer protection. The course aims to provide students with a practical, applied understanding of the laws in these two key areas, how the current regulatory framework has evolved, and the ways regulation might change in the future.

LAWS3053
Entertainment Law
Faculty of Law
Staff Contact: School Office
UOC8 X2

This course will provide students with an understanding of the business practices and legal issues that arise in the life of an audiovisual production, associated intellectual property issues, current policy debates and the application of legal requirements to industry business practices. The focus is on the audiovisual production sector - from the conceptualisation of the idea and its development into a project, through financing, to distribution and commercial exploitation - although the material covered will be relevant to students with an interest in the broader entertainment industry.

LAWS3080
Insurance Law
Faculty of Law
Staff Contact: C Connolly
UOC8 HPW2 S1

This course provides an advanced analysis of law and policy covering general insurance. The insurance industry faces unprecedented levels of economic and legal reform, as well as rapid convergence with other financial services. Topics covered will include prudential regulation, mergers, licensing, disclosure requirements and the complaints system. The course will include in depth analysis of several leading cases, as well as consideration of the legal issues arising from the collapse of HIH Insurance and the subsequent Royal Commission. Legislation and regulations considered will include the Insurance Contracts Act, the Insurance (Agents and Brokers) Act, the General Insurance Code of Practice, the General Insurance Brokers' Code of Practice and the Financial Services Reform legislation.

LAWS3089
Corporate Law and Regulation
Faculty of Law
Staff Contact: S Riley
UOC8 HPW2 S2

This course provides an introduction to the structure and regulation of business corporations in Australia. It also examines some of the theoretical debates about the nature of the corporation and consider their influence on approaches to regulation of corporations. The first part of the course focuses on factors influencing choice of business organisation, the process and consequences of incorporation. This part of the course also considers various aspects affecting the structure of the corporation: its internal rules; the corporate organs and the financing of the corporation. Attention will be given to the differences in regulatory approach between small and large corporations. The second part of the course focuses on corporate governance and topics include directors' duties and remedies available for breach of directors' duties or to protect against oppression of minority shareholders. Finally, the course considers briefly some issues of concern to the larger corporation such as fundraising and takeovers. The course is designed for students with a non-law background and provides a useful introduction to other courses in the corporate and commercial law program

LAWS3090
Principles of Australian Corporations Law
Faculty of Law
Staff Contact: S Riley
UOC8 HPW4 S1 S2

This course provides an introduction to the structure and regulation of business corporations in Australia. It will also examine some of the theoretical debates about the nature of the corporation and consider their influence on approaches to regulation of corporations. The first part of the course focuses on factors influencing choice of business organisation, the process and consequences of incorporation. Attention will be given to the differences in regulatory approach between small and large corporations. The second part of the course will focus on corporate governance. Finally, the course will consider briefly some issues of concern to the larger corporation. The course will provide a useful introduction to other courses in the corporate and commercial law program.

LAWS3091
Corporate Control Transactions
Faculty of Law
Staff Contact: P Redmond
UOC8 HPW2 S2

The overall aim of this course is to examine the legal regulation of the transfer of corporate control through takeovers. Other mechanisms for transferring control are examined such as schemes of arrangement and capital reductions. Compulsory acquisitions of minority shareholdings are also considered. The course is primarily concerned with the legal analysis of corporate control transactions, but time is also spent on the theoretical and policy underpinnings of the regulation. The following topics are covered: restrictions upon acquisition of voting shares; structuring and conducting a takeover bid; the role of the Takeovers Panel; other mechanisms for transfer of control such as schemes of arrangement and selective capital reduction; compulsory acquisitions and taxation aspects of takeovers.

LAWS3092
Securities and Financial Markets Regulation
Faculty of Law
Staff Contact: P Redmond
UOC8 HPW2 S1

The broad aim of this course is to examine the structure and regulation of markets for corporate securities. The study is primarily a legal analysis although it considers some financial theory relevant to legal responses to market operations. The following topics are covered: the legal structure of co-regulation of securities markets including the role and powers of the Australian Stock Exchange and the Australian Securities and Investmemts Commission; the efficient market hypothesis and its implications for mandatory corporate disclosure and prospectus regulation; prospectus disclosure and the liability of those associated with prospectus preparation and issue; the licensing of securities dealers and investment professionals; the conduct of securities business; abusive trading on secondary markets, including stock market manipulation and insider trading.

LAWS3093
Derivatives Regulation
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 S2

Derivative financial products are a class of financial contract whose value depends upon that of underlying assets or indices of asset values. Derivatives have become an integral part of modern financial risk management. The course examines the legal regime governing derivatives trading together with legal issues facing those designing these financial products. This course covers the following topics: the general structure and regulation of exchange traded derivatives and over the counter derivatives; definition of futures contracts and dealings; the licensing of brokers and advisers; brokers duties; market offences such as bucketing, churning, fraud, manipulation, and dissemination of false and misleading information; over the counter markets; options; swaps, forwards and hybrids; FOREX and capital markets; ISDA documentation; netting; enforceability issues; self-regulatory organisations.

LAWS3095
Corporate Insolvency
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 S1

The course examines the theory and practice of corporate insolvency focussing on company receivership and liquidation. It covers the winding up of a corporation, the appointment of a provisional liquidator, the powers and duties of the receiver and manager, the operation of the administration procedures under the Corporation Law (with UK analogies), and the powers and duties of the liquidator including an examination of the realisation and distribution of the corporation's assets, the position of unsecured creditors, and the potential liability of a corporation's controllers. Reference will be made, as appropriate, to the insolvency regimes in force in other countries, and to the theoretical difficulties in loss sharing in 'common pool' activities.

LAWS4017
Intellectual Property: Regulation and Policy
Faculty of Law
Staff Contact: K Bowrey
UOC8 HPW2 S2

This course has been designed to give postgraduates from a non-legal background an overview of intellectual property, which is becoming one of the most important areas of commercial legal practice, and is vital to the marketing, advertising, entertainment and communications industries. This course aims to introduce students to each of the general law and statutory protections outlined below. There are increasing interrelationships and overlaps between these protections, particularly because of the Trade Practices Act. For each of the heads of protection, the course gives consideration to the subject matter which is protected, the pre-conditions for protection, and the nature of infringement. Other matters such as remedies, competition law and international protection are dealt with briefly but cannot be examined in detail in an intensive course. However, as far as possible in an intensive overview, this course focuses on the commercial and business aspects of intellectual property.

LAWS4018
Principles of Intellectual Property
Faculty of Law
Staff Contact: J McKeough
UOC8 HPW2 S1

An introduction for postgraduate students to Australian intellectual property law, with reference also to the international order for the protection of copyright, and design, trademarks, patents, trade secrets and business reputation. The course covers the legal regimes affecting the protection of new technologies and the development and exploitation of ideas. The course is suitable for students with a completed law degree at undergraduate level.

LAWS4019
Issues in Competition Law
Faculty of Law
Staff Contact: D Healey
UOC8 HPW2 S2

This course aims to provide candidates with an understanding of competition law. Australia's competition law is predominantly reflected in Part IIIA and Part IV of the Trade Practices Act 1974. It has its foundation

in the jurisprudence of other jurisdictions, particularly the United States. Therefore while the course examines the Australian law, it also draws on important decisions of the courts of the United States and other jurisdictions. The course covers the following topics:development of competition law; policy objectives of competition law; economic foundation of competition policy, economic models and concepts; collusive arrangements including price fixing and primary boycotts; monopolisation; access and utility regulation; vertical arrangements including exclusive dealing and resale price maintenance; mergers; protection from the competition law including exemptions, authorisation and notification.

LAWS4021
Issues in Intellectual Property
Faculty of Law
Staff Contact: J McKeough
UOC8 HPW2 S2

The aim of this course is to develop themes and explore issues concerning the protection of ideas, business reputation or innovations and commercialising and trading in such matter. The course assumes in the student an understanding of intellectual property law. General principles will not be covered, rather, specific topics. International, policy and theoretical aspects may be addressed. Typically, the topics may include: global information policy and the role of copyright in a technological society; digital piracy and copyright control mechanisms; developments in moral rights; protection of cultural property; patenting of biotechnological inventions; biopiracy; global protection of trade marks; the interface of IP law and competition law; current law reform initiatives and other topical issues.

LAWS4023
Commercial Contracts: Problems of Performance, Breach and Termination
Faculty of Law
Staff Contact: D Harley
UOC8 S1 X1

This course focuses in depth upon principles of contract law which govern the performance, breach and termination of many commercial and conveyancing transactions; it is concerned with complex applications of general contract law principles rather than with more specific rights that are sometimes conferred by statutes dealing with consumer contracts. The course systematically examines a large number of issues which may arise in the course of contractual performance but can seldom be fully considered in undergraduate contract law courses despite their considerable practical importance. In the course of this examination the course addresses a range of difficult questions that have been raised in recent judgments of the High Court of Australia but often remain unanswered. While the course seeks primarily to reveal frequently unrecognised interrelations between legal principles, very considerable class time is devoted to discussion of issued problems which highlight the practical significance and dimensions of conceptual issues. Some specific topics likely to be considered are: contingent conditions precedent to the duty of performance, and their elimination; confusion arising from the multiple classifications of serious breaches; problems in identifying a repudiation and acting upon it; the effect of an unaccepted repudiation; the consequences of repudiation where the victim is not ready, willing and able to perform its own obligations; unconscionable exercises of a right to affirm, or a right to terminate, following serious breach; problems raised by Shevill's case; identification of rights surviving termination.

LAWS4026
Banking and Finance Law
Faculty of Law
Staff Contact: S Degeling
UOC8 HPW2 S2

This course, after a general review of centrally relevant legal principle, addresses at an advanced level law and practice concerning a range of processes utilised or met with in the financing of commercial enterprise. The principal but not exclusive focus is on the raising of debt finance, including secured transactions, subordinated and unsecured lending, bank finance and capital market borrowings, and syndicated loan financing. While topics considered may vary from year to year they will include many of the following: negotiable instruments; stamp duty considerations; project and infrastructure financing; security and guarantees; insolvency issues in banking and finance, including voluntary administration; securitisation; leasing; selected lending techniques including syndication, transferable loan facilities and co-financings; international capital markets.

LAWS4029
Elements of Contract
Faculty of Law
Staff Contact: E Stone
UOC4 HPW2 X2

This course is designed to introduce non-law graduates to the law governing the formation and performance of contracts. The course looks at the distinctive nature of contractual obligations particularly as these obligations affect the regulation of relationships in society, business and the commercial world.

LAWS4031
Discharge of Contracts
Faculty of Law
Staff Contact: D Harley
UOC8 HPW2 S1

The course examines some basic principles governing five major ways in which contracting parties may be discharged from their obligations: (i) by performance; (ii) by express or implicit agreement of the parties that their obligations be terminated; (iii) by failure of a non-promissory condition precedent to major performatory obligations;(iv) by election of the innocent party to terminate further delegations following a serious breach by the other party; and (v) by the occurrence of supervening events which frustrate the originally intended operation of the contract. Significant attention will be given to some legal remedies that become available following discharge in the five situations just mentioned.

LAWS4032
Construction Law for Non-Lawyers
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 S2

Construction Law concentrates on the legal aspects of construction contracting, from a practical and legal perspective. The course looks at construction terms and roles, project delivery structures, tendering, contract formation, the site, scope, variations, extensions of time, liquidated damages, warranties, dispute resolution, payment, defects rectification and statutory rights. The course focuses on four standard form contracts commonly in use in the industry (JCCF, PC1, AS 4300 and AS 4000) and considers how the risk profiles of each contract differ. The course does not deal with all aspects of law relating to construction; rather, it is focussed on the construction contracting aspects of projects.

LAWS4080
Issues in International Law
Faculty of Law
Staff Contact: R Rayfuse
UOC8 HPW2 S1

This course will provide students with a solid introduction to the central issues within the field of public international law. The course can be taken either as an effective 'stand alone' introduction to international law or as the basis from which further specialisation in international law can proceed. The course begins with a brief introduction to the history and development of international law and organisations. It then focuses around three core topics: how international law is made; how the basic units of international law, States, are constituted; and how States and other international legal persons resolve their disputes. Within the context of these core topics the course examines how international law applies with respect to issues involving human rights, terrorism, the use of force, the environment and land, air and sea. The operation of these issues will be examined and assessed in the context of current affairs and evolving international legal developments.

LAWS4081
Advanced Issues in International Law
Faculty of Law
Staff Contact: R Rayfuse
UOC8 HPW2 S2

This course will study selected currently relevant topics of public international law in more depth than is available/possible in the basic Public International Law course. The focus of the course will vary from year to year depending on current international events. The operation of the rules of International Law will be examined and assessed in action in the context of the chosen topic/event.

LAWS4083
International Commercial Arbitration
Faculty of Law
Staff Contact: D Sturzaker
UOC8 HPW2 S1
Prerequisite or corequisite: LAWS2081 or equivalent.

Many cases of injury to multinational companies which would formerly have been pursued as a diplomatic claim by the national State of the company are now resolved by arbitration directly between the company and the respondent State. In this sense, international commercial arbitration can be seen as a natural extension of inter-State dispute settlement procedures, of great and growing importance. This course will examine the law and practice relating to the arbitral process and recognition and enforcement of arbitral awards. Reference will be made to the Model Arbitral Rules and the case law emanating from a number of Arbitral Bodies and Tribunals such as the ICC, UNCITRAL, ICSID and to the decisions of ad-hoc arbitral tribunals.

LAWS4084
History and Theory of International Law
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 S1
Prerequisite or corequisite: LAWS2081 or equivalent.

This course will examine some of the fundamental issues underlying international law, against the background of its history. Attention will be paid both to classical analysis of the nature of international law (positivism and its alternatives) and to some of the recent critiques of international law from perspectives such as critical legal studies, - feminist legal theory, international relations theory, etc. Particular topics to be examined will be chosen having regard to the interests of students taking the course.

LAWS4086
Law of the Sea
Faculty of Law
Staff Contact: R Rayfuse
UOC8 HPW2 S1
Prerequisite or corequisite: LAWS2081 or equivalent.

This course will examine the legal regime which binds States in their international relations concerning maritime matters. The course will examine the major maritime zones recognised in international law, such as the territorial sea, the contiguous and exclusive economic zones, the high seas, and the legal regime relating to the continental shelf. It will also examine the rules relating to the various uses of the seas, such as fishing, navigation, scientific research, regulation of marine pollution and military uses of the sea. It will examine the way in which disputes over conflicting uses of the seas arise and the manner in which they are handled and will look at the interrelationship between the public international law of the sea and municipal law.

LAWS4120
Themes in Asian and Comparative Law
Faculty of Law
Staff Contact: L Wolff
UOC8 HPW2 X1

Asia is of increasing relevance to both practising lawyers and policymakers. With Australasian law firms expanding their network of offices into Asian countries and government departments increasingly linking up with their Asian counterparts, there is growing demand for 'Asia-literate' lawyers. This course provides students with the suite of skills necessary to successfully navigate Asian laws and legal institutions. The course reminds students of the dangers of uncritically projecting their own values and assumptions about law onto Asia. Thus, the first part of the course explores a wide range of theoretical concepts - legal orientalism, comparative legal historiography, parallelism, law and culture, legal development and capitalism, Asian legal theories, transplantability of law and interdisciplinarity in Asian law - to equip students with a new framework for interpreting and engaging with Asian law. The second part of the course invites student to apply these concepts to a contemporary issue in Asian law -either a commercial law or human rights issue, depending on student interest - to enable students to exercise these new skills in context. By the end of the course, students will be able to question whether or not traditional comparative law method is suitable for analysing Asian law and devise their own framework for solving Asia-related practice and policy problems.

LAWS4127
Japanese Law in Context
Faculty of Law
Staff Contact: L Wolff
UOC8 HPW2 S1

Japanese Law in Context invites students to look inside Japanese law. The purpose of this course is to go beyond a mere description of the 'external' contours of the Japanese legal system and explore the 'internal' workings of the system. The course is divided thematically into issues of the 'who', what', 'where', 'when', 'why' and 'how' of Japanese law. Thus, the course covers: the reasons for engaging with the Japanese legal system, including the economic, political and cultural rationales (the why); where to locate Japanese law, ie, as part of comparative law, the 'new' Asian law or Japanese studies (the where); the structure, institutions and classification of the legal system (the what); the various methodologies that may be adopted in analysing Japanese law (the how); Japanese legal history and historiography (the when); and the major theoretical positions on Japanese law and their advocates (the who). The course concludes with a case study on a major contemporary issue in Japanese law - eg, product liability, administrative law reform or sexual harassment, depending on student interest - in which students will be encouraged to apply these contextual factors to evaluate the impact of that issue on Japanese society.

LAWS4128
Japanese Law and Politics
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 S1

Japanese Law and Politics explores the relationship between law and governance in Japan. Although the course ostensibly deals with public law topics such as constitutionalism, administrative law and judicial activism, the course adopts a thematic approach to how these topics are played out in the Japanese legal setting. Thus, the theme of policymaking in Japan examines how the public policy agenda is set in Japan, focusing on the policy-making powers of the Diet, the bureaucracy, the judiciary and other legal agents. The theme of parochialism investigates Japan's political and legal engagement with the global community, tracing the tension between Japan's eagerness to assume a more prominent political role within the global community and its reluctance to internalise unwelcome international norms on the other. The theme of privatization charts the rise of corporate governments in Japan, exposing three trends of privatization in Japan - deregulation of rules, delegation of adjudication to private parties and relegation of public functions to the corporate domain. The final theme of pluralism explodes the myth of homogeneity in Japan and examines how the Japanese are prepared to use State legal institution to transform social protest into legal action.

LAWS4130
Japanese Law and the Economy
Faculty of Law
Staff Contact: L Wolff
UOC8 HPW2 S2

Japanese Law and the Economy takes a problem-based approach to examining how Japanese law regulates commercial transactions. Students will work on a hypothetical business deal between an Australian and Japanese party. Throughout the course, students will be exposed to a wide variety of commercial law topics - contract law, anti-trust, product liability, corporate law, intellectual property, banking and finance regulations, and commercial dispute resolution - as part of advising on the transaction. In the process, students will learn how Japanese law defines business relationships, allocates commercial risk, ensures compliance with public policy responsibilities, and generally regulates commercial conduct. By the end of the course, students will gain such practical lawyering skills as negotiating across cultural domains, drafting transnational documents and issue-spotting in international transactions.

LAWS4131
Tutorial in Japanese Law and Language
Faculty of Law
Staff Contact: L Wolff
UOC8 HPW2 S1

The growing number of lawyers with Japanese language skills highlights the need to prepare lawyers for the types of socio-linguistic challenges they will face in legal practice, business and policy settings. In this

self-paced tutorial, students with at least 3 years tertiary-level Japanese language training (or equivalent) will gain the necessary skills in reading and interpreting a variety of Japanese legal documents, including cases, statutes, regulatory instruments, corporate documents and contracts. Students will learn the 'language of the law', incorporating not only the grammar and lexicon of law, but also legal translation theory, the sociology of legal language, and the legal/political/economic/cultural context of Japanese legal texts. Students will also acquire research skills necessary to find Japanese legal sources. Depending on linguistic ability, students may complete either a portfolio of language-related assessment (eg, a major translation and word bank) or a theory-based project (eg, a research essay on gendered language in Japan and Australia).Students will not be assessed on linguistic competence.

LAWS4132
Tutorial in Advanced Japanese Law
Faculty of Law
Staff Contact: L Wolff
UOC8 HPW2 S1

Students with a specialist interest in a particular area of Japanese law may, in conjunction with the course coordinator, develop their own specialist course. For example, students may elect to complete the subjects Japanese Law and Politics, Japanese Law and Society or Japanese Law and the Economy in a self-paced tutorial format if the relevant subject is not offered in that year. Alternatively, students may wish to co-develop a program in Japanese Labour Law, Gender and Japanese Law, Japanese Constitutionalism, Japanese Corporate Law and so on. This might be an especially effective way for students to investigate an area of law prior to completing a LLM, SJD or PhD thesis in the field.

LAWS4133
Tutorial in Advanced Asian and Comparative Law
Faculty of Law
Staff Contact: L Wolff
UOC8 HPW2 S1

Students with a specialist interest in a particular area of Asian and comparative law may, in conjunction with the course coordinator, develop their own specialist course. For example, students may elect to co-develop a program of study in Chinese law, Korean law or Indonesian law where an equivalent subject is not available in the regular curriculum. Alternatively, students may wish to co-develop a more thematic approach to Asian and comparative law, such as Law and Economic Development in Asian states, Asian Constitutionalism, Culture and the Law in Asia, and so on. This might be an especially effective way for students to investigate an area of law prior to completing a LLM, SJD or PhD thesis in the field.

LAWS4151
European Union: Institutions and Legal Systems
Faculty of Law
Staff Contact: S Hall
UOC8 HPW2 S2

A comprehensive introduction to the constitutional history, institutional structure and legal system of the unique quasi-federation which is the European Union. Particular attention will be paid to the composition, powers and functions of the main legislative and executive organs (Council, Commission and European Parliament) and to the judicial organs (European Court of Justice and Court of First Instance). The course will then focus on the most important aspects of the legal system: supremacy and direct effect of Union law; general principles of law including fundamental rights; Union citizenship; the role of Union and national courts in enforcing and applying Union law.

LAWS4152
European Union: Economic & Trade Law
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 X1

A comprehensive introduction to the substantive law of the European Union; the world's largest integrated market economy and a principal economic and trade partner for both Australia and the Asia-Pacific region. The Common Market and the Internal Market with particular reference to; the free movement of goods, persons, services and capital; the Common Commercial Policy towards non-EU countries; Introduction to EU competition law; Economic and Monetary Union; State Aids.

LAWS4181
Issues in Human Rights
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 S2

The course examines issues of current concern in Human Rights Law. The issues selected will vary from time to time. They will include consideration of the adequacy of International Law standards and processes; regional approaches to human rights protection; the adequacy of Australian law and machinery, with comparative references to other relevant countries.

LAWS4182
International Aspects of Social Justice
Faculty of Law
Staff Contact: J Disney
UOC8 HPW2 S2

This course examines ways in which intergovernmental agreements and other international processes can advance social justice. It includes global agreements, especially within the United Nations system, and also regional agreements within groupings such as the European Union and Association of South East Asian Nations (ASEAN). It will focus principally on agreements and processes which establish or closely affect economic and social rights, especially in the context of rapid economic and technological globalisation. Special attention is given to the role of non-governmental organisations in the processes by which such agreements and processes can be developed, monitored and enforced. The course will include expert guest speakers from within Australia and overseas as well as a "case study" research essay.

LAWS4183
Aspects of International Governance
Faculty of Law
Staff Contact: J Disney
UOC4 HPW2 S2
Prerequisite/s: Academic Program must be either 9200, 9210 or 5740.

The course examines aspects of the structures, processes and consequences of international governance, especially in relation to social justice. It includes aspects of global governance, especially within the UN system, and also regional governance within groupings such as the European Union and the Association of South East Asian nations. Special attention is given to relevant international agreements at both global and regional levels, and to the role of civil society organisations in their development, monitoring and enforcement.

LAWS4271
Australian Legal System
Faculty of Law
Staff Contact: A Blunden
Enrolment requires School approval
UOC8 HPW4 S1 S2

This course provides a basic understanding of common law and the Australian legal system. It is intended for students whose legal background is in non-common law jurisdictions. It has a strong focus on techniques of common law legal reasoning, which are essential for the non-common law practitioner to understand when dealing with common law legal systems. 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 - its history, role, interrelationships, operation and techniques; the doctrine of precedent and statutory interpretation, practice and theory; sources of Australian law including the past and present status of Aboriginal customary laws; the origins of common law; the colonisation of Australia; classifications within the common law, and the jurisdiction of Australian courts.

LAWS4272
Australian Legal System and Process
Faculty of Law
Staff Contact: M Davis
UOC8 HPW2 S1 S2

This course is designed to introduce non-law graduates to the principal institutions of the legal system in Australia, doctrines of precedent, statutory interpretation, historical influences on our law and also provides training in the tools required for reading cases and using legal material.

LAWS4292
Human Rights under the Australian Constitution
Faculty of Law
Staff Contact: G Williams
UOC8 HPW2 S1

The Australian Constitution was not drafted to include a Bill of Rights. It does, however, contain some protection for basic freedoms, including freedom of religion, trial by jury and a right to acquisition of property on just terms. The High Court has also found that certain rights can be implied from the Constitution, such as a freedom of political communication and a right to due process. This course will examine the record of the High Court in interpreting the Constitution in the field of human rights. It will also examine the possibilities for future development through interaction with other rights systems, such as comparative and international human rights regimes. The course will also examine proposals for reform, including Bills of Rights, and the constitutional protection afforded to particular sections of the community, such as Indigenous peoples.

LAWS4335
Contemporary Legal & Social Theory: Jurgen Habermas 1
Faculty of Law
Staff Contact: R Shelly
UOC4 HPW2 S1

This course is the first in a series to be offered on leading, contemporary legal and social theorists as well as key issues in legal and social theory. In virtue of the abiding importance of Habermas' work in philosophy and social theory in general, and law in particular, and the fact that he is currently at the centre of many of the most significant debates in these domains, it seems that a knowledge of his ideas is important to anyone who wants to be au fait with the most advanced contemporary theoretical work on law. This course can be done as an introduction to doing LAWS4336 (Habermas 2) or simply on its own. It will an involve a general and wide-ranging introduction to Habermas' main ideas as set out in his Theory of Communicative Action. It will explore some of Habermas' main concepts such as: communicative action and communicative rationality; strategic action and strategic rationality; system and lifeworld; the colonization of the lifeworld; and juridification. It will also begin to draw out his many comments on law in this book, and seek to work these into a general theory of law for contemporary society. Particular focus will be given to seeing exactly where Habermas' ideas are situated in relation to other legal and social theorists, past and present. Habermas' work naturally invites such comparisons by virtue of the way he builds up his own ideas by critically and creatively appropriating the central insights of others. On a general note, students should not think that this course is for experts in legal and social theory. The level of expertise demanded is that of the interested novice or relative novice who wants exposure to one of the leading and most broadbased present-day legal and social theory.

LAWS4336
Contemporary Legal & Social Theory: Jurgen Habermas 2
Faculty of Law
Staff Contact: R Shelly
UOC4 HPW2 S1

This course follows directly on from LAWS4335 and will further develop the approach and themes covered in that course, by focussing upon Habermas' more recent work Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy. This work is currently at the very centre of debate in legal, social and political theory circles and takes its point of departure from the insights into contemporary law and politics alluded to, but not systematically elaborated in Theory of Communicative Action. But now Habermas takes law as his specific focus with the aim of trying to locate - more adequately than other competing theories have done - the place and function of law in contemporary modern/postmodern societies. Specific themes to be explored include: the role that law plays in reflexively integrating highly complex, decentred and pluralist societies; the rights and principles law must embody for it to perform this role; the model of democracy that is, in turn, entailed by these rights, and finally the reciprocal relations between law, rights, society and democracy that lead Habermas to call his theory a discourse theory of law and democracy. As in LAWS4335, these themes will be explored comparatively, always placing Habermas' theory within the context of other competing theories. The result of this comparative approach is that by the end of this course students should not only acquire a good grounding in one important theorist, but also gain a sense of what is happening in contemporary legal and social theory at large.

LAWS4422
Research Thesis: 16 UOC
Faculty of Law
Staff Contact: School Office
Enrolment requires School approval
UOC16 S1 S2

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; 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.The School of Law will initially limit its approval for a Research Thesis to an 8UOC enrolment (LAWS4423). A student who has received approval for an 8UOC enrolment may be given subsequent approval to transfer to a 16UOC enrolment (LAWS4422). Similarly a student who has received approval for a 16UOC enrolment may be given retrospective approval for transfer to an 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 15,000 words for an 8UOC enrolment or 30,000 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.

LAWS4423
Research Thesis: 8 UOC
Faculty of Law
Staff Contact: School Office
UOC8 S1 S2

LAWS4430
Research and Writing in a Legal Environment
Faculty of Law
Staff Contact: C Fong
UOC4 HPW2 S1 S2

This course is designed to introduce non-law graduates to legal research skills, techniques and methodology. It covers hard copy and electronic resources, conventions for citing legal materials and presenting research in written form, including the development of legal argument. A major element is hands-on training in researching case law, statute law, secondary material and the Internet. The course goes beyond undergraduate courses of this nature in that it is designed to draw on the interdisciplinary background that graduates will bring to the Legal Studies programs. An appreciation of empirical and social science methodology, including the ethics of research, is a key component.

LAWS4431
Legal Research
Faculty of Law
Staff Contact: G Greenleaf
UOC8 HPW2 S2

This course covers legal research skills, techniques and methodology. It aims to familiarise students with sophisticated techniques for finding the law as well as the conventions of presenting their research in a written form. The interdisciplinary nature of legal research involves an appreciation of empirical and social science methodology, including the ethics of research. The course will focus on both hard copy and electronic resources, allowing students the opportunity of evaluating and comparing them in different situations. Students will receive hands on training in researching case law, statute law, secondary material, current awareness services and the Internet, comparative law, trends in legal publishing, applying for grants and getting published. The ultimate objective of the course is to help students achieve an appreciation of the process and method of legal research.

LAWS7001
Internationalisation of Financial and Commercial Law
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 X2

What does legal globalisation refers to the ever increasing sources of modern commercial and financial law in an environment of liberalisation deregulation and privatisation. Major issues concern the place of domestic and international legal orders and the role of comparative law in an environment where common law and civil law are both relevant. Topics will include issues relating to contracts, international payments, banking matters, financial services provision, ownership of goods, leasing and sale of chattels and intangible property.

LAWS7003
Global Issues in Competition Policy
Faculty of Law
Staff Contact: School Office
UOC8 X1

An in-depth comparative study of the legal and economic concepts which underpin competition enforcement in the United States, Australia, New Zealand and the European Union and the mechanisms for extending or rejecting antitrust jurisdiction across jurisdictional boundaries. The course aims to develop in students an understanding of the different approaches to competition law in the jurisdictions selected so that they may utilise the jurisprudence from these jurisdictions more effectively when acting or advising in competition matters whether in Australia or elsewhere. The course proceeds concept by concept rather than country by country. No prior study of trade practices is required.

LAWS7004
International Child Law
Faculty of Law
Staff Contact: M Hecht
UOC8 X1

Over the past ten years the concept of children's rights has received a greater amount of attention in legal discourse. Internationally, incidents of child labour, child sexual exploitation and child abductions appear to be increasing at an exponential rate. In many nations of the Western world, high suicide rates amongst teens, the growth of the child prostitution industry, and a higher number of young offenders accused of violent crimes have impacted all our communities. In the South and in many countries in transition the use of child soldiers, a high child mortality rate and the widespread trafficking of young people seem to continuously expanding their reach. Jurisprudence developing from the decisions of domestic courts, administrative tribunals and within international fora have provided insights into policy issues while at the same time offering contradictory messages on the legal responsibility and status of children. Because of this, there is a need to better understand the current status of the law and what your role may be - as lawyers, advocates or concerned members of civil society - in ensuring that the rights of all citizens are respected, regardless of their age. It is often said that the phrase "children's rights" is a slogan in search of a definition. This course will attempt to find its meaning by surveying the history and legal development of children's rights internationally.

LAWS9119
International Environmental Law
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 X2
Prerequisite or corequisite: LAWS2081 or equivalent.

The first part of the course will provide students with an overview of the historical context, political processes and international institutions which are shaping the development of international environmental law. It will examine the role of UN institutions, regional negotiating blocs and the non-governmental community. An introduction to the incorporation of international environmental law in Australia and the management of the political processes in Australia will focus these concerns in the "here and now". In the second part, systemic concerns will be explored through case studies of the major sectoral issues current today. Lectures will examine the existing and emerging laws in each sector and view these as examples of the application of international environmental law principles. The challenges and possible solutions which may be adopted in each sector will be explored. The third part will return to the systemic concerns raised earlier and consider the ways ahead. Study will focus on some of the many aspects of regime design and the trade and environment interface. These include the use of dispute resolution, compliance mechanisms, trade sanctions, eco-taxes, environmental standards and ecolabels in international trade, and the roles of institutions such as the WTO, UNCTAD and APEC. The increasing use of economic instruments in the international context, such as prior informed consent, polluter pays, liability and tradeable emissions quotas, will be considered. The course will conclude with discussion on the future challenges and directions facing international environmental law.

LAWS9190
Issues in Immigration Law
Faculty of Law
Staff Contact: A Glass
UOC8 HPW2 S1

What are our obligations to strangers? What is a just migration program? To what extent can the important ideals of due process and equal treatment be realised in the immigration context? Are the goals of particular immigration programs being achieved? This course discusses such matters as these in the context of selected current 'problems' in Australian migration law. Knowledge of migration law is not a prerequisite but some exposure to administrative law and legal philosophy would be of assistance.

LAWS9800
Law for Psychologists 1
Faculty of Law
Staff Contact: School Office
UOC6 HPW2 S2

This course will provide an introduction to certain aspects of law relevant to forensic psychologists. Topics to be covered will include an overview of the Australian legal system, civil obligations (tort and contract) and family law.

LAWS9810
Law for Psychologists 2
Faculty of Law
Staff Contact: S Egger
UOC6 HPW2 S2

This course will consider legal issues for forensic psychologists. Topics to be covered will include relevant areas of children and the law, and a range of issues arising in the fields of criminal law and procedure and the laws of evidence.

LAWS9972
International Trade Law
Faculty of Law
Staff Contact: School Office
UOC8 X1
Prerequisite or corequisite: LAWS2081 or equivalent.

This course is an introduction to the legal order of international trade in a broad sense, i.e. including trade in goods, in services, the regulation of foreign direct investment and international sales transactions. It starts with providing a conceptual framework of international economic law, its main actors and institutions. In particular, the limits of the jurisdiction of states, i.e. their power to regulate transborder commercial activities, will be discussed. The emphasis will be on the principal obligations of the WTO/GATT system (National Treatment, Most-Favoured-Nation Principle, Technical Barriers, provisions on quantitative restrictions, developing countries and government procurement; General Agreement on Trade in Services; Trade-Related Intellectual Property Rights). The course will also address issues raised by the dispute settlement procedures of the WTO as well as by unilateral trade remedies (anti-dumping, countervailing duties, safeguards, etc.) according to national laws.

LAWS9977
Internet Governance
Faculty of Law
Staff Contact: G Greenleaf
UOC8 HPW2 S1

The course will provide an in depth focus on major issues surrounding information technology law, including: Entities and the governance of cyberspace: domestic and international regulatory structures and rules, Telecommunications and the Internet, the status on internet players and rules of access for internet traffic; Ecommerce - legal issues surrounding

the use of cyberspace for commercial transactions; Intellectual Property and Cyberspace: copyright, moral rights, trade marks, domain names, and issues including Computer crime; and Privacy.

LAWS9978
Corporate Self Regulation and Compliance
Faculty of Law
Staff Contact: A Corbett
UOC8 HPW2 X2

Corporate Self-Regulation and Compliance is the first and currently the only university-level course to cover the development and implementation of corporate compliance systems in a range of areas including financial services, environment, health and safety, trade practices and anti-discrimination. The subject takes an interdisciplinary approach to teaching the practice and regulatory policy context of corporate compliance systems. It is suitable for both LLM and management students, and has a strong practical focus on preparing managers and lawyers for the development and implementation of corporate compliance programs in their own workplaces. The subject should also appeal to staff of regulatory agencies with its focus on what makes compliance and self-regulatory systems effective. The course objectives are: (1) To identify legal and regulatory strategies that facilitate, enforce and provide standards for corporate self-regulation and compliance systems; (2) To identify and practise skills in designing and implementing the building blocks of effective compliance systems from a management and a legal perspective; (3) To analyse how the building blocks of compliance systems can interlock and support each other to form robust compliance systems (and how failures of compliance can be failures of system interaction); (4) To learn to when and how to use basic evaluative techniques to review compliance system performance; (5) To develop the skills of the 'reflective practitioner' - the ability to use theory, experience and systems overview to reflect upon action, and continuously implement improvements.

LAWS9991
International Criminal Law
Faculty of Law
Staff Contact: School Office
UOC8 X1

This course will endeavour to systematically analyse the most current state of international criminal law and its place in the modern international legal system in light of: (a) the entry into force of the Rome Statute of the International Criminal Court in July 2002; (b) a series of judgments on the substantive criminal law rendered by the International Criminal Tribunal for the Former Yugoslavia and that for Rwanda; and (c) other recent developments, such as the proceedings against General Augusto Pinochet in England, and the attempt to bring the members of the Khmer Rouge to justice. While the focus of the course will be on the substantive law, important procedural aspects will also be considered. Inevitably, emphasis will be placed on the present and future prospect of international criminal law in the hands of the International Criminal Court (ICC) set up by the Rome Statute. At the same time, the possibility of domestic courts or ad hoc international tribunals applying international criminal law alongside the permanent international criminal court must be reckoned with. The course will proceed with the examination of relevant international legal concepts, general principles of international criminal law, and the functioning of ad hoc international tribunals and their comparison with the ICC. Particular international crimes (genocide, crimes against humanity, war crimes, aggression, and other international crimes), modes of participation in the commission of such crimes, and defences will then be analysed. The course will conclude by dealing with procedural aspects as well as the present and future implementations of international criminal law.

LAWS9993
International Business Transactions
Faculty of Law
Staff Contact: B Mercurio
UOC8 HPW2 S2

This course examines the legal framework of the international business transaction by focussing on trade terms, the Vienna Convention on the International Sale of Goods and the structure and finance of international trade. The course covers a wide range of topics, including the commercial terms of the sales agreement, shipping contracts, financing arrangements (letters of credit, electronic transfers, etc.), insurance and customs documentation. The course also examines the foreign direct investment transaction, international franchise and distribution agreements and contracts for the transfer of technology. International business regulation is also reviewed with particular attention focussed on the World Trade Organisation Agreements and regional trade agreements. Finally, dispute resolution is considered with emphasis on choice of law and forum, arbitration and enforcement of arbitral awards and foreign judgments.

LAWS9994
Commercial Fraud
Faculty of Law
Staff Contact: A Steel
UOC8 HPW2 S1

Property offences in NSW are still based on legislation and common law principles that were developed over 100 years ago. Since that time many aspects of society have fundamentally changed and the law has struggled to catch up. In particular the use of the corporate vehicle in business and the problems of the meaning of property in a computer-mediated world have created difficulty. This course examines the criminal law in NSW dealing with theft and fraud. It traces the development of the common law concepts of larceny and the legislative initiatives of false pretences through to more modern forms of obtaining by dishonesty, defrauding and computer-related offences. The course will be based on a detailed analysis of current and proposed laws and will deal in a comparative way with both the English Theft Act approach and the new Model Criminal Code and Commonwealth Criminal Code approach.

LAWS9997
Financial Services Law and Compliance
Faculty of Law
Staff Contact: C Connolly G Pearson
UOC8 HPW2 S2

Financial Services is the fastest growing sector of the economy and has profound implications for individuals, corporations and government. Financial services include: deposit taking, superannuation, insurance, financial advice, investments, the provision of credit and payment systems. This course is being offered at a time of great change in financial services law with the introduction of the Financial Services Reform legislation; the impact of globalisation on Australian financial institutions; and a growth of litigation and regulatory activity in the area.The course offers the student a comprehensive overview of the legal and regulatory structure of financial services; commentary on recent case law; and a detailed study of legislative reform. The course considers compliance issues in financial services including licensing, codes of conduct and disclosure. Further issues for consideration include the importance of quasi law in driving industry practice; the effectiveness of regulatory neutrality for diverse financial products and the characterisation of wholesale and retail markets for financial products.

LEGT5411
Legal Strategies for Knowledge Protection
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S2

While it is imperative to promote knowledge flows within a business, it is just as imperative to quarantine that knowledge from the outside world. A business' profitability and long-term viability depend on the cultivation and exploitation of distinct and protected knowledge stores. Such knowledge can be protected by the use of available bodies of law, including those commonly labelled intellectual property and theft laws.This course examines the various legal frameworks that have been developed to protect information and knowledge and analyses the extent to which these laws can either promote or inhibit the flows of knowledge within a business or organisation. The course highlights why businesses promoting knowledge flows need to be aware of how their ability to do so is underpinned by a supportive legal framework and, just as importantly, how deficiencies in those laws require sophisticated and vigilant strategies to protect a business' knowledge stores.

LEGT5421
E-Business and the Law
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1 S2
Excluded: LEGT5563.

Electronic commerce relies on the new wave of technologies associated with the internet. It raises significant legal and regulatory issues. This course reviews the existing legal and regulatory regimes applying to E-business and critically examines the need, and proposals, for reform. Topics covered will focus on three primary areas of legal regulation, transactional regulation including contract law and consumer protection; digital and internet related regulatory issues including privacy, internet content and intellectural property protection; and industry sector specific regulation such as banking, securities, gaming and software technology.

LEGT5511
Legal Foundations of Business
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1 S2

Law is an increasingly significant factor in business. In any business decision fundamental legal questions may arise about the potential liabilities of the parties, the rights that the parties have and how the business or transaction should be organised. This subject introduces the Australian legal system; outlines alternative forms of business organisation; discusses the legal framework of business regulation; and examines areas of law particularly relevant to business including the law of contract and torts, the law relating to specialised commercial transactions, the regulation of restrictive trade practices and sales promotion, and intellectual property.

LEGT5522
Special Topic in Business Law
School of Business Law and Tax
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2

A specially assigned project, program or set of readings relating to research in business law.

LEGT5523
Special Topic in Taxation
School of Business Law and Tax
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1 S2

A specially assigned project or set of readings relating to research in taxation.

LEGT5531
Competition and Consumer Law
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: LEGT5511.

Trade practices and fair trading laws have assumed fundamental importance in the Australian marketplace. This subject examines the regulation of restrictive trade practices under the Trade Practices Act 1974 (Commonwealth) and the Competition Code with particular reference to collusive activity, distribution methods, pricing arrangements, abuse of market power, mergers and access to essential facilities. This subject also examines major fair trading initiatives under the Trade Practices Act, and State and Territory Fair Trading legislation, with particular reference to misleading or deceptive conduct, unconscionable conduct, advertising and marketing strategies and product liability. Aspects of the protection of intellectual property are also examined.

LEGT5541
Company Law
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s or Corequisite/s: LEGT5511

The law relating to business organisations, including partnerships, joint ventures, trading trusts, and companies incorporated under the Corporations Law. The primary focus is on company law and, in particular, the significance of the corporate entity; groups of companies; the division of corporate control amongst directors, management and shareholders and their respective roles; the duties of directors; share and debt capital; fund raising; enforcement of shareholders rights; insolvency and liquidation.

LEGT5542
Corporate Governance
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: LEGT5541.

The corporate structure dominates both Australian and global commerce. This course examines the operation of the modern corporation from the perspective of corporate governance issues. Topics include the changing character of the corporation, the respective roles of shareholders, management and directors, the position of institutional shareholders, performance and conformance aspects of the board's function and international standards of corporate governance. The course will incorporate case studies based on contemporary examples and practices.

LEGT5551
Revenue Law
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s or Corequisite/s: LEGT5511

The complexity and comprehensiveness of the Australian tax system mean that tax considerations are now of major importance in most business decisions. After outlining tax policy, tax mix and tax reform considerations, 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; and fringe benefits tax.

LEGT5561
Legal Aspects of Finance
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S2

The size and complexity of modern capital markets requires a comprehensive understanding of essential legal concepts involved. Topics include commercial structures including companies, joint ventures, partnerships and trusts; procedures for equity and debt financing of entrepreneurial schemes with special reference to both law and practice; the regulation of the securities market; corporate restructuring and take-overs, mergers and reconstructions; the law of company charges; aspects of the taxation of commercial financing.

LEGT5562
Business Law in a Global Economy
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1 S2

Developments in technology, telecommunications and deregulation which have taken place in the latter part of this century have led to the creation of a global economy. This subject addresses the legal environment of this economy and aspects of its operation. Topics include GATT and the World Trade Organisation; the laws and practices relating to international sales and financing agreements; arrangements for conducting international business, including franchising, licensing, joint ventures and technology transfer; the resolution of international disputes and the protection of intellectual property.

LEGT5564
Regulation of Government Agencies
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S2

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 the major regulatory agencies with particular reference to the Australian Competition and Consumer Commission, the Australian Securities Commission and the Australian Taxation Office are also examined.

LEGT5571
Franchising
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1

Franchising is becoming the dominant force in the distribution of goods and services. This subject 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 other distribution strategies - technology transfers, trademark licensing, character and personality merchandising - are also examined.

LEGT5575
Corporate Fraud and Crime
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: LEGT5511.

Corporate fraud costs Australian business tens of billions of dollars every year. This course examines aspects of fraud and corporate crime in their legal and commercial contexts. Topics include analysis of the various laws relating to theft, fraud, conspiracy 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 issues and strategies for minimising legal exposure to fraud.

LEGT5581
Taxation Policy, Principles and Planning
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: LEGT5551.

Taxation is a necessary component of any modern economy. In Australia the dominant form of taxation is income taxation. Any country imposing an income tax will face several fundamental policy options. Responsible businesses in any country with an income tax will endeavour to legitimately minimise their tax liability. In this subject Australian income tax law is examined in the context of the policy principles influencing Parliament and of planning opportunities that currently exist in Australia.

LEGT5582
Taxation of Business Entities
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: LEGT5551.

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 subject 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.

LEGT5583
International Business Taxation
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: LEGT5551.

In the world economy, barriers to international investments are rapidly falling. Of the remaining barriers some of the most significant are differences in tax systems, and the inadequate coordination of different tax systems. This course discusses the principles relevant to international taxation and uses the Australian international tax rules to highlight possible international tax policy choices and problems. Prospects for the improved coordination of international tax rules through harmonisation and through bi-lateral and multi-lateral treaty networks are examined. Special emphasis is given to practical tax issues associated with international direct investments.

LEGT5586
Corporate Law, Tax and Strategy
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: LEGT5551, LEGT5541.

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 subject 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 simulations.

LEGT5589
Capital Gains Tax
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: LEGT5551.

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.

LEGT5998
Research Seminar in Commercial Law
School of Business Law and Tax
Staff Contact: School Office
UOC6 S1 S2

LEGT5999
M.Com. (Hons) Project Report
School of Business Law and Tax
Staff Contact: School Office
Enrolment requires School approval
UOC12 HPW3 S1 S2

LEGT7512
Business Law (International)
School of Business Law and Tax
Staff Contact: School Office
UOC6 S1 S2

Note/s: Only offered to students in the International Professional Accounting Program Beijing ACCTES8405.

LEGT7552
Corporate and Revenue Law (International)
School of Business Law and Tax
Staff Contact: School Office
UOC6 S1 S2

Note/s: Only offered to students in the International Professional Accounting Program Beijing ACCTES8405.

LEGT7590
International Venture Management
School of Business Law and Tax
Staff Contact: School Office
UOC6 S1 S2

Note/s: Only offered to students in the International Professional Accounting Program Beijing ACCT8405.

LEGT8512
Business Law (International)
School of Business Law and Tax
Staff Contact: School Office
UOC6 S1 S2

Note/s: Only offered to students in the International Professional Accounting Program Guangzhou ACCT8403.

LEGT8552
Corporate and Revenue Law (International)
School of Business Law and Tax
Staff Contact: School Office
UOC6 S1 S2

Note/s: Only offered to students in the International Professional Accounting Program Guangzhou ACCT8403.

LEGT8590
International Venture Management
School of Business Law and Tax
Staff Contact: School Office
UOC6 S1 S2

Note/s: Only offered to students in the International Professional Accounting Program Guangzhou ACCT8403.

LEGT9101
Business Law and Technology
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW1.5 S1
Prerequisite/s: must be enrolled in Program 8616, 7333 or 5457

Business Law and Technology provides an overview of the legal environment for, and the legal regulation of, business in Australia. It introduces the Australian legal system, alternative forms of business organisation and the legal framework of business regulation, and examines areas of law of particular relevance to business including contracts and torts, restrictive trade practices and fair-trading, the protection and exploitation of intellectual property and technology contracts.

LING5000
Special Project in Applied Linguistics
Linguistics
Staff Contact: B Mullock
UOC8 S1 S2

A major project (8,000 words) involving the design of a language course, or some other form of applied linguistic research (eg application of translation theory, language acquisition study, text or discourse analysis, LOTE-related project, devising a CALL program, contrastive language study, sociolinguistic study).

LING5001
Second Language Acquisition
Linguistics
Staff Contact: R Gardner
UOC8 HPW2 S1 S2

Current research and theory in second language acquisition and their implications for language teaching.

LING5002
Language Teaching Methodology
Linguistics
Staff Contact: B Mullock
UOC8 HPW2 S1 S2

Overview of the range of methodological approaches to the teaching of spoken and written language skills in relation to historical and sociocultural contexts and to theoretical considerations with a special focus on TESOL. Analyses and reflects on aspects of classroom practice, including teacher and learner roles, the use of teaching materials and language teaching technology. Draws on the collective knowledge and experience of the class.

LING5003
Testing and Evaluation
Linguistics
Staff Contact: R Gardner
UOC8 HPW2 S1 S2

The principles and practice of language testing and assessment and of language teaching program evaluation with a special focus on TESOL. Includes practical work in the construction of tests and other assessment instruments and in the design of evaluation tools.

LING5004
Syllabus Design
Linguistics
Staff Contact: B Mullock
UOC8 HPW2 S1 S2

Critical survey of different approaches to language teaching syllabus design with a special focus on TESOL. Topics: exploring the difference between methodology and syllabus design; cultural and social context of the syllabus; assessing student needs; the relationship between models of language and principles of syllabus design in English for Specific Purposes.

LING5005
The Structure of English
Linguistics
Staff Contact: P Collins
UOC8 HPW2 S1
Excluded: ENGL5502, LING2604, LING2800

A step-by-step account of English grammar covering the most important and central constructions and categories. Reference is made to both the latest theoretical advances in linguistics and to significant departures that are made from traditional grammar. Samples from present-day English are analysed and discussed.

LING5006
Bilingualism
Linguistics
Staff Contact: M Amberber
UOC8 HPW2 S1

Explores the linguistic, psycholinguistic and sociolinguistic dimensions of bilingualism. Issues considered include definitions of bilingualism, bilingual competence, code switching, identity and bilingualism, and language policy and bilingualism.

LING5007
Translation: Theory and Practice
Linguistics
Staff Contact: R Machali
UOC8 HPW2 S2

Considers the impact of modern linguistics on the theoretical and practical aspects of interlingual translation and/or interpretation. Issues and debates will be discussed, along with the theoretical frameworks behind some major programs.

LING5011
Functional Grammar
Linguistics
Staff Contact: L Ravelli
UOC8 HPW2 S2

An introduction to Systemic Functional Grammar. Provides a model of grammar which analyses authentic texts in their social context, and which has had a significant impact on education in mother tongue and second/foreign language situations. We develop a set of tools which focus on the lexical and grammatical patterns of a variety of texts from different genres and registers.

LING5012
Language and Mind
Linguistics
Staff Contact: M Amberber
UOC8 HPW2 S2
Excluded: ENGL2552

An introduction to issues in current linguistic theory, with particular attention to generative models, their historical development, methodology and philosophical and psychological implications.

LING5020
Adult Language Learning and Teaching
Linguistics
Staff Contact: B Mullock
UOC8 HPW2 S1

Focuses on the pedagogical strategies of teaching adults English as a second and/or foreign language. Examines language use and discourse in the classroom, models of language, teaching methodology, development of curricula, syllabus design and use of teaching resources and technology. Includes a practicum in a classroom environment with hands-on experience, putting theory into practice.

LING5021
Language for Specific Purposes
Linguistics
Staff Contact: B Mullock
UOC8 HPW2 S2

Covers the origins of LSP and its relationship to foreign and second language teaching; the branches of LSP including Language for Business, Science and Technology, Academic, and Vocational Purposes; curriculum issues such as linguistic description and language needs, needs analysis and situation analysis, and teacher and learner characteristics; methodology, materials; assessment and evaluation. Uses case studies and research studies of LSP courses.

LING5023
Analysing Spoken Discourse
Linguistics
Staff Contact: R Gardner
UOC8 HPW2 S2

Explores conversation and other forms of talk-in-interaction, with a focus on the structures and organisation of the discourse, and further, on how participants interactively construct meanings and activities through the talk. Special focus is on the ways speakers distribute their turns at talk, how turns are sequenced into series of actions, and ways of dealing with disagreement and with misunderstandings and breakdowns. Students are required to transcribe and analyse a short conversation, and analyse some conversational data.

LING5050
Special Project in TESOL
Linguistics
Staff Contact: B Mullock
UOC8 HPW2 S1 S2

A major project (8,000 words) involving the design of an ESL/EFL language course, a project in testing/evaluation or in classroom practices in TESOL, a CALL program in TESOL or another TESOL-related topic.

MANF8340
Factory Automation
School of Mechanical and Manufacturing Engineering
Staff Contact: P Mathew
UOC6 S2
Excluded: MANF9340

Elements of factory automation such as Flexible Manufacturing Cells and Systems, material handling and warehousing, assembly systems, automated quality control systems, sensors and data acquisition. Cellular manufacturing techniques and layout planning. Simulation and intelligence in manufacturing. Communication networks in a factory environment. Strategies for factory automation.

MANF8420
Managing Manufacturing Operations
School of Mechanical and Manufacturing Engineering
Staff Contact: A Kayis
UOC6 S2
Excluded: MANF9420

Managing manufacturing operations as a competitive weapon, strategic linkage of operations through quality, value added management, strategic quality management approach, International Human Resource Management, Technology Transfer, Strategic Management of Technology, Variation and its Causes, improvement strategies, productivity and its measurement, Taguchi techniques.

MANF8471
Manufacturing Strategy
School of Mechanical and Manufacturing Engineering
Staff Contact: S Kara
UOC6 S1
Excluded: MANF9471

Relation of manufacturing strategy to business strategy, financial strategy and marketing strategy. Technology and process choice; process positioning. Capacity and location decisions: long term capacity strategies, international capacity planning; planning facilities with a region. Global manufacturing and the virtual corporation. Focused manufacturing; continuous improvement and the experience curve. Strategic management of human resources; strategy implementation and change management; linking operational performance to manufacturing strategy.

MANF8472
Production Planning and Control
School of Mechanical and Manufacturing Engineering
Staff Contact: School Office
UOC6 S2
Excluded: MANF9472

Industry dynamics; Porters Model; bases for competition and implications for Production Planning and Control. Dynamics of materials flow; role of inventory; effect of bottlenecks and process variability on materials flow. Planning levels and timescales; forecasting; aggregate planning; the Master Production Schedule. Manufacturing Resources planning and its limitations. Optimised Production Technology and synchronised manufacturing; Just in Time production; Kan Ban systems; mixed model production; evolution towards JIT. Maintenance management; preventive and predictive maintenance; Total Productive Maintenance. Role of Information Technology in Production Planning and Control; decision support and expert systems as applied to planning and scheduling.

MANF8544
Concurrent Product and Process Design
School of Mechanical and Manufacturing Engineering
Staff Contact: H Kaebernick
UOC6 S1
Excluded: MANF9544

Concurrent Engineering approach to the design of products, processes and manufacturing systems. The product development process and the Concurrent Engineering team. Customer focussed design and Quality Function Deployment. Design for Manufacture, Design and Planning for Assembly, Rapid Prototyping. Implementation, organisation and management of Concurrent Engineering.

MANF8560
Computer Integrated Manufacture
School of Mechanical and Manufacturing Engineering
Staff Contact: K Hoang
UOC6 S2
Excluded: MANF9560

Systems analysis, design and implementation of Computer Integrated Manufacturing (CIM). Components of CIM including Production Planning and Control, CAD in CIM, Computer-Aided Process Planning, integrated maintenance, material handling. Shared CIM and AI in CIM will also be discussed.

MANF9010
Project Manufacturing Engineering and Management
School of Mechanical and Manufacturing Engineering
Staff Contact: B Kayis
UOC12 S1 S2

Note/s: The project must be completed in no more than two sessions. A seminar presentation on the project topic is compulsory.

MANF9340
Factory Automation
School of Mechanical and Manufacturing Engineering
Staff Contact: P Mathew
UOC6 HPW3 S2
Excluded: MANF8340

Elements of factory automation such as Flexible Manufacturing Cells and Systems, material handling and warehousing, assembly systems, automated quality control systems, sensors and data acquisition. Cellular manufacturing techniques and layout planning. Simulation and intelligent manufacturing. Communication networks in a factory environment. Strategies for factory automation.

MANF9400
Industrial Management
School of Mechanical and Manufacturing Engineering
Staff Contact: M Hasan
UOC6 HPW3 S2

Evolution of management thought, the planning process; nature of managerial decision making, organisational structures; managing organisational change, motivation, performance, satisfaction, interpersonal and organisational communication, use of management information systems.

MANF9410
Total Quality Management
School of Mechanical and Manufacturing Engineering
Staff Contact: A Kayis
UOC6 HPW3 S1

Quality control systems, quality assurance, planning for quality, total quality management (TQM) philosophy, implementation of TQM in service and manufacturing industries, national and international standards.

MANF9420
Managing Manufacturing Operations
School of Mechanical and Manufacturing Engineering
Staff Contact: A Kayis
UOC6 HPW3 S2
Excluded: MANF8420

Managing manufacturing operations as a competitive weapon, strategic linkage of operations through quality, value added management, strategic quality management approach, International Human Resource Management, Technology Transfer, Strategic Management of Technology, Variation and its Causes, improvement strategies, productivity and its measurement, Taguchi techniques.

MANF9471
Manufacturing Strategy
School of Mechanical and Manufacturing Engineering
Staff Contact: S Kara
UOC6 HPW3 S1
Excluded: MANF8471

Relation of manufacturing strategy to business strategy, financial strategy and marketing strategy. Technology and process choice; process positioning. Capacity and location decisions: long term capacity strategies, international capacity planning; planning facilities with a region. Global manufacturing and the virtual corporation. Focused manufacturing; continuous improvement and the experience curve. Strategic management of human resources; strategy implementation and change management; linking operational performance to manufacturing strategy.

MANF9472
Production Planning and Control
School of Mechanical and Manufacturing Engineering
Staff Contact: School Office
UOC6 HPW3 S2
Excluded: MANF8472

Industry dynamics; Porters Model; bases for competition and implications for Production Planning and Control. Dynamics of materials flow; role of inventory; effect of bottlenecks and process variability on materials flow. Planning levels and timescales; forecasting; aggregate planning; the Master Production Schedule. Manufacturing Resources planning and its limitations. Optimized Production Technology and synchronized manufacturing; Just in Time production; Kan Ban systems; mixed model production; evolution towards JIT. Maintenance management; preventive and predictive maintenance; Total Productive Maintenance. Role of Information Technology in Production Planning and Control; decision support and expert systems as applied to planning and scheduling.

MANF9491
Special Topic in Manufacturing Engineering
School of Mechanical and Manufacturing Engineering
Staff Contact: P Mathew
UOC6 HPW3 S1 S2

MANF9492
Advanced Topic in Manufacturing Engineering
School of Mechanical and Manufacturing Engineering
Staff Contact: P Mathew
UOC6 HPW3 S1 S2

MANF9543
Computer Aided Design/Computer Aided Manufacture
School of Mechanical and Manufacturing Engineering
Staff Contact: K Hoang
UOC6 HPW3 S1
Excluded: AERO9543

Topics to be covered include: manufacturing systems; elements of CAM; computer process monitoring and control; production systems at the plant and operation levels; principles underlying the intergration between a CAD/CAM package such as CATIA and a Manufacturing Management System such as Fourth Shift; applications to design and engineering processes.
Note/s: Enrolments are limited due to computer availability. Preference will be given to CIM Program Students. Students must contact the Lecturer one week after enrolment to confirm enrolment.

MANF9544
Concurrent Product and Process Design
School of Mechanical and Manufacturing Engineering
Staff Contact: H Kaebernick
UOC6 HPW3 S1
Excluded: MANF8544

Life-cycle design of products, principles of design of products, processes and manufacturing systems, design for quality, design for manufacture, design for assembly, organisational aspects of concurrent engineering.

MANF9560
Computer Integrated Manufacturing
School of Mechanical and Manufacturing Engineering
Staff Contact: K Hoang
UOC6 HPW3 S2
Prerequisite/s: MANF9543
Excluded: MANF8560

Systems analysis and design of computer integrated manufacturing, including flexible manufacturing systems and automated factories. Communication protocols.

MANF9601
Economic Decisions in Industrial Management
School of Mechanical and Manufacturing Engineering
Staff Contact: M Hasan
UOC6 HPW3 S1

Concept of economic analyses. Cost concepts; interest and interest formulae. Methods for economy studies; present worth, annual worth, payback period and rate of return; comparing alternative investments; depreciation methods, effect of income taxes, inflation; replacement analysis; capital budgeting; break-even and sensitivity analyses; economic decision making under risk and uncertainty; evaluation of projects in public sector.

MARK5900
Elements of Marketing
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1 S2 X1

An introduction to marketing in contemporary business. The central theme running throughout the course is that marketing is not a fragmented assortment of actions and functions taking place among disconnected institutions operating in isolation. Rather, it is a total system of business action aimed at profitably meeting the needs and wants of business customers and final consumers. The task of managing a marketing operation involves strategic and tactical decision-making in both domestic and international markets. It also demands an understanding of the structure of the marketing system, the various institutions that make up that system, and the role of each institution within the system. The course is a blend of theory and practical application, using cases, reports and exercises to enhance student learning.

MARK5930
Consumer Analysis
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1 S2
Corequisite/s: MARK5900

An understanding of business customers and final consumers is crucial in marketing. This requires knowledge of why and how people buy. Major concepts and theories from the social and behavioural sciences provide a background to the study of why people buy. Behavioural topics include: perception, attitude and decision-making processes, and the psychology of purchasing. Social science topics include: values and lifestyles, mass communication and advertising, and buyer-seller relationships. This inter-disciplinary approach enables students to think about many different facets of customer/consumer behaviour.

MARK5932
Applied Marketing Research
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1 S2
Corequisite/s: MARK5900, ECON5203

Research helps marketing managers make informed decisions. This applied course offers an introduction to the varied forms of marketing research that are used in practice by marketers. Themes include: problem definition and research design, questionnaire design, sampling, interviewing, interpretation and reporting. Both quantitative and qualitative tools and techniques are considered and also mixed methods. The uses of research data are reviewed in the context of applied problems, such as segmentation studies, pricing, market entry, and media selection. Assignments and projects give students experience in applying the skills learnt on the course.

MARK5940
International Marketing
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: MARK5900

Astute marketers are very aware of opportunities in international markets, and also attuned to the impact of international players in domestic markets. This course highlights the conceptual, descriptive and strategic issues that underlie these developments. There is a focus on the various environments that have an impact on international marketing (economic, technological, socio-cultural, political-legal and corporate). The implications of these for the marketing mix are analysed, and broad strategic alternatives for the international marketer are covered. Product pricing, promotional and distribution issues and options are canvassed. Cases are drawn from multiple markets and the course offers a broad global perspective.

MARK5941
Services Marketing
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: MARK5900

Many economies are dominated by services. In Australia, for instance, 70% of the labour force, 75% of the GNP and 45% of an average family's budget are accounted for by services. This course focuses on the distinct needs and problems of service organisations in marketing and general management, It is shown how service organisations require a distinctive approach to marketing strategy - both in its development and execution. Cases are drawn from commercial and not-for-profit organisations, including banking, transportation, hotels, tourism, hospitals, education, and professional services such as accountancy, engineering and management consultancy. Anyone working in a service industry and/or for an organisation with a strong commitment to customer service will find this course relevant.

MARK5942
Contemporary Knowledge - Based Marketing
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: MARK5900

In most organisations it is now the intellect of the people that is the key resource. This, combined with the notion of the learning organisation and the convergence of telecommunications and computer technologies, has shifted us into an era where"knowledge has become the key economic resource and the dominant - and perhaps even the only - source of competitive advanatge" (Peter Drucker). The focus of this course is on current issues relating to how firms use this "new knowledge" to better understand and reach their key target markets, develop customer retention programs, and how it might be used to create a competitive advantage. This requires going behind some of the popular ideas in marketing today (interactive media, global marketing, mass customisation, value-added marketing, partnerships and strageic alliances and virtual relationships, and group-wide networks) and exploring their true impact on the business organisation. The course is for students who want to question more conventional treatments of marketing.

MARK5945
Marketing in Asia
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2 X1
Prerequisite/s: MARK5900

This course examines conceptual and descriptive aspects of marketing management in East Asian countries and the challenges that global firms face in operating in the region. A comparative approach that acknowledges both similarities and differences among East Asian countries is adopted. Attention is given to such issues as market entry strategies, product adaptation, business-to-business negotiations and the influence of culture on consumer behaviour. Discussion focuses on Australia's important Asian commercial and trading partners: Japan, South Korea, Indonesia, Malaysia and China. Guest lecturers and case studies are used to highlight key points.

MARK5946
Marketing Communication
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: MARK5900

This course provides students with an integrated approach to communication management. It focuses on the management of communication with customers, public bodies and community interest groups. Topics include: communication theory and strategic planning in relation to product/brand information; sales promotion and interpersonal communication; and the uses of new media. Specific attention is given to media and message planning, costing, evaluation, direct and interactive communication, and public relations management.

MARK5947
Interactive Electronic Marketing
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: MARK5900

Marketers are making increasing use of interactive electronic technologies; the Internet and World Wide Web, interactive TV, electronic kiosks, etc. They are doing so to acheive a variety of goals: information provision, advertising and promotion, building customer profiles, direct and interactive communications, placing goods with customers through virtual stores, and working with customers to develop innovative new products and services. These activities present management with exciting new opportunities, reveal new sources of competition, and also demand a re-evaluation of core competencies. The impact of these challeneges on marketing practice is considered, with an emphasis on the application and integration of the new technologies within existing business frameworks. Topics include: integrating with conventional media (including established electronic media such as radio, TV and telecommunications), the customer service and fulfilment challenge, global connectivity, adaptive and accountable marketing planning, and specific implications for intermediaries and business-to-business marketers. A critical and questioning approach is expected of students taking this course.

MARK5950
Marketing Strategy
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: MARK5930, MARK5932

The focus is the development of market-driven strategies that are sensitive to the needs and desires of customers. To achieve this, consideration is given to proactive and reactive strategies, the role of information systems and empirical research, the need for entrepreneurial thrust and vision over the longer-term, and the importance of global and inter-disciplinary perspectives. As all organisations have limited resources, the starting point for the strategy formulation is careful analysis of competing market opportunities, the evaluation of these opportunities and assessment of the alternative means available for realising these opportunities. The aim is to help organisations realise their strategic choices in the context of external and internal pressures and threats. The course is based on lectures, readings, case studies and the development of procedures for forming, implementing, evolving and monitoring strategic plans. This advanced course assumes students have a thorough understanding of marketing fundamentals, as well as economic and management principles.

MARK5951
Marketing Decision Analysis
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: MARK5930, MARK5932

This innovative course examines the way organisations can use information to improve their marketing efforts - to make more informed decisions about positioning and segmentation, sales resource allocation, ad copy design, pre-test market modelling, new product diffusion, and so forth. The most popular and useful techniques found in marketing today are studied, including choice models, conjoint analysis, perceptual maps, neural networks, and multivariate techniques. These are illustrated with cases based on real situations in which organisations must make tough practical decisions. Students who complete this course will be conversant with modern methods of analysis and decision-support in marketing, and have a distinct edge in the labour market. Access to a computer is required.

MARK5952
New Product/Service Development
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: MARK5930, MARK5932

The lifeblood of most market-driven organisations is the development and commercialisation of new products and services. However, most of these developments fail. The purpose of this course is to minimise the chances of failure by having a better knowledge of the development process. The course covers all issues involved in developing and bringing to market new products and services: opportunity identification, idea generation, segmentation, design, consumer measurement, perceptual mapping, forecasting, market testing, launch and post-launch monitoring, as well as project management and appraisal. The latest techniques and analysis procedures are used within a practical managerial framework.

MARK5955
Advances in Consumer Analysis
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: MARK5930, MARK5932

This is an advance-level treatment of consumer behaviour. Considerable stress is laid on consumer decision-making. Themes include: the historical antecedents of consumer behaviour, the culture of consumption, concepts of environmental influence, the social psychology of consumption, the ecology of learning and perception, and the role of emotion in choice. Also studied is the impact of these considerations on marketing strategy, such as the development and proliferation of product formulations and the uses and limitations of mass communication. It is assumed all students already have a thorough understanding of the basics of consumer behaviour, and are able to contribute to a critical discussion of the themes addressed in this course.

MARK5956
Managing Marketing Relationships
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: MARK5930, MARK5932

The organisation and implementation of marketing strategy is the focus of this course, rather than strategy development. Implementation involves the performance of marketing activities to create and deliver products and services that meet the needs of customers and consumers. Some of this work is carried out within the firm and some by suppliers, distributors, business customers and other organisations. A key aspect of this activity is relationship management, which involves developing and managing relations between marketing and other functions within the firm and with external organisations in order to gain access to and develop key resources and competences. The increased importance of relationship management is reflected in the growth of relationship marketing in consumer markets and in the development of interaction and network approaches to marketing in business and international marketing. This course examines the nature and role of internal and external relations in implementing marketing strategy, their impact on a firm's marketing performance and how they are managed. It includes consideration of issues such as customer relationship management, key account management, relationship portfolios, power and conflict, collaboration and partnering strategies, interaction and network approaches to marketing.

MARK5957
Business-to-Business Marketing
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: MARK5930, MARK5932

Considerable marketing effort is devoted to reaching and servicing business markets, either because of their own inherent value or as a route through to mass consumer markets. Arguably, it is in the area of business-to-business marketing that relationship management comes into its own. Presented in this course are the specific elements of marketing knowledge and planning that relate to business, industrial and public markets. These include assessing market opportunities, examining the business environment, and managing the functional aspects of marketing in an organisational setting. Specific attention is paid to exchange relationships, business retention and loyalty-building initiatives, and commercial partnerships. It is assumed students taking this advanced course are familiar with standard models of marketing management, and are equipped to appreciate the points of difference between these and business-to-business models.

MARK5958
Entrepreneurship in the Global Marketplace
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: MARK5930, MARK5932; Exclusion: IBUS5607

This course explores entrepreneurship (and intrapreneurship) in both large and small firms, recognising the increasing crucial role of the global dimension. Key questions addressed include: What is an entrepreneur? How does a market orientation help identify and exploit opportunities?

What challenges do entrepreneurs face (or create!) in the global arena? How can these opportunities and challenges be managed creatively and effectively? These questions are addressed from both economic and behavioural perspectives. An emphasis is placed on: the processes of innovation and entrepreneurship; identifying opportunities; planning for and managing a growing venture in the global marketplace; how marketing can be integrated with other functions to maximise value creation; and developing an entrepreneurial mindset. Central to this course is the integration of theory and practice, building on previous courses. It also requires and further develops skills in analysis, creativity, communication (written and oral) and group collaboration. Student participation through case analyses, experiential exercises and workshops, project work, symposiums with industry practitioners, and reflective learning underpins the course.

MARK5960
Project in Marketing Implementation
School of Marketing
Staff Contact: School Office
UOC6 S1 S2
Prerequisite/s: MARK5930, MARK5932

There is an opportunity for a small number of students to complete a detailed project in marketing. The project should apply knowledge gained from the MCom program to a specific area that is of both academic and managerial interest. Project reports are expected to be scholarly documents, and not simply industry case studies. The course is designed for those seeking a career as a market analyst, researcher, management consultant, or academic. Students must be eligible to undertake Advanced Specialisation Courses in Marketing, and have identified a willing supervisor. Supervisors may specify in advance the topics they are willing to supervise and also stipulate additional eligibility criteria (e.g. specific research/analysis/writing skills may be required for the completion of certain projects). Students and supervisors need to agree and sign a project brief before enrolment on this course is confirmed.

MARK5991
Introduction to the Media Sales Environment
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: Admission to Media Sales Program

Media Sales executives are employed by Australia's media companies (News Ltd, PBL, Austereo) to write the $4bn in annual advertising revenue that finances the industry. Media Sales executives must therefore have an understanding of the industry and the regulatory environment in which their employers operate and compete. This course will cover the structure, organisations, revenue base and regulatory environment of Australian media.

MARK5992
Media Audience Research
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: Admission to Media Sales Program

This course will cover the purpose, methodology, application and management by media companies and advertising/media agencies of audience research for the selling and buying of media space and time for television, radio, newspapers, magazines and other media. Substantial class time will be dedicated to both the theory (statistical sampling, data collection and analysis methodology) and practice (use of syndicated and proprietary software programs) of media research.

MARK5993
Principles of Media Planning, Buying and Selling
School of Marketing
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: Admission to Media Sales Program

This course will cover the progression of a communication strategy into a media strategy and then implementation through the media planning and buying process to post campaign delivery evaluation. It will examine the role and practices of all the stakeholders in the media buying and selling process: clients, advertising and media agencies, media sales companies, media companies. Impacts on the media buying decision such as media planning theories and direct client experiences will be addressed. It will examine current industry selling practices through bulk media agency deals, clients deals, cross media deals and the structure and application of media rate cards.

MARK5994
Media Customer Relationships
School of Marketing
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3 S1
Prerequisite/s: Admission to Media Sales Program

This course will provide a background on the theory of business to business sales techniques and customer relationship building and management within a sales environment. It will then demonstrate how this is applied in the Media Sales industry by a range of different companies. It will look at a range of presentation methods and tools for persuasive and effective selling and how these are currently utilised. And it will cover the techniques required for negotiations within multiple and long term client relationship sales environments. Students will be given the opportunity to practice these skills within a learning environment that is objective and focussed toward skills development

MARK8995
Business Research Methods in Marketing
School of Marketing
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW2 S1
Prerequisite/s: Admission to MCom (Honours) or PhD programs 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, Economic Theory and Consumer Psychology). The art of the solvable. Using this knowledge to write viable research plans.

MARK8996
Research Seminar in Marketing
School of Marketing
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW2 S1
Prerequisite/s: Admission to MCom (Honours) or PhD programs in Marketing.

A study and critique of seminal published papers in selected marketing topics relevant to the interests of research students. Emphasis will be on appreciating the present state of knowledge, and considering future opportunities. Special attention will be given to the knowledge base in various substantive areas (for instance, international marketing, services marketing and service quality, brand management, and relationship marketing). The focus will be on understanding the empirical significance of each article, and it 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.

MARK8997
Advanced Quantitative Methods in Marketing
School of Marketing
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW2 S1
Prerequisite/s: Admission to MCom (Honours) or PhD programs in Marketing.

Extension of the knowledge of elementary statistics into the area of multivariate statistics, with special attention to the underlying theory and assumptions of the methods used. Discussion of multiple regression and multiple correlation, multivariate analysis of variance, discriminant and logit analysis, conjoint analysis, factor and correspondence analysis and structural equation modelling. Hands-on practical sessions will enable participants to implement these tools, techniques and methods in the context of specific Marketing applications.

MARK8998
Contemporary Research Methods in Marketing
School of Marketing
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW2 S2
Prerequisite/s: Admission to MCom (Honours) or PhD programs 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 design 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.

MATH5115
Analysis of the Finite Element Method
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

A selection of topics from: finite element methods, boundary element methods, approximation theory, integral equations and iterative techniques for matrix problems.

MATH5130
Advanced Mathematical Methods
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Fundamental methods for solution of problems in applied mathematics, physics and engineering.

MATH5165
Continuous Optimisation
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Analysis, solution and application of optimisation problems where the variables change continuously. Topics selected from: nonlinear programming, convex optimisation, nonsmooth analysis and optimisation, variational inequalities and complementarity problems, infinite dimensional optimisation, stochastic optimisation, and numerical optimisation.

MATH5170
Nonsmooth Optimisation
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

A selection of topics from: non-smooth convex analysis, conjugate duality, subgradient optimality conditions, convex approximations, difference convex optimisation, approximate subdifferentials and global optimisation.

MATH5175
Topics in Optimisation and Optimal Control
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

A selection of topics from: differential equation models, systems of differential equations and HIV modelling.

MATH5185
Topics in Modern Applied Mathematics A
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

A selection of topics from optimisation, optimal control and numerical analysis.

MATH5205
Nonlinear Analysis
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

The mathematical theory of nonlinear differential equations, whose behaviours may range from coherence to chaos. Major topics include soliton theory covering integrable partial differential equations and their method of solution using the inverse scattering method, asymptotic methods for nonlinear differential equations covering global techniques and singularity analysis, and functional and complex analytic methods of proving qualitative results for equations of physical interest.

MATH5215
Modern Topics in Dynamics
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

A selection of topics from: bifurcation theory, Hamiltonian systems, perturbation methods, the theory of solitons and chaotic systems.

MATH5245
Methods for Computational Fluid Dynamics
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

A selection of topics from: boundary layer theory, turbulent flows, stability theory, waves, viscous flows and computational techniques.

MATH5250
Advanced Fluid Mechanics
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

The mathematical modelling and theory of problems arising in the flow of fluids.

MATH5255
Hydrodynamic Stability
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

MATH5275
Applied Data Analysis
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

MATH5285
Ocean Modelling
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Analytical and numerical modelling of ocean dynamics, and their interpretation. The course examines aspects of modelling of oceanic circulation using analytical and numerical modeling techniques. Theoretical analyses of the primitive equations will be used to identify individual physical processes such as surface Ekman layers, stratified flow over topography and wind-forced coastal currents under idealised conditions. A general numerical ocean model will be used to illustrate these results by comparison with the idealised analytical work, and by extension to more complex cases. Theoretical and practical aspects of model implementation will be considered including numerical stability, open boundary conditions, surface and convective mixed layer algorithms, as well as interpretation in the light of observations.

MATH5295
Atmospheric Modelling
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Atmospheric dynamics and their simulation using numerical models. This course combines atmospheric dynamics and numerical modelling. It covers the following topics: derivation and interpretation of the equations governing the motion of the earth s atmosphere from the surface to just above the stratopause, the important types of wave motions supported by the governing equations, the use of scaling analysis to develop several distinct kinds of atmospheric models and the application of a range of numerical techniques to solving the equations governing these models. The last section will form the major part of the course, and will examine the various numerical algorithms in terms of accuracy, stability, consistency and efficiency. The choice of lateral boundary conditions also will be discussed in detail. During the course, computer laboratory sessions will be held and course participants will put together a working numerical model of their choice, from one of those introduced in the course. This model will be realistic in the sense that it will produce 24 hour predictions of the state of the atmosphere using real (observed) data as initial and boundary conditions.

MATH5305
Computational Mathematics - Finite Difference Methods for PDE
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

MATH5315
High Performance Numerical Computing
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

MATH5325
Computational Mesh Generation and Data Visualisation
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

An introduction to the theories of mesh generation for structured and unstructured grids. The emphasis of the course is on the use of computational packages to create grids for specific problems. Advanced visualisation techniques, using commercial packages for data manipulation and presentation.

MATH5425
Fuzzy Logic and Neural Nets
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: how fuzzy logic handles imprecise and vague concepts, fuzzy control theory, artificial neural nets and their learning algorithms, approximation by neural nets, supervised and unsupervised networks.

MATH5505
Topics in Algebra - Commutative Algebra
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

MATH5515
Topics in Analysis
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

MATH5525
Topics in Geometry - Knot Theory
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

MATH5535
Topics in Number Theory - Analytic Number Theory
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

MATH5605
Operator Theory
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: invariant subspaces, integral equations and Fredholm theory, functional calculus, decomposition theorems, Hankel and Toeplitz operators, operators on Hp spaces, Ergodic theory, semigroups.

MATH5615
Banach and Operator Algebras - C* Algebras
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: commutative Banach algebras and Gelfand theory, spectral theory of operators on Hilbert space, introduction to C* and von Neumann algebras, relationship to group representations and ergodic theory.

MATH5625
Distributions and Partial Differential Equations
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: derivatives, convolutions and Fourier transforms of distributions, weak solutions of differential equations, existence and uniqueness for the Cauchy problem, Holmgren's Theorem, elliptic boundary-value problems via the Schauder approach.

MATH5635
Dynamical Systems
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: automorphisms of measure spaces, recurrence, ergodicity, entropy, conjugacy and orbit equivalence, topological dynamics with applications to number theory, fractals and chaos.

MATH5645
Number Theory
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

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.

MATH5655
Homological Algebra
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: concept of a category, additive and abelian categories, representable functors, exact sequences, homology, derived functors, Ext and Tor, relations with algebraic topology, derived categories, homological dimension.

MATH5665
Algebraic Topology
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: functors and natural transformations, homotopy of maps, homotopy groups, covering spaces, simplicial and singular homology and cohomology, homological algebra.

MATH5675
Set Theory and Topology
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: set theory, axiom of choice, ordinals and cardinals, topological spaces, compactness, quotient topologies.

MATH5685
Complex Analysis
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics in advanced complex function theory chosen from the following: conformal mappings, analytic continuation, entire and meromorphic functions, elliptic functions, asymptotic methods, integral formulae, harmonic functions, Riemann surfaces.

MATH5695
Stochastic Differential Equations
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: Brownian motion, Ito calculus, Malliavin calculus, Girsanov's theorem, Clark's theorem, the Harrison-Pliska model of option pricing.

MATH5705
Commutative Harmonic Analysis
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: Fourier series and integrals for Tn and Rn, locally compact abelian groups, Pontrjagin duality, Plancherel Theory.

MATH5715
Noncommutative Harmonic Analysis
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: locally compact groups, Haar measure, homogeneous spaces, convolution algebras, representations, irreducibility, induced representations, Mackey theory, compact groups, Peter Weyl theory, nilpotent groups, Kirillov theory.

MATH5725
Lie Groups
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: revision of manifolds and linear algebra, topological groups, Haar measure, Lie groups, Lie algebras, substructures, classification of semi-simple complex Lie algebras, highest weight representations.

MATH5735
Advanced Algebra
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: rings, commutative rings, factorization theory, modules, associative and Lie algebras, Wedderburn theory, category theory.

MATH5745
Group Theory
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

MATH5755
Mathematical Foundations of Quantum Mechanics - Mathematical Relativity
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: origin and interpretation of Schrodinger's equation, unbounded operators on Hilbert space, spectral theory, functional calculus and time evolution, the role of symmetry groups, irreducible and induced.

MATH5765
Algebraic Geometry
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: algebraic curves, cohomology, Riemann- Roch theorem, elliptic curves, Jacobians, classical projective geo-metry, quadrics, cubic surfaces, Grassmanians, Schubert calculus, commutative algebra, modules, homological concepts, dimension.

MATH5775
Calculus on Manifolds
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: manifolds, vector fields, flows, introduction to Morse theory, differential forms, Stokes theorem, de Rham cohomology.

MATH5785
Geometry
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics from: axiomatic geometry, affine geometry, Desargues theorem, projective geometry, spherical and hyperbolic geometry.

MATH5795
Investment Science
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

MATH5805
Special Topics in Statistics
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

MATH5806
Applied Regression Analysis
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Generalised linear models. Ridge regression. Analysis of residuals. Nonlinear regression.

MATH5815
Experimental Design 1
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Modified designs for fixed effects models. Incomplete and balanced incomplete block designs. Confounding and fractional replication. Randomization theory.

MATH5816
Mathematics of Security Markets 2
School of Mathematics
Staff Contact: School Office
UOC6 HPW2
Prerequisite/s: MATH5965

More advanced applications of stochastic calculus to security markets.

MATH5826
Statistical Methods in Epidemiology
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Measures and models of disease association, relative risks and odd ratios, attributable risk, interactions, Mantel-Haenszel formulae, confounding, logistic regression, survival analysis.

MATH5835
Stochastic Processes
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Random Walk and Exponential Random Walk: interpretation in Mathematical Finance, martingales. Wiener Processs: calculation of functionals and distributions related to the Wiener process, reflection principle and barrier problem. Stochastic integration: Ito formula, calculations based on the Ito formula. Linear and bilinear stochastic differential equations: interpretation in Mathematical Finance, connections with partial differential equations, pricing of simple options. The Girsanov Theorem: linear barrier problem, examples of exotic options.

MATH5836
Data Mining and its Business Applications
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Increasingly, organisations need to analyse enormous data sets to determine useful structure in them. In response to this, a range of statistical methods and tools have been developed in recent times to allow accurate and quick analysis of these sets. Topics include: choosing the right data mining tool for your data, linear methods (logistic regression and generalized linear models) and data mining, clustering methods, decision trees, multivariate adaptive regression splines, wavelet smoothing, hybrid models, neural networks, support vector machines, bagging and boosting methods. Case studies of industry-based data mining projects will feature prominently. The most recent data mining software will be used to illustrate the methods.

MATH5845
Time Series
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Spectral estimates, discrete and continuous spectra. Periodogram analysis. Probability theory, special processes. Ergodicity and linear filters. Estimation and hypothesis testing.

MATH5855
Multivariate Analysis 1
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Likelihood ratio tests for means, variances and structure. Discriminant, principal component, canonical and factor analysis. Computing will feature prominently.

MATH5865
Multivariate Analysis 2
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

The general linear hypothesis. Tests based on roots, distribution theory. Multivariate analysis of variance and covariance (MANOVA and MANCOVA). Repeated measures analysis. Introduction to structural equation models.

MATH5875
Sample Survey Design
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Simple, stratified and systematic random sampling. Estimation of proportions, ratios, and sample sizes. Multistage sampling.

MATH5885
Longitudinal Data Analysis
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics include exploratory data analysis; fixed, random and mixed effects linear models; generalized linear models; diagnostics and model checking; and missing data and non-response issues. Applications to medical and biological sciences are used throughout.

MATH5895
Nonparametric Methods
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Sign test, run tests, goodness of fit tests. Order statistics and range. Rank order statistics. Wilcoxon and signed rank tests, one and two-way rank analyses of variance. Rank correlation. Randomization theory and permutation tests. Paired comparisons. Censoring and truncation.

MATH5905
Statistical Inference
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Decision theory. General theory of estimation and hypothesis testing. Robustness of the statistical procedures. Introduction to the bootstrap.

MATH5915
Medical Statistics
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Bioassay, generalised linear models, analysis of multivariate discrete data including loglinear model analysis of contingency tables, survival analysis, competing risks, hazard models for point processes.

MATH5925
Project
School of Mathematics
Staff Contact: School Office
Enrolment requires School approval
UOC12 S1 S2

A thorough study of a set of statistical papers or some workplace problem of the student s choice.

MATH5935
Statistical Consultancy
School of Mathematics
Staff Contact: School Office
UOC6

This is a practical course which introduces students to the general framework of statistical consulting and gives students experience in solving statistical problems arising in practice.

MATH5945
Categorical Data Analysis
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Logistic models. Loglinear models. Multiway contingency tables. Ordered categories. Implementation of techniques in a statistical package.

MATH5955
Statistical Quality Control
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Lot acceptance sampling plans. Acceptance inspection for continuous production. Process control charts. Multicharacteristic quality control. Economic design of control plans. Quality evaluation.

MATH5960
Bayesian and Markov Chain Monte Carlo Methods
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

MATH5965
Mathematics of Security Markets 1
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Derivative securities, forward and futures contracts, swaps. Option pricing using Black Scholes and binomial approaches. Stochastic models for asset dynamics, term structure of volatilities and interest rates. Introduction to Ito calculus, diffusion processes and stochastic differential equations.

MATH5995
Financial Statistics
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Binomial lattice model, random walks and Wiener process, the ARCH family of models and stochastic volatility models. The implications of these models for option pricing are examined analytically and via Monte Carlo simulation.

MATS6605
Professional Communication and Presentation
School of Materials Science and Engineering
Staff Contact: C Sorrell
UOC3 HPW2 S1 S2
Corequisite/s: MATS6695

Presentation skills: public speaking, presentation techniques, visual aids, and library usage.
MATS6695 Materials Project: guidelines for project preparation and two oral presentations.
Job search skills: curriculum vitae, cover letters, and interviews.

MATS6615
Materials Design
School of Materials Science and Engineering
Staff Contact: A Crosky
UOC6 HPW4 S1 S2

Selected topics in ceramics, composites, metals, and/or polymers involving the inter-relationships between materials properties, design, production, and performance. Materials selection, specifications, and standards.

MATS6625
Materials Processing
School of Materials Science and Engineering
Staff Contact: V Sahajwalla
UOC6 HPW4 S1 S2

Selected topics in ceramics, composites, metals, and/or polymers involving the processing of raw materials to their finished condition as precursors, stock shapes, or specific components. Mass and energy balances, engineering calculations, and unit operations.

MATS6635
Materials Properties & Behaviour
School of Materials Science and Engineering
Staff Contact: M Hoffman
UOC6 HPW4 S1 S2

Selected topics in ceramics, composites, metals, and/or polymers involving the principal properties of materials: physical, chemical, thermal, mechanical, thermo-mechanical, electrical, magnetic and optical.

MATS6645
Materials Characterisation
School of Materials Science and Engineering
Staff Contact: P Munroe
UOC6 HPW4 S1 S2

Selected topics in ceramics, composites, metals, and/or polymers involving the structural, microstructural, and chemical analyses of materials: X-ray diffraction (XRD), scanning electron microscopy (SEM), transmission electron microscopy (TEM), energy dispersive spectroscopy (EDS), electron probe microanalysis (EPMA), atomic force microscopy (AFM), and optical microscopy.

MATS6655
Advanced Materials Characterisation
School of Materials Science and Engineering
Staff Contact: A Crosky
UOC6 HPW4 S1 S2

Selected topics in ceramics, composites, metals, and/or polymers involving the structural, microstructural, and chemical analyses of materials: secondary ion mass spectroscopy (SIMS), X-ray photoelectron spectroscopy (XPS), Auger electron spectroscopy (AES), and laser Raman microscopy.

MATS6665
Materials Applications & Performance
School of Materials Science and Engineering
Staff Contact: P Munroe
UOC6 HPW4 S1 S2

Selected topics in ceramics, composites, metals, and/or polymers involving the inter-relationships between the structure and microstructure of materials, their resultant properties, expected and actual performance, and current and potential applications.

MATS6675
Materials Modelling
School of Materials Science and Engineering
Staff Contact: M Hoffman
UOC6 HPW4 S1 S2

Selected topics in ceramics, composites, metals, and/or polymers involving numerical and analytical techniques, such as finite element modelling (FEM), applied to materials and processes in terms of design and performance, particularly thermal and mechanical stress analyses. Software packages and design of computer programs.

MATS6685
Management
School of Materials Science and Engineering
Staff Contact: School Office
UOC6 HPW4 S1 S2

Selected topics in management involving basic economic principles, cost-benefit analyses, basic accounting, legal and contractual issues, products and services liability, human resources, industrial relations and conflict, leadership, decision-making, operations and project management, quality assurance and management, organisational design and development, market research and strategy, marketing and sales.

MATS6695
Materials Project
School of Materials Science and Engineering
Staff Contact: School Office
UOC6 HPW8 S1 S2
Corequisite/s: MATS6605

A project report on ceramics, composites, metals, and/or polymers in the form of a thesis, including literature review; experimental, theoretical, or design investigation; and discussion of the results. Serves as the basis for the oral presentations in MATS6605 Professional Communication and Presentation.

MDCM5001
New Media, Technology and Education
School of Media and Communications
Staff Contact: School Office
UOC8 HPW2 S2

Considers the changing nature of media, analysing in particular the convergence of digital media and its implications for education and culture. Critically analyses the utopian claims frequently made about new media and introduces ways of teaching about these media in primary and secondary school contexts. Examines the use of new media in education generally and in media education in particular.

MDCM5002
Teaching Television
School of Media and Communications
Staff Contact: P Bell
UOC8 HPW2 S1

Introduces recent approaches to the study of television as a cultural form. The engagement of children with television is approached through studying audiences as active, using television genres/programs by incorporating them into their personal development and social lives. Examines arguments which see television as socially undesirable because of its effects on the vulnerable and its representation of violent or sexually-explicit behaviour, exploring ways by which primary and secondary school students can consider such issues and develop critical competence about the medium generally.

MDCM5003
Teaching Cinema
School of Media and Communications
Staff Contact: P Bell
UOC8 HPW2 S2

Popular film, including action genres and animation, is studied in relation to students' experience of 'movies' as entertainment. Approaches to analysing and interpreting films are examined by focusing on questions of fantasy and 'realism'. The visual and aural qualities of the cinema are considered while literary models of film 'appreciation' are also evaluated. Ways of encouraging students to create pre-cinematic 'stories' are developed (eg cartoon strips, story-boards, collages/montages). The appeal of 'stars' and particular genres is used to open up students to engage deeply with the cinema as a cultural form.

MDCM5004
Media Production in Education
School of Media and Communications
Staff Contact: School Office
UOC8 HPW2 S1

Elementary skills in script construction, videography and editing are developed in the context of their utilisation in the classroom. Computer-mediated communication and elements of multimedia production are studied with the aim of developing creative classroom exercises in which students can participate to produce audio-visual or 'multimedia' work. It is emphasised that relatively low levels of technology can provide rich classroom resources if used creatively by the teacher.

MDCM5005
Media Advocacy and Public Education
School of Media and Communications
Staff Contact: School Office
UOC8 HPW2 S2

Develops practical abilities in designing media-based education campaigns (suitable for health, environmental issues, for example). The media are seen as a resource to be utilised in advocating social or behavioural change and as the conduit for public education programs. Cross-cultural issues are considered as well as questions of 'targeting' groups by age, gender and sub-cultural definition. Introduces techniques of qualitative media/social research in the context of public education.

MDCM5006
Research Project
School of Media and Communications
Staff Contact: P Bell
Enrolment requires School approval
UOC8 S1 S2

Individual projects are undertaken under supervision. Projects must involve original research and the development of an educationally-relevant media resource, either a finished product (video, CD Rom, booklet, for example) or a script/outline as well as a contextualising, theoretical, essay setting out the aims, methods and educational significance of the project.

MDCM5007
Reading Program
School of Media and Communications
Staff Contact: P Bell
Enrolment requires School approval
UOC8 S1 S2

Designed to accommodate students' interests not covered in the program. Each student's program is designed in consultation with the Head of School and may be substituted for one elective. The program involves writing a 6,000 word essay under supervision of a relevant staff member.

MDCM5008
Web-based Technologies
School of Media and Communications
Staff Contact: A Rothwell
UOC8 HPW2 S2

Develops practical skills in web-design and uses in research and teaching. Students research, design and produce a web-site for an educational institution or service and critically evaluate alternatives found in current practice. Where appropriate, web-sites designed by students will also be evaluated in relevant educational contexts.

MDCM5009
New Media and Technology
School of Media and Communications
Staff Contact: School Office
Enrolment requires School approval
UOC8 HPW2 S1

Apply Cultural Studies approaches to recent developments in media practices, industries, and technologies. This course offers a set of tools for interpreting the complex interplay between representation, identity, production, consumption and regulation in contemporary techno-culture.

MDCM5013
New Media Criticism
School of Media and Communications
Staff Contact: School Office
UOC8 HPW2 S2

Considers how can new media works are interpreted. Looks at textual, journalistic, sociological and philosophical approaches to evaluating websites, CD-ROM and other new media works and systems. Evaluates a selection of new media works.

MDCM5014
Professional Writing - New Media
School of Media and Communications
Staff Contact: School Office
UOC8 HPW2 S1

Examines the textual forms in new media and how text works in non-linear and multi-linear forms. Different genres of new media will be analysed and the workings of text will be considered in terms of rhetoric, grammatical principles of cohesion and how text constructs interpersonal relations between product and user. Scripting and storyboarding conventions in new media genres.

MECH8310
Advanced Vibration Analysis
School of Mechanical and Manufacturing Engineering
Staff Contact: R Randall
UOC6 S2
Excluded: MECH9310

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 gearedshaft systems.

MECH8311
Fundamentals of Vibration
School of Mechanical and Manufacturing Engineering
Staff Contact: N Kessissoglou
UOC6 S1 S2
Excluded: 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.

MECH8312
Fundamentals of Noise and Vibration Measurment
School of Mechanical and Manufacturing Engineering
Staff Contact: R Randall
UOC6 S1
Excluded: MECH9312
Fourier coefficients of periodic signals. Power spectral density. Time windows and spectral analysis. Simple sound pressure measurements. Measurement of special descriptors of sound. Measurement of reverberation time and calculation of absorption coefficients. Measurements of the sound power level of a sound source by the direct and the comparison method. Measurements of the sound power levels of a sound source by the intensity method. Tape recording of noise and vibration signals. Using accelerometers.

MECH8323
Environmental Noise
School of Mechanical and Manufacturing Engineering
Staff Contact: S Samuels
UOC6 S1 S2

Prediction of source strengths of transport and construction noise. Noise propagation models including atmospheric and topological effects. Propagation in urban and rural areas. Attenuation by barriers. Strategies for controlling environmental noise. Prediction models. Environmental noise exposure concepts.

MECH8324
Building Acoustics
School of Mechanical and Manufacturing Engineering
Staff Contact: R Randall
UOC6 S2

Room acoustics viewed from modal and energy aspects. Absorption and transmission performance of building elements such as carpets, windows and walls. Relationship between laboratory and field performance measurements. Noise problems associated with building services.

MECH8325
Fundamentals of Noise
School of Mechanical and Manufacturing Engineering
Staff Contact: N Kessissoglou
UOC6 S1
Excluded: MECH9325

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.

MECH8326
Advanced Noise
School of Mechanical and Manufacturing Engineering
Staff Contact: N Kessissoglou
UOC6 S2
Prerequisite/s: MECH8325 or MECH9325
Excluded: MECH9326

The Helmholtz resonator. Transmission line formulae for one dimensional plane wave calculations. Development of the three dimensional acoustic wave equation. Applications of the three dimensional form of the acoustic wave equation in rectangular coordinates, including transmission of plane waves at oblique incidence between media, waves in rectangular ducts, standing waves in enclosures. Applications of the three dimensional wave equation in cylindrical and spherical coordinates. Basic structural-acoustic interaction.

MECH8620
Computational Fluid Dynamics
School of Mechanical and Manufacturing Engineering
Staff Contact: E Leonardi
UOC6 HPW3 S1

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.

MECH8751
Refrigeration and Air Conditioning 1
School of Mechanical and Manufacturing Engineering
Staff Contact: E Leonardi
UOC6 HPW3 S1
Excluded: MECH4751, MECH8751

Review of thermodynamic principles; evaluation of thermodynamic properties of real fluids. Refrigerants, their properties and applications. Gas cycle refrigeration. Steam-jet refrigeration. Vapour compression refrigeration; analysis and performance characteristics of the complete cycle; analysis and performance of multipressure systems. Analysis of the performance of compressors, condensers, evaporators and expansion devices. Thermo-electric refrigeration.

MECH8752
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.

MECH9010
Project Mechanical Engineering
School of Mechanical and Manufacturing Engineering
Staff Contact: N Kessissoglou
UOC12 S1 S2

Note/s: The project must be completed in no more than two sessions.

MECH9310
Advanced Vibration Analysis
School of Mechanical and Manufacturing Engineering
Staff Contact: R Randall
UOC6 HPW3 S2
Excluded: MECH4310, MECH8310

Introduction to experimental vibration analysis using Fast Fourier Transform (FFT) techniques. Typical sources of vibration in machines. Analysis of continuous systems via classical and finite element techniques. Experimental modal analysis. Torsional vibrations, including geared shaft systems.

MECH9311
Fundamentals of Vibration
School of Mechanical and Manufacturing Engineering
Staff Contact: N Kessissoglou
UOC6 HPW3 S2
Excluded: MECH3310, MECH3330, MECH8311

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.

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
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
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

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
Excluded: MECH4720

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
Excluded: MECH4730

Nature of multiphase flow. Flow regime maps. Two-phase flow in vertical, horizontal and inclined pipes. Modelling of two-phase flow: homogenous model; drift flux model; drift velocity model; separated model. Annular and stratified flows. Flow in adiabatic pipes. Flow in heated pipes. The critical flow of a two-phase mixture. Pressure drop and heat transfer correlations in pipes. Subcooled, nucleate, pool and film boiling. Critical heat fluxes in boiling. Mechanisms of heat transfer in boiling. Nucleation, bubble dynamics and bubble parameters. Film and dropwise condensation on flat plates. Condensation on horizontal tubes and tube banks. Condensation inside tubes. Two-phase heat exchangers. Laboratory experiments.

MECH9740
Power Plant Engineering
School of Mechanical and Manufacturing Engineering
Staff Contact: School Office
UOC6 HPW3 S2
Excluded: MECH4740

Energy sources, power plant thermodynamics. Fuel, combustion processes and equipment. Boilers, turbines and condensers. Heat exchangers, pumps, water supply and treatment systems. Air circulating and heating systems. Station operation and performance. Economics of electrical power production. Environmental impacts of power plants. Alternate sources of energy. Power station field trip.

MECH9751
Refrigeration and Air Conditioning 1
School of Mechanical and Manufacturing Engineering
Staff Contact: E Leonardi
UOC6 HPW3 S1
Excluded: MECH4751, MECH8751

Review of thermodynamic principles; evaluation of thermodynamic properties of real fluids. Refrigerants, their properties and applications. Gas cycle refrigeration. Steam-jet refrigeration. Vapour compression refrigeration; analysis and performance characteristics of the complete cycle; analysis and performance of multipressure systems. Analysis of the performance of compressors, condensers, evaporators and expansion devices. Thermo-electric refrigeration.

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

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
Excluded: MECH4700

Thermodynamic cycles. Combustion, reaction kinetics. Real engine cycles. Chart, computer analysis. Spark ignition engines. Flame physics. Combustion chamber design. Charging, discharging; heat transfer; friction. Emissions, fuels, computer modelling: efficiency, performance, emissions. Testing. Laboratory.

MFIN6201
Empirical Techniques & Applications in Finance
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3

Reviews probability and statistical techniques commonly used in quantitative finance. Topics include common univariate and multivariate continuous distributions, parametric and non-parametric estimation techniques. Advanced topics include: unobserved components and their applications to non-Markov processes, estimation techniques based on Expectation Maximising Algorithm. Applications of these tools include rational stochastic asset price bubble and the measurement of financial market risk premia. Introduced to appropriate software for such exercises.

MFIN6202
Applied Corporate Finance
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3

Provides an advanced treatment of the contemporary theoretical and empirical literature related to corporate financing and investing decisions. Topics include risk, return and market efficiency, the role of financial theory and empirical evidence, anomalies in market efficiency, advanced topics in corporate investment decisions, ownership control and compensation, capital structure policy, dividend policy and share repurchases, corporate bond stock and option valuation, IPOs and SEOs, derivatives and risk management, other topical issues in applied corporate finance.

MFIN6203
Applied Portfolio Management
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3

Provides the foundation for the analysis of active funds management. In particular focuses on an in depth treatment of asset pricing theories and examines selected tests of the validity of these theories. Examination of empirical tests aim at pointing out how research can be implemented and modified to suit market conditions. Of particular emphasis is the application of these theories to real market conditions. A substantial portion of time is spent conducting analyses of models which are likely to predict asset returns.

MFIN6204
Interest Rate Risk Management.
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3

Focuses on the practical methods for valuing, hedging and managing interest rate derivatives. Begins with a review of the standard pricing framework for interest rate derivatives such as bond options, caps and floors and points out its limitations; followed by and in-depth study of common interest rate models, including Vasicek, Cox-Ingersoll-Ross, Ho-Lee, Hull-White, Black-Derman-Toy, and Black-Karasinski. Advantages and disadvantages as well as the issue of the analytic tractability of these models are examined. The more general and consistent interest rate framework of Heath-Jarrow-Morton is introduced and the links to earlier models; LIBOR market model of Brace-Gatarek-Musiela and its application to the pricing of caps, floors and swaptions are studied. Methods for estimating the model parameters, such as the maximum likelihood estimation and calibration to market prices, and numerical methods for computing derivative prices, such as the lattice and Monte Carlo methods, are presented and the practical issues of constructing reliable forward rate curves. Forward rate volatility curves are addressed.

MFIN6208
Venture Capital and Private Equity
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3

This course provides an accessible introduction to the literature on recent developments in venture capital (VC) investments. The course provides a complete, yet concise, synthesis of the recent available literature on venture capital within a logical, analytical structure. It provides important discussions of the three major areas of VC fundraising, VC investing and VC exit strategies. An important feature of the course is the extensive use of cases of US and Australian VC investment activity that will be used in weekly case discussions. These are designed to bring a practical application to the empirical evidence on the investment performance of this rapidly expanding asset class. Several case study sessions will involve VC practitioner input.

MFIN6209
Options, Futures and Exotic Derivatives
School of Banking and Finance
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW3

This course is an advanced course in financial derivatives. Exotic options, such as exchange options, chooser options, rainbow options, extendible options, binaries, barriers, lookback options, and Asian options, will be discussed in detail. The course will also deal with models that imply incomplete markets, such as GARCH models, stochastic volatility models, regime-switching models, constant elasticity of variance models, and models driven by Levy processes such as jump diffusions. For each model we show how to estimate the parameters, and discuss which model best captures the skewness and kurtosis observed in certain markets. We discuss pricing under various martingale measures, approximate hedging strategies, and fitting the volatility smile or volatility skew. Numerical methods such as Monte Carlo techniques, the use of characteristic functions, and the relationship to partial differential equations will also be discussed.

MFIN6401
Models for Risk Management
Actuarial Studies Unit
Staff Contact: M Sherris
Enrolment requires School approval
UOC6 HPW3 S2

This course covers the models used in insurance and reinsurance for frequency and severity of losses for both individual risks and portfolios of risks. Included is the modeling of dependencies amongst risks and links to credit and operational risk models. Topics include: individual and collective risk models; loss distributions; estimation techniques for loss models; GLM's; extreme values and tails of losses; copulas and modeling dependency.

MFIN6402
Risk and Capital Management
Actuarial Studies Unit
Staff Contact: M Sherris
Enrolment requires School approval
UOC6 HPW3 S1

This course covers the integrated risk management approach to balance sheet and capital management for market, credit and operational risk. Pricing theory, risk based capital and capital management are considered in a common framework based on theories of capital structure and integrated risk management. Risk measures for setting capital requirements for market, credit and operations risk such as VaR, TailVar are reviewed and critiqued. Approaches to economic capital and optimal risk and capital management strategies are developed. Topics include: Risk based capital and capital structure theory; risk and capital management products; insurance pricing theory; role of capital in pricing and the frictional cost approach to risk and capital management.

MFIN6403
Asset-Liability Management
Actuarial Studies Unit
Staff Contact: M Sherris
Enrolment requires School approval
UOC6 HPW3 S2

This course covers the models and techniques used for the projection, valuation and risk management of asset and liability cash flows inlcudng interest sensitive liabilities and equity linked liabiltiies. Models reviewed include those for fixed and interest sensitive cash flows, equity return models and more comprehensice models inlcuding inflation and exchange rates and the application of the modesl in Dynamic Financial Analysis (DFA). Topics inlcude; single and multi-period model framework; optimal asset-liability strategies; risk-neutral computation; dynamic programming; incomplete markets; ALM in insurance; DFA modeling in insurance and reinsurance.

MFIN6404
Risk Management Strategies
Actuarial Studies Unit
Staff Contact: M Sherris
Enrolment requires School approval
UOC6 HPW3 S1

This course covers innovative risk management strategies using capital and insurance market techniques including those used in the alternative risk transfer (ART) market. Topics include: product types; securitization; pricing risk-linked securities; credit risk; weather and energy risk; modeling individual risks; industry specific case studies; portfolio considerations; accounting, regulatory and legal issues.

MICR5033
Graduate Diploma (Microbiology)
School of Biotechnology and Biomolecular Sciences
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1 S2

The structure of the program would be decided after discussions with students, taking into account their particular background, interest and career goals. Usually students would attend one or more of the advanced third year courses in either microbial genetics, microbial physiology, environmental microbiology, immunology, medical bacteriology or virology. The rest of the year would be spent carrying out a research project supervised by a member of academic staff.

MINE5010
Fundamentals of Rock Behaviour for Underground Mining
School of Mining Engineering
Staff Contact: B Hebblewhite
UOC6 HPW3 S1

Introduction to mining rock mechanics and the rock mechanics context within new and operating underground mines. Basic physical principles applied to rock mechanics and geotechnical engineering in an underground mining environment. Elasticity and stress; rock properties and methods of determination; rock response to load; failure modes; time-dependency; stiffness; energy release; rock mass characterisation; geological environment and structure; stress environment and methods of determination; hydro-geological environment; soft rock/soil mechanics considerations.
Note/s: The prefix for this course will change from MINE to MNNG in 2004.

MINE5020
Geotechnical Assessment for Underground Mining
School of Mining Engineering
Staff Contact: B Hebblewhite
UOC6 HPW3 S1

Geotechnical components of exploration programs - requirements, technologies, integration, management. Geotechnical assessment and logging; geophysical methods for geotechnical determinations, in both exploration and operating mine environments; integration of geotechnical data; rock mass characterisation; geotechnical hazard/condition mapping.
Note/s: The prefix for this course will change from MINE to MNNG in 2004.

MINE5030
Mining Excavations in Rock
School of Mining Engineering
Staff Contact: B Hebblewhite
UOC6 HPW3 S2

Stress in rock and the effect of depth on pre-mining stress state; other factors influencing stress in rock; mining-induced stress and the rock mass response to excavation process; stress distributions around different excavation shapes and sizes - elastic and inelastic rock materials; excavation stability and potential failure modes; interaction between different excavations (horizontal and vertical interaction); regional stability considerations; effect of time on rock behaviour around excavations.
Note/s: The prefix for this course will change from MINE to MNNG in 2004.

MINE5040
Coal Mining Methods, Mine Planning and Applied Geomechanics
School of Mining Engineering
Staff Contact: B Hebblewhite
UOC6 HPW3 S2

Range of mining methods used in underground coal mining and the core geotechnical parameters and criteria that effect the choice or application of the methods. Mine entry systems (drifts, shafts etc); pillar mechanics and design procedures; geomechanics of longwall mining; caving mechanics, periodic weighting, windblasts; outbursts and rock bursts/bumps; pillar extraction; highwall mining; mine subsidence mechanics and design; geotechnical equipment considerations; mine planning considerations; geotechnical design methodologies (methods, excavations, pillars etc). A range of case studies will supplement this course content.
Note/s: The prefix for this course will change from MINE to MNNG in 2004.

MINE5050
Ground Control Principles and Practice in Underground Coal Mining
School of Mining Engineering
Staff Contact: B Hebblewhite
UOC6 HPW3 S1

Principles of rock reinforcement; active/passive support; support requirements for different excavation types and mining methods; ground reaction curves; load and displacement controlled support response; types of ground support/reinforcement hardware and related systems; design of support systems; interaction of mining method, layout and reinforcement systems; ground support installation and quality assurance; time effects on ground support systems and remedial options.
Note/s: The prefix for this course will change from MINE to MNNG in 2004.

MINE5060
Operational Geotechnical Management (Underground Coal Mining)
School of Mining Engineering
Staff Contact: B Hebblewhite
UOC6 HPW3 S1

Risk assessment methodologies and core geotechnical risks in underground coal mining; geotechnical risk management strategies; preparation of strata control management plans; geotechnical hazard mapping; geotechnical instrumentation; role and design of geotechnical measurement and monitoring systems; underground data collection; rock fall recovery techniques; geotechnical audits, quality assurance; geotechnical variability and dealing with non-compliance; geotechnical training; safe operating procedures; use of specialist consultants; geotechnical reporting and management interaction; professional responsibilities and accountabilities.
Note/s: The prefix for this course will change from MINE to MNNG in 2004.

MINE8110
Mining Processes and Systems
School of Mining Engineering
Staff Contact: B Hebblewhite
UOC6 S1

All generic mining methods will be reviewed and analysed to identify the fundamental drivers which influence the performance of a mining operation based on each method. Mining operations are made up of a complex and inter-related number of key processes and systems.

Appropriate and efficient mine design, planning and operations is dependent on understanding and optimising these processes and systems. Components of a generic mining operation to be considered will include: rock breakage, materials transport, grade/quality control and economic sensitivity, ground stability, mine environment and environmental impact. In each component, process and/or system, the critical economic sensitivities will be identified, together with the safety implications and management strategies.

MINE8120
Hazard Identification, Risk and Safety Management in Mining
School of Mining Engineering
Staff Contact: School Office
UOC6 S1

The course includes the following: safety management; hazard and risk analyses, safety hazard identification, management techniques, safety audits; statistics; HAZOP management and maintenance of change risk analysis; cost benefit analysis; attitudes to safety in mining; effective training; accident and injury report/recovery; ergonomics and safety engineering; prevention of traumatic injury; work stress; environmental factors; monitoring and protection; personal protective equipment; safety policies and programs; action plans. A generic approach to loss control within mining operations will be reviewed together with identification of management strategies to deal with such losses. This will extend from simple hazard control management to full catastrophic management planning. The course will draw on experience and techniques applied in non-mining industries in addition to a practical focus on mining risk management taught by specialist safety management personnel.

MINE8130
Technology Management in Mining
School of Mining Engineering
Staff Contact: School Office
UOC6 S2

The course addresses the role of technology in the mining process. Sensitivity of the mine profitability and performance is addressed with respect to different levels of technology in each stage of the mining operation. Appropriate specification of technology; capital justification and cost benefit analyses; performance monitoring; technology audits; training requirements and effectiveness; occupational health and safety implications of technology changes relative to skill levels.

MINE8140
Mining Geomechanics
School of Mining Engineering
Staff Contact: B Hebblewhite
UOC6 S1

The course will provide an introduction to the full range of potential geomechanics issues which form part of, or impact on a mining operation, from resource evaluation, mine design to daily operations. This will cover both coal and metalliferous operations. The course content will include the following components: site investigation, rock mass classification, rock fragmentation, caving prediction and control, slope stability, diggability and rippability, role and application of reinforcement systems, geotechnical instrumentation, stress analysis and stability evaluation around complex excavations, ground control management and environmental geomechanics.

MINE8210
Management Systems - Projects, Processes, Contracts, Contractors
School of Mining Engineering
Staff Contact: P Hagan
UOC6 S2

Different aspects of mining operations require different management approaches. This course provides applied management theory and practices in each area of project, process, contracts and contractor management. In each case, examples and case studies are linked to mining operations. The course works through a typical mining system to identify the embedded sub-projects and processes which are inherent to the mining system and demonstrates the role and benefits of applying different management techniques. Managing contracts, including on-going contractor management both at the construction and ongoing operational stage of a mine is addressed in the course.

MINE8220
Mine Feasibility, Planning and Project Evaluation
School of Mining Engineering
Staff Contact: M Malone
UOC6 S1

This course addresses the process of mine feasibility planning and project evaluation commencing from the resource assessment stage. It includes a brief introduction to in situ resource estimation methods, the use of geostatistical techniques in grade interpretation, ore body block modelling and reserves estimation. The implications of the Australasian Code for Reporting of Mineral Resources and Ore Reserves for quality control of these processes will be discussed. Other topics include the feasibility study process, mine planning methodologies and scheduling techniques, mine cost structures and cost estimation. The project evaluation component includes financial theory in relation to project evaluation, evaluation techniques, project financing, cost of capital, revenue assumptions, cost assumptions, risk and sensitivity analysis, institutional and corporate perspectives on project evaluation, introduction to financial modelling, practical exercises in financial modelling, intra-project evaluation, and financial modelling case studies.

MINE8230
Mine Sampling, Grade Control and Reserves Definition
School of Mining Engineering
Staff Contact: School Office
UOC6 S2

This course will provide a full coverage of the theory and practice of sampling solid and particulate materials, based on Pierre Gy's theoretical research as modified by Francis Pitard and Francois Bongarcon. It will cover subsampling and sample preparation for laboratory analysis, as well as the need for and means of establishing and monitoring a quality assurance/quality control program for laboratory analytical techniques. The geostatistics coverage will include variography, grade interpolation and average grade determination and will lead into cut-off grade determination, reserves definition and ore body modelling. The interaction of mining method and reserves definition will be reviewed. Case histories will illustrate grade control and reserves definition problems and practices. Management topics will include maintaining the integrity of the database and involving and motivating the workforce.

MINE8710
Mine Slope Stability
School of Mining Engineering
Staff Contact: School Office
UOC6 S2

This course will deal with the major topics of engineering geology and groundwater controls on surface mining slope stability in the form of discontinuities, variable materials and pore pressures; effect of excavation method and scheduling in pit stability; the fundamental basis of stability analysis; advantages and disadvantages of a range of mathematical models; remedial measures that can be taken to stabilise slopes; pit slope design in the context of overall mine planning. In addition to dealing with the underlying principles, the course may involve workshops and field inspections so that the participants gain hands-on experience of practical cases.

MINE8720
Advanced Rock Mechanics
School of Mining Engineering
Staff Contact: B Hebblewhite
UOC6 S2

This subject will expand on components of the MINE8140 Mining Geomechanics subject to providing a more comprehensive and theoretical understanding of the engineering principles involved, together with practical mining industry application. Specific areas covered in this course include: stress analysis, advanced computational methods, rock mass behaviour and failure criteria, time-dependent rock characteristics under load, ground support - rock mass interaction, support systems, foundation engineering and geotechnical instrumentation.

MINE8730
Mechanised Excavation Engineering
School of Mining Engineering
Staff Contact: P Hagan
UOC6 S2

The course will address a range of rock cutting and mechanised rock excavation techniques applied in the mining industry. Fundamental engineering excavation mechanics will include: principles of coal and rock cutting mechanics; the performance of picks and free rolling cutters; cutting tool interaction; the design of cutting arrays for machine mining and tunnelling; impact breakage of rock; drill bit design and breakage mechanics; cutting tool materials and the effects of wear; methods of assessing rock cuttability; water jet cutting and water jet assisted drilling and cutting. Applications including full face and partial mining machines, drilling technologies and tunnel boring machines will be reviewed.

MINE8740
Blasting and Rock Fragmentation
School of Mining Engineering
Staff Contact: D Chalmers
UOC6 S2

The course will address the mechanics and practical applications and current technologies in rock fragmentation; theories of rock breakage and fragmentation; rock mass properties; structure and discontinuities and their impact on blast behaviour. Blasting theories and types of explosives and blast initiation procedures; blast designs for both underground and surface mining applications; blast hazard management; blast vibration and impact on structures and mining excavations; state-of-the-art blasting practices and technologies; and alternatives to conventional blasting for rock fragmentation.

MINE8750
Advanced Soil Mechanics and Mine Fill Technology
School of Mining Engineering
Staff Contact: School Office
UOC6 S2

Geotechnical properties of soil and unconsolidated materials and weak rocks for mining applications. Issues covered include: assessment of the stability, design and stabilisation of soil slopes and the influence of geology and groundwater, use of soils and weak materials for mine pavements, foundation design, soil dynamics and design for dynamic loading, consolidation, laboratory and site investigation techniques and soil liquefaction. Mine fill technology as an integral part of mining methods - fill properties, use of cemented and rock fill, paste fill technology, rock-fill interaction, fill transport and placement, fill economics, post-mining underground stowage.

MINE8760
Mine Geology and Geophysics for Mining Operations
School of Mining Engineering
Staff Contact: B Hebblewhite
UOC6 S2

This course addresses the essential interaction between the disciplines of geology and mining engineering in the geotechnical field, embracing engineering geology, structural geology and applied geophysics. The impact of engineering geological rock mass properties and structural features on mining operations is evaluated, together with likely variability of these parameters and the degree and confidence with which they can be predicted and projected ahead of the mining process. Modern geophysical techniques including 2D and 3D seismic, microseismics, tomography, electromagnetic imaging techniques, radar and down-hole survey methods are reviewed in the context of their ability to provide reliable information to assist with mine planning and operational decision-making. Effective communication systems for the geologist - engineering interface are also addressed, together with the integral role of such geological information in the planning and operations of a modern efficient mining operation.

MINE8770
Mining Law
School of Mining Engineering
Staff Contact: D Laurence
UOC6 S1

This course will explore all aspects of modern mining legislation and its impacts on the mining industry and its stakeholders both in Australia and the Asia-Pacific region. Topics to be covered include in broad terms mine health and safety, mining and the environment, exploration and mining, and miscellaneous issues. Concepts to be covered include duty of care, enabling legislation, safety management systems, the role of risk management, the role of the regulator, mining laws in developing countries, industrial law and other issues. The course is designed for mining industry personnel and/or those involved with the industry who need to be updated in this rapidly changing discipline. An emphasis will be on case studies. The course will be delivered by experienced practitioners from government, legal firms and UNSW.

MINE8780
Environmental Management for the Mining Industry
School of Mining Engineering
Staff Contact: D Laurence
UOC6 S1 S2

Participants should gain an appreciation of:- Global treaties, international environmental law and the role of the UN and World Bank - the big picture- Sustainability- Corporate responsibility- Environmental management tools including EIA and EMS- Best practice- The most significant environmental management issues on mine sites- Management of these issues.Topics addressed are: International Perspective, Sustainable Development, Corporate Responsibility, Legislation & Regulatory Framework, Risk Management, Environmental Impact Assessment, Environmental Management Systems & ISO 14001, EMS Case Study, Company Initiatives - corporate reporting/code for environmental management/case studies, Environmental Auditing, Mine Planning/Feasibility Studies/Documentation to Avoid Environmental Impact, Best Practice Environmental Management - an introduction, Environmental issues in mining, Management of Mine Wastes, Mine Tailings Disposal and Storage, Environmental issues in tailings management, Tailings dam incidents, Cyanide Management, Water pollution/Acid Mine Drainage and its remediation, Environmental Monitoring and sampling, Air Quality, Mineral Exploration, Quarries/ extractives/industrial minerals, Small scale & placer mining, Uranium mining, Mining in developing countries - a case study, Social impact, Rehabilitation and closure.

MINE8790
Advanced Mineral Economics and Commodity Marketing
School of Mining Engineering
Staff Contact: School Office
UOC6 S2

Review of general mineral economics theory and more detailed review of mining industry economics, leading to commercial evaluation of the market opportunities and problems of mining projects. Commodities: supply and demand; business cycles; exchange rates; metal and coal markets and hedging; long-term contracts and the spot market; commodity pricing and mine revenue calculation. Sources and types of market-related information; particular international market characteristics; trade barriers; cartels, regional and sub-regional economic groups; factors related to particular mineral commodities. The recognition of export opportunities; stages in the development of a market strategy; value added mineral products and export marketing. Case histories; in-course evaluation of market impact on a specific mining project.

MINE9901
Ventilation and Mine Services
School of Mining Engineering
Staff Contact: D Chalmers
UOC6 S1

This course module covers laws and relationships required to describe the behavious of mine or ducted ventilation systems. These relate to fluid flow, friction losses, fans and network analysis. Use of ventilation surveys to provide design parameters or reconciliation with predictive models is also covered.
Note/s: The prefix for this course will change from MINE to MNNG in 2004.

MINE9902
Environmental Contaminants
School of Mining Engineering
Staff Contact: D Chalmers
UOC6 S1

This course module deals with the occurrence, effects and control of atmospheric contaminants in underground mine environments. These include toxic and or flammable gasses and dusts originating from strata, mine equipment or the mining process. The causes, effects and control of mine fires is also considered.
Note/s: The prefix for this course will change from MINE to MNNG in 2004.

MINE9903
Heat in Underground Mines
School of Mining Engineering
Staff Contact: D Chalmers
UOC6 S1

This course module deals with the issues of heat in underground mines. The module topics are psychrometry, heat transfer, sources of heat and heat stress management. The module provides the means to analyse a mine's ventilation circuit to determine the magnitude of heat management controls required, such as refrigeration. The topic of refrigeration is taken further in module MINE9907.
Note/s: The prefix for this course will change from MINE to MNNG in 2004.

MINE9904
Ventilation System Management
School of Mining Engineering
Staff Contact: D Chalmers
UOC6 S2

This course module covers the risk management approach to control of hazards and development of safety management plans pertinent to mine ventilation. In addition, the issue of project economics relating to capital and operating costs in ventilation systems is covered.
Note/s: The prefix for this course will change from MINE to MNNG in 2004.

MINE9905
Coal Mine Hazards and Control
School of Mining Engineering
Staff Contact: D Chalmers
UOC6 S2

This course module describes hazards and controls specific to underground coal mines, such as seam gas emission, outbursts and spontaneous combustion. The module includes methods of quantifying or predicting management requirements based on properties of the working section and adjacent seam gas reservoirs.
Note/s: The prefix for this course will change from MINE to MNNG in 2004.

MINE9906
Coal Mine Ventilation
School of Mining Engineering
Staff Contact: D Chalmers
UOC6 S1 S2

This course module covers legislative requirements, pertinent to mine ventilation systems, in underground Australian coal mines, together with current industry practice.
Note/s: The prefix for this course will change from MINE to MNNG in 2004.

MINE9907
Metalliferous Mine Hazards and Control
School of Mining Engineering
Staff Contact: D Chalmers
UOC6 S2

This course module describes two issues encountered mainly in Australia metaliferous mines, namely refrigeration practice and the occurrence of ionising radiation. Although this module is taken as a metalliferous elective, the underpinning knowledge and design principles may also be applied to coal mines if required.
Note/s: The prefix for this course will change from MINE to MNNG in 2004.

MINE9908
Metalliferous Mine Ventilation
School of Mining Engineering
Staff Contact: D Chalmers
UOC6 S2

This course module covers legislative requirements, pertinent to mine ventilation systems, in underground metalliferous mines together with current industry practice.
Note/s: The prefix for this course will change from MINE to MNNG in 2004.

MINE9910
Mine Ventilation
School of Mining Engineering
Staff Contact: D Chalmers
UOC6 S1

This course will provide an understanding of the basic principles of mine ventilation and environmental control. The emphasis will be on the practical aspects of ventilation and involve both classroom and underground sessions. Course participants should be able to apply their knowledge to solve their practical problems at their individual mine sites. Individual access to a mine site is a requirement of this course.This course will be held on an Australian minesite. Additional travel/ accommodation costs to be incurred by student.

MSCI5001
Environmental Monitoring and Assessment
Centre for Marine and Coastal Studies
Staff Contact: A Albani
UOC6 HPW4 S1

This course is designed to give each student an understanding of the various techniques used in monitoring a coastal environment. It includes the applications and limitations of oceanographic instrumentation and application of physical, geological, chemical and biological methods in the field. Bathymetric, sedimentological and ecological surveys are art of a number of field activities designed to train students to carry out a detailed assessment of a coastal area.

MSCI5002
Management of Marine Resources
Centre for Marine and Coastal Studies
Staff Contact: G Waugh
UOC3 HPW4 S1

This course covers basic concepts relating to marine resources, environmental issues, property rights and how different property rights affect the exploitation of marine resources, questions of marine resources, how natural systems intreract with economic systems, with policies and regulations that may improve economic performance in a very uncertain environment, with adjustment to economic policies on regional and community criteria, with sustainable and non-sustainable models of resource use in general and the management of fisheries in particular and with problems of resource use in developing countries.

MSCI5003
Experimental Design and Analysis
Centre for Marine and Coastal Studies
Staff Contact: S Middleton
UOC3 HPW4 S1 S2

Applications of statistics to marine science data. Probability, estimation statistics and tests of hypotheses. Experimental design, ANOVA, linear and multiple regression, multivariate analysis, non parametric methods. Emphasis is placed on the applications of computer software packages.

MSCI5004
Oceanographic Processes
Centre for Marine and Coastal Studies
Staff Contact: M England
UOC6 HPW4 S2

The physical, biological and geological processes of the marine environment; the dynamics of ocean currents including surface waves, geostrophy, tides, upwelling subduction, basin scale gyres, El Nino: biological processes including primary formation of particulate matter, secondary production, biological cycles; geological processes.

MSCI5005
Topics in Marine Science
Centre for Marine and Coastal Studies
Staff Contact: E Johnston
UOC6 HPW8 S1 S2

Students choose topics from those listed below to make up the required contact hours per week. The topics chosen must be approved by the course co-ordinator: marine biology, aquaculture, zooplankton, marine botany, fisheries, coastal ecology, marine pollution, environmental microbiology, fluid dynamics, estuarine hydraulics, dispersion processes, instrumentation, coastal engineering, remote sensing, atmosphere-ocean dynamics, marine geology, coastal environmental assessment, aquatic chemistry, computers in chemistry, spectroscopic analysis, environmental chemistry, modern developments in chemical synthesis.

MSCI5006
Graduate Seminars in Marine Science
Centre for Marine and Coastal Studies
Staff Contact: E Johnston
UOC6 HPW2 S1 S2

A series of seminars of particular relevance to the practice of marine science. Includes both specialist topics in the disciplines that contribute to the marine sciences and detailed study and evaluation of case studies and contemporary issues in marine science.

MSCI5007
Marine Science Project
Centre for Marine and Coastal Studies
Staff Contact: E Johnston
UOC12 HPW8 S1 S2

A study of an aspect of marine science and submission of a project report. The project may be either experimental or theoretical in approach.

MSCI5008
Special Topic
Centre for Marine and Coastal Studies
Staff Contact: E Johnston
UOC6 HPW4 S2

A special reading program and seminar course to cover perceived areas of special need. This course is designed to meet the particular needs of individual students.

MTRN8223
Machine Condition Monitoring
School of Mechanical and Manufacturing Engineering
Staff Contact: R Randall
UOC6 S1
Excluded: MECH4223, MTRN9223

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.

MTRN9010
Project Mechatronic Engineering
School of Mechanical and Manufacturing Engineering
Staff Contact: R Willgoss
UOC12 S1 S2

Note/s: The project must be completed in no more than two sessions.

MTRN9201
Digital Logic Fundamentals for Mechanical Engineers
School of Mechanical and Manufacturing Engineering
Staff Contact: J Katupitiya
UOC6 HPW3 S1
Excluded: MECH9201, MTRN3201

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.

MTRN9202
Microprocessor Fundamentals for Mechanical Engineers
School of Mechanical and Manufacturing Engineering
Staff Contact: M Tordon
UOC6 HPW3 S2
Prerequisite/s: MECH9201 or MTRN9201
Excluded: COMP9221, ELEC4432, ELEC9406, ELEC4351, MECH3202, MTRN3202

Introduction to microprocessor programming. Machine code programming. Instruction sets. Program branching and condition codes. Addressing modes. Interrupts. Address decoding and memory interface. Input/Output interfacing techniques. Programmable peripheral devices. Serial and parallel interfaces. Microprocessor control of electromechanical devices. Laboratory complement to lectures.

MTRN9211
Modelling and Control of Mechatronic Systems 1
School of Mechanical and Manufacturing Engineering
Staff Contact: J Katupitiya
UOC6 HPW3 S2
Excluded: MECH9211

Development of modelling technique and design of controllers using digital computers, with special emphasis on digital control systems for motion control. Typical examples of mechatronic systems.

MTRN9221
Industrial Robotics
School of Mechanical and Manufacturing Engineering
Staff Contact: R Willgoss
UOC6 HPW3 S1
Excluded: MECH4221, MECH9221, MTRN4221

Applications survey. System structure, hardware, software, handling. Linkage kinematic structure; power transmission. Linkage structural design. Actuator choice. Interface hardware. Feedback. Function programming philosophies. Control algorithms. Problem specification; solution preparation. Writing, storage, implementation of computer algorithms.

MTRN9222
Artificially Intelligent Machines
School of Mechanical and Manufacturing Engineering
Staff Contact: R Willgoss
UOC6 HPW3 S1
Excluded: MECH4222, MECH9222

The principles of operation of machines into which limited powers of decision making have been delegated. The grouping of intelligent machines. Cognition; sensor technology; parsing; information representation; convolutions; software and hardware environments.

MTRN9223
Machine Condition Monitoring
School of Mechanical and Manufacturing Engineering
Staff Contact: R Randall
UOC6 HPW3 S1
Excluded: MECH4223, MTRN8223

Sensors and transducer interfacing to computers. Vibration signatures of faults in rotating and reciprocating machines; detection and diagnosis of faults; characterisation of signatures; prediction of service life and maintenance procedures. Project on measuring a parameter indicating possible failure.

MUSC5104
An Ethnomusicological Exploration of Australian Traditional and Popular Music
School of Music and Music Education
Staff Contact: G Stubington
UOC8 HPW2 S1

19th century ballads and bush songs - convicts, settlers, bushrangers gold diggers; the musical characteristics, social functions and stylistic origins of songs and dances; 20th century immigrants and the folk song revival; bibliographical, discographic (audiographic) and archival sources.

MUSC5122
Research in Music Education
School of Music and Music Education
Staff Contact: A Walker
UOC8 HPW2 S1

Covers the main approaches and methodologies for undertaking research in music education. Includes conceptual framework for undertaking research as well as research modes and techniques. Introduces qualitative, philosophical, historical, descriptive and experimental methodologies and includes critical evaluation and interpretation of prominent research studies in music education.

MUSC5123
Curriculum in Music Education
School of Music and Music Education
Staff Contact: A Walker
UOC8 HPW2 S2

Designed to illuminate the field of curriculum study in ways that can be instructive for curriculum work in music education. Provides appraisal of past curricula in music education and other arts and considers recent curriculum developments in a variety of school settings. Considers more useful frameworks for organising and focusing the study of curriculum in ways which provide direction to future curriculum study efforts.

MUSC5125
Australian Music in the Twentieth Century
School of Music and Music Education
Staff Contact: C Logan
UOC8 HPW2 S2

Investigates the current state of research and directions in Australian composition in the twentieth century with an emphasis on music post-1950.

MUSC5126
Musical Performance: Learning Theory and Pedagogy
School of Music and Music Education
Staff Contact: A Walker
UOC8 HPW2 S1

Examines the research and methods of teaching musical performance skills within school and studio instrumental programs and presents an opportunity to reassess teaching methods, strategies and materials in the light of current educational thinking and practice. Topics covered include the role of the instrumental/vocal teacher in school music programs, individual versus group processes and patterns of interaction, methods of teaching beginning ensembles, developmental and remedial teaching, acquiring performance technique and developing musicianship, administration of a school instrumental program, and recent research concerned with instrumental/vocal instruction.

MUSC5130
Research in Music Studies
School of Music and Music Education
Staff Contact: C Logan
UOC8 HPW2 S1

Examines current issues in music research. Introduces conceptual frameworks for undertaking research in history, analysis, performance, sound recording and manuscript studies, and includes critical evaluation of prominent research publications in musicology. Equips students with skills in appropriate methodologies.

MUSC5134
Mozart the Dramatist
School of Music and Music Education
Staff Contact: D Fabian
UOC8 HPW2 S2

Offers an in depth study of Mozart's late operas. The social, political and cultural milieu of Vienna during the reign of Joseph II is explored in order to gain a better understanding of the context of Mozart's works. The characteristics of 18th century opera buffa and opera seria are also studied highlighting Mozart's deviations from conventional norms and providing insight into why his collaborations with da Ponte enabled him to create such lasting masterpieces.

OCEA5115
Experimental Project in Physical Oceanography
School of Mathematics
Staff Contact: School Office
Enrolment requires School approval
UOC24 S1 S2

A report of an experimental project, including recording, preparation, analysis and interpretation of field or laboratory data.

OCEA5125
Geophysical Fluid Dynamics
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Aspects of the physical features of the oceans. Includes ocean waves rotational and gravitational, tides, large scale wind driven ocean circulation, coastal dynamics, thermohaline circulations and mixing processes.

OCEA5145
Applied Data Analysis
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

OCEA5155
Theoretical Project in Physical Oceanography
School of Mathematics
Staff Contact: School Office
Enrolment requires School approval
UOC12 S1 S2

A theoretical project aimed at developing the prediction of oceanographical phenomena, tailored to meet individual student background but taken only by those students with a strong theoretical background.

OPTM7102
Visual Function
School of Optometry and Vision Science
Staff Contact: S Dain
UOC6 HPW4 S1 S2

This course provides understanding of the characterisitics of human vision from the basis of psychophysics and electrodiagnostic methods of investigation. The relationship with clinical methods of investigation will be explored. Perpetual organisation of the retinal image; neural networks in the retina and their mathematical analogues; visual transfer functions; electrophysiological analysis of cortical processing and retinal function in normal and pathological cases; the electro-oculogram, electromyography. Temporal and spatial effects; colour vision physiology and psychophysics and colour vision deficiencies.

OPTM7103
Behavioural Optometry 1
School of Optometry and Vision Science
Staff Contact: R Paynter
UOC6 HPW4 S1

Behavioural Optometry is one of the fastest developing clinical areas in optometry. It embodies a broad clinical approach to the practice of optometry by considering vision in the context of other sensory motor systems. This course covers the scientific and theoretical background to behavioural optometry, the neuroscience of visual function, developmental vision, the development of myopia, the clinical recognition and evaluation of efficient visual function, strabismus & amblyopia, and the optometric management of learning disabilities. Assignments require the clinical application of behavioural concepts to simple and complex cases, so all participants must have access to a variety of optometric patients, including children. Overseas students must arrange this with the course controller prior to enrolment. Together with OPTM7203 Behavioural Optometry 2, this course forms the foundation program for candidates for a Fellowship of the Australian College of Behavioural Optometrists.

OPTM7104
Advanced Contact Lens Studies 1
School of Optometry and Vision Science
Staff Contact: H Swarbrick
UOC6 HPW4 S1

This course provides lectures, seminars and practical workshops on topics underlying an advanced knowledge of contact lens practice and research. Topics covered in the course may include: research concepts and opportunities in private clinical practice; accessing the contact lens literature and other relevant databases; use of clinical grading scales; update on corneal physiology and biochemistry; tear film assessment; advanced clinical and research instrumentation; visual considerations with different contact lens designs and modalities; corneal topographic analysis; advanced rigid contact lens design and fitting; rigid and soft toric lens fitting; rigid lens parameter measurement and lens modification; contact lens material properties. The course is conducted over 4 weekend sessions. The specific topics covered in the course will vary from year to year depending on the availability of expert lecturers.

OPTM7105
Advanced Contact Lens Practice
School of Optometry and Vision Science
Staff Contact: H Swarbrick
UOC6 HPW4 S1 S2

This course will provide an opportunity for appropriately qualified contact lens practitioners to acquire advanced clinical knowledge and skills in specialty contact lens practice. The course will be offered as a series of targeted external clinical placements at a range of teaching institutions and optometric practices which specialise in contact lens practice. Travel and accommodation costs must be met by the student. Emphasis will be placed on advanced and specialised contact lens fitting and patient management, including keratoconus, post-keratoplasty and post-refractive surgery lens fittting, haptic lens fitting, orthokeratology, contact lenses for babies and children, rigid toric lenses, bifocal contact lenses, and extended wear. The application of new techniques and advanced instrumentation will also be emphasised.

OPTM7106
Occupational Optometry 1
School of Optometry and Vision Science
Staff Contact: S Dain
UOC6 HPW4 S1 S2

Visual and general ergonomics. Illuminating engineering. Human factors engineering. Anthropometry. Task analysis. Physical and chemical hazards. Radiation effects and hazard analysis. Risk engineering. Workplace design and modification. Ocular and visual factors on specific tasks. Visual fitness. Vision screening. Legal aspects. Issues in common visually based activities. The course matter will comprise consideration of course matter at a higher level than in the undergraduate course in a seminar format.

OPTM7108
Small Research Project
School of Optometry and Vision Science
Staff Contact: S Dain
UOC6 S1 S2
Excluded: OPTM7308

A research investigation into a topic in Optometry or Visual Science. May be carried out either on campus or within the student's professional practice with supervision from the University. Involving less time commitment than OPTM7308 Research Project

OPTM7110
Public Health Optometry
School of Optometry and Vision Science
Staff Contact: S Dain
UOC6 S1 S2

This course provides understanding of the issues of public health as it relates to optometry at an advanced level. Topics covered include: Structure of the Australian health care system. Comparative study of health care systems. Optometry in a multi-disciplinary health care system. Quality assurance in health care. Demography and epidemiology of occupational eye disease and injuries. Social issues and optometric involvement. Occupational eye disease management. Law and ethics.
Note/s: Distance learning

OPTM7111
Pathophysiology of Ocular Disease 1
School of Optometry and Vision Science
Staff Contact: G Boneham
UOC3 S1

This course will give the student a background in basic sciences and increase their understanding of the pathology of ocular disease. This knowledge will be necessary to understand the processes involved in the pathophysiology of commonly encountered ocular diseases seen in optometric practice. Topics covered include cell and molecular biology, biochemistry, immunology, and inflammation.
Note/s: Distance learning

OPTM7112
Pathophysiology of Ocular Disease 2
School of Optometry and Vision Science
Staff Contact: G Boneham
UOC3 S1 S2
Corequisite/s: OPTM7111

Increasingly Optometry is playing a role as the primary provider in eyecare diagnosing and referring for secondary and tertiary care. Concomitant with this is the duty to enhance our knowledge of the pathophysiological processes associated with ocular disease. This short course covers three types of eye disease commonly encountered in optometric practice: diabetes, glaucoma, and dry eye disease. The course discusses the underlying pathophysiology of each disease allowing the student to better understand and manage these conditions.
Note/s: Distance learning

OPTM7113
Human Visual Development
School of Optometry and Vision Science
Staff Contact: C Suttle
UOC6 HPW4 S1

This course aims to increase the student's understanding of visual sensitivity to colour, motion and form in human infants and young children. Specifically, topics will include: Methods of infant visual function assessment. Limitations of currently available techniques, including visual evoked potentials, forced-choice preferential looking and optokinetic nystagmus. Anatomical and functional development of the human visual system: differential neural pathway development. Visual development under normal and abnormal conditions: the effects of oculo-visual abnormality on development of different visual functions.
Note/s: Distance learning

OPTM7114
Rehabilitation of the Partially Sighted
School of Optometry and Vision Science
Staff Contact: P Herse
UOC6 S1 S2

This course will survey issues involved in the visual rehabilitation of the partially sighted person. Topics covered include epidemiology of visual impairment, pathophysiology of the major ocular disease processes, models of adaptation to loss, assessment of visual impairment, provision of optical and non-optical visual aids, new developments in adaptive technology, professional interactions and referrals and support structures.

OPTM7115
Visual Neuroscience
School of Optometry and Vision Science
Staff Contact: School Office
UOC6 S1 S2

This course provides understanding of the issues of visual functioning which will also be related to clinical assessment issues. Topics covered include: processing of visual information in mammals, repair in the nervous system of vertebrates, objective assessment of visual pathway, review of brainstem and brainstem anatomy, review of amino acid chemistry related to brain neurochemistry, glutamate and neurotoxicity in glaucoma, visual attention and arousal systems, brainstem mechanisms in the control of eye movements, visually directed activities - reading, parietal factors in vision, frontal factors in vision, after effects and inter-ovular transfers.
Note/s: Distance learning

OPTM7203
Behavioural Optometry 2
School of Optometry and Vision Science
Staff Contact: R Paynter
UOC6 HPW4 S2
Prerequisite/s: OPTM7103

This course utilises the principles of behavioural optometry introduced in OPTM7103 Behavioural Optometry 1, with an emphasis on treatment options, vision training, and practice management issues. Consideration is also given to the assessment and management of special needs patients including those with genetic conditions, developmental disabilities and traumatic brain injury. Assignments require the clinical application of behavioural concepts to simple and complex cases, so all participants must have access to a variety of optometric patients, including children. Overseas students must arrange this with the course controller prior to enrolment. Together with OPTM7103 Behavioural Optometry 1, this course forms the foundation program for candidates for a Fellowship of the Australian College of Behavioural Optometrists.

OPTM7204
Advanced Contact Lens Studies 2
School of Optometry and Vision Science
Staff Contact: H Swarbrick
UOC6 HPW4 S2

This course provides lectures, seminars and practical workshops on topics underlying an advanced knowledge of contact lens practice and research, and builds on topics covered in OPTM7104 Advanced Contact Lens Studies 1. Topics covered in the course may include: contact lenses for keratoconus, PMMA and RGP haptic contact lenses; fitting contact lenses after corneal refractive surgery and keratoplasty; contact lenses for children and teenagers; therapeutic contact lenses; research and clinical aspects of orthokeratology; contact lenses for colour vision deficiency; contact lens-related ocular microbiology and immunology; future directions in the contact lens field; contact lens education; current market issues. The course is conducted over 4 weekend sessions. The specific topics covered in the course will vary from year to year depending on the availability of expert lecturers.

OPTM7206
Occupational Optometry 2
School of Optometry and Vision Science
Staff Contact: S Dain
UOC6 HPW4 S1 S2
Prerequisite/s: OPTM7106.

This course will take the principles learnt in OTPM7106 Occupational Optometry 1 and apply them to industrial situations. The course will comprise field work. Local students will participate in organised visits and assessments. Remote students may propose a programme of industry-based visits, assessments and assignments, organised by themselves, for approval by the Head of School.

OPTM7211
Pathophysiology of Ocular Disease 3
School of Optometry and Vision Science
Staff Contact: G Boneham
UOC3 S1 S2
Prerequisite/s: OPTM7111

Increasingly Optometry is playing a role as the primary provider in eyecare diagnosing and referring for secondary and tertiary care/surgery. Concomitant with this is the duty to enhance our knowledge of the processes associated with ocular disease and the techniques/effects of surgery popular in modern day eyecare. The course discusses the underlying pathophysiology of anterior eye disease along with techniques/outcomes of various surgical techniques used in corneal refractive surgery and the treatment of cataract.
Note/s: Distance learning

OPTM7212
Pathophysiology of Ocular Disease 4
School of Optometry and Vision Science
Staff Contact: G Boneham
UOC3 S1 S2
Prerequisite/s: OPTM7111

Posterior eye disease, especially age related maculopathy, is becoming more prevalent with our aging population. In this course we will discuss the pathophysiology of commonly encountered posterior eye diseases of the optic nerve, vitreous, retina and the visual pathway.
Note/s: Distance learning

OPTM7301
Advanced Clinical Optometry
School of Optometry and Vision Science
Staff Contact: D Pye
UOC12 S1 S2
Prerequisite/s: OPTM7309

This course comprises clinical work on selected patients with special emphasis on advanced techniques and new developments. Optometric examination procedures include: gonioscopy, slit lamp fundoscopy, binocular indirect ophthalmoscopy and scleral depression; ultrasonography; corneal topography; ocular photography; computerised visual field analysis; visual functions; low vision; optometric co-management; evaluation of binocular functions; geriatric and paediatric optometry; the clinical application of electrophysiological techniques. Assessments of new instruments, methods and treatments. This course is offered as an overseas posting at the LV Prasad Eye Institute in Hyderabad, India subject to the ability of the location to host the candidate in the time requested. This posting is for a 4 week period, with travel and accommodation costs to be met by the candidate.
Note/s: Short course format - overseas posting. Candidates must have successfully completed the Ocular Therapy component to be eligible for the posting. Candidates who have not completed this course can lodge an application at the School Office. Each application will then be reviewed and assessed on merit.

OPTM7307
Clinical Imaging
School of Optometry and Vision Science
Staff Contact: B Junghans
UOC6 HPW4 S1 S2

This course will provide candidates with a working knowledge of clinical photography of the ocular adnexa, anterior eye and posterior eye using both film and digitally-based still and video photography. Topics will include: ethical and legal issues relating to photodocumentation and archiving of clinical records, the unique lighting requirements for ocular photography, interfacing ophthalmic instruments with image capture devices, image database applications, image analysis versus image processing, video editing using tape and digitised facilities, comparison of the relative advantages of the various photographic modalities, use of photography in patient management, patient education and communication with other practitioners.

OPTM7308
Research Project
School of Optometry and Vision Science
Staff Contact: S Dain
UOC6 S1 S2
Excluded: OPTM7108

A research investigation into a topic in Optometry or Visual Science with a duration of one year. May be carried out either on campus or within the student's professional practice with supervision from the University.

OPTM7309
Ocular Therapy
School of Optometry and Vision Science
Staff Contact: School Office
UOC12 S1 S2

Microbiology: fundamentals, classification, ocular pathogens, ocular inflammation, contact lens related infections. Biochemistry of cell communication: pathways affected by therapeutics and systemic drugs. Autonomic nervous system review: systemic ocular. Pharmacology and pathophysiology of common systemic disease: cardiovascular, asthma, joint disease, hepatitis, shock. Pharmacoepidemiology: incidence and prevalence of drug use in Australia, ocular and visual side-effects of commonly used systemic drugs. Pharmacology and pharmaceutics: clinical pharmacology, pharmaceutics, prescribing, dealing with pharmacists, legal and health administration aspects. Diagnosis, co-management and therapy of diseases of external adnexae, conjuctiva, cornea, lacrimal system. Posterior segment observation techniques. Diagnosis and management of retinal degenerations, dystrophies and vascular disorders. Diagnosis, co-management and therapy of glaucoma. Diagnosis, management and treatment of uveitis. Systemic disease and the eye. Co-management of refractive and cataract surgery. Ocular emergencies and ocular trauma. Neuro-opthalmic disorders. Some topics may involve distance learning activities.

PAED8104
The Effect of Social Adversity in Childhood
School of Women's & Children's Health
Staff Contact: G Alperstein
UOC4 HPW2 S2

Family structure and dynamics, poverty, single parent, drug addicted parents, housing and sanitation, homeless children, teenage parents, migrant families, Aboriginal health, working mothers and childcare.

PAED8203
Infant Feeding and Nutrition 1
School of Women's & Children's Health
Staff Contact: P McVeagh
UOC4 HPW2 S1 S2

Lactation, breast feeding. Nutritional requirements. Feeding of infants and children. Infant formulas.

PAED8204
Infant Feeding and Nutrition 2
School of Women's & Children's Health
Staff Contact: P McVeagh
UOC4 HPW2 S1 S2
Prerequisite/s: PAED8203

Nutritional disorders in children. Childhood origin of adult diseases. Health and organic foods. Developing nutritional guidelines for children in care. The effect of social, cultural and food advertising on children's nutrition.

PAED9101
General Paediatrics and Child Health 1
School of Women's & Children's Health
Staff Contact: S Russell
UOC8 S1 S2

Two semesters combine to form the Diploma of Paediatrics, which is a 12-month postgraduate course in paediatrics. Candidates are required to have 12 months experience in clinical paediatrics, which may be gained concurrently with doing the Diploma or may have been accredited prior to entering the course. The Diploma is part-time in that it is primarily a lecture-based program held on one afternoon a week for 40 weeks of the year. Bedside clinical tuition is available in the second semester. A clinical and written exam is held at the end of the year. Topics covering all aspects of paediatric medicine are included in the lecture series. The Diploma is suitable for medical practitioners who are in, or wish to enter, General Practice and also for those embarking on a career in paediatrics.

PAED9102
General Paediatrics and Child Health 2
School of Women's & Children's Health
Staff Contact: S Russell
UOC8 S1 S2

Two semesters combine to form the Diploma of Paediatrics, which is a 12-month postgraduate course in paediatrics. Candidates are required to have 12 months experience in clinical paediatrics, which may be gained concurrently with doing the Diploma or may have been accredited prior to entering the course. The Diploma is part-time in that it is primarily a lecture-based program held on one afternoon a week for 40 weeks of the year. Bedside clinical tuition is available in the second semester. A clinical and written exam is held at the end of the year. Topics covering all aspects of paediatric medicine are included in the lecture series. The Diploma is suitable for medical practitioners who are in, or wish to enter, General Practice and also for those embarking on a career in paediatrics.

PAED9108
Clinical Paediatric Experience 1
School of Women's & Children's Health
Staff Contact: School Office
UOC4 S1 S2

It is a requirement of the course that 12 clinical experience is gained before sitting for the diploma exam.

PHCM9010
Community Development
School of Public Health and Community Medicine
Staff Contact: S Nathan
UOC4 HPW2 S1 S2 X1

This course explores the meaning and conceptual frameworks of community development as an approach to improving the health of individuals and the broader community. It also facilitates exploration of the fundamental components of community development, such as needs assessment, empowerment, and evaluation. Case examples are extensively used to explore theories and models in practice and to highlight and reflect on the issues and dilemmas faced in community development work. This Course is useful for community workers, researchers, policy officers/managers, health service administrators/ managers, educators or clinicians. For those with field experience, this course will provide a strong theoretical basis and will hopefully introduce some new practice tools. For those with little or no field experience, it provides a good mix of theories, models, practical examples and tools to introduce this exciting approach to improving health.

PHCM9011
Public Health, Statistics and Epidemiology
School of Public Health and Community Medicine
Staff Contact: M McLaws
UOC6 HPW3 S1

Collection, collation and analysis of data and the interpretation of statistical information for the purposes of health services management. The use of computers for these purposes. Measurement of disease rates and interpretation and identification of health status. These statistical methods and measures will assist in planning, operation and evaluation of interventions in health service management.

PHCM9012
Health Promotion
School of Public Health and Community Medicine
Staff Contact: J Ritchie
UOC4 HPW2 S1 S2

Explores the mearning of health promotion and its role in the field of public health, and provides a forum for discussion on preventive approaches in health care. Students study a variety of approaches to promoting health and consider the benefits and disadvantages of each of these within an integrated framework.

PHCM9013
Influencing Health Beliefs and Health Behaviours
School of Public Health and Community Medicine
Staff Contact: School Office
UOC4 HPW2 S1 S2

This ungraded elective explores the complexity and theoretical perspectives of influencing health beliefs and health behaviours. Issues such as risk perception, value systems, culture, inequality, motivation and education are discussed and current intervention models for change are analysed.

PHCM9015
Health Services Development and Implementation
School of Public Health and Community Medicine
Staff Contact: A Rotem
UOC6 HPW3 S2

This course addresses institutional strengthening and capacity building in health services. The focus is on development and change. Particular attention is given to organisational culture and learning within the organisation, leadership, change management and communication. The complexities of cross cultural communication in health services in different international settings is explored.

PHCM9041
Health Care Systems
School of Public Health and Community Medicine
Staff Contact: J Dewdney
UOC6 HPW3 S1

The first part of the course focuses on the concepts and theoretical perspectives that will enable students to understand the complex relations between health, health care and society. Notions of physical,

psychological and social health both at the individual and society-wide level are analysed. Close attention is paid to the health care system in Australia, as a basis for the closer analysis of particular health care issues such as the organisation and financing of health care, the health workforce, health care legislation and health care services for disadvantaged groups. The course then examines current reforms in health policy making, delivery and financing, before future possibilities for the development of health and health care in Australia and elsewhere are analysed.

PHCM9071
Health Care Financial Mngt 1
School of Public Health and Community Medicine
Staff Contact: K Forde
UOC6 HPW3 S1

Introduction to double entry accounting including the underlying conventions and doctrines to provide a working knowledge of both accrual and cash based accounting systems, utilisation of accounting records for the presentation and interpretation of profit and loss accounts, balance sheets and cash flow statements. Capital budgeting, analysis of budgets and costing products and services are also discussed.

PHCM9081
Health Care Financial Mngt 2
School of Public Health and Community Medicine
Staff Contact: K Forde
UOC4 S2
Prerequisite/s: PHCM9071

The aim of this course is to construct a "business plan" that relates to some aspect of the health care industry. A business plan outlines the financial implications of either starting up a new business or expanding or contracting an existing service. This is not a theoretical course - you are required to write your business plan. Most students develop their plan from their own work experience. Offered both in Hong Kong and externally in Australia. A workshop is conducted for external students during residential week.

PHCM9100
Independent Study (4UOC)
School of Public Health and Community Medicine
Staff Contact: A Hodgkinson
Enrolment requires School approval
UOC4 S1 S2

Independent studies are designed to provide opportunities for candidates to pursue interests and areas of study not addressed in existing courses. They are recommended particularly for candidates who wish to explore specific health or education related problems within their own discipline or area. Students wishing to take an independent study must obtain approval from their program coordinator and the unit of credit value can vary between 2 to 8 UOC depending on the size of the Independent Study. The correct course code will be advised on enrolment.

PHCM9108
Program Evaluation and Planned Change
School of Public Health and Community Medicine
Staff Contact: A Rotem
UOC4 S1 S2

This course offers a framework and practical skills for the design of evaluation which is aimed to support decision making. The role of evaluation in development and innovation is explored with due attention to organisational and political sensitivities and constraints. The role of the evaluator in clarifying the need for evaluation, and in determining the questions that should be addressed, and the methods of obtaining and interpreting information, is considered in some detail.

PHCM9111
Quality and Clinical Practice Improvement
School of Public Health and Community Medicine
Staff Contact: M Robinson
UOC4 S1

This course aims to empower and equip frontline health care professionals to lead and achieve real improvements in the delivery and outcomes of clinical care. This is a practical course that is supported by a robust academic background which will allow participants to develop a practical understanding of quality in health care and to harness both individual and teams skills to achieve sustainable learning.

PHCM9120
Qualitative Research Methods
School of Public Health and Community Medicine
Staff Contact: L Maher
UOC4 HPW2 S1 X1

Explores a range of qualitative research methods and techniques, including participant observation, in-depth interviews and focus groups and their application to public health and health promotion. The course aims to provide students with skills for documenting and understanding how people interpret health and illness and the contexts in which they occur. Recommended for students wishing to undertake their projects using qualitative methods.

PHCM9121
Measurement of Quality of Life and Patient Satisfaction
School of Public Health and Community Medicine
Staff Contact: R O'Connor
UOC4 HPW2 X1

This course outlines the nature and use of Quality of Life, functional health status and patient satisfaction measures, and their increasing role in the evaluation of health programs. It presents the origins and nature of the most common generic instruments (eg SF36, QWB, SIP), selected disease-specific instruments and a patient satisfaction instrument and psychometric notions of validity, reliability and scaling. It presents a method for developing and evaluating such measures. Common generic and disease-specific instruments are introduced and reviewed. This course is conducted through a two day workshop; tutorials can be arranged if required.

PHCM9122
Primary Health Care: Policies, Programs & Perspectives
School of Public Health and Community Medicine
Staff Contact: R Burdon
UOC4 HPW2 S1

The concept of primary health care and its emergence as the priority health care approach in developing countries. Emphasis on the training implications of primary health care programs together with different definitions of the concept including the role of primary health care in social and economic development, and its relationship to existing health care systems.

PHCM9125
Designing Short Courses and Workshops
School of Public Health and Community Medicine
Staff Contact: S Di Corpo
UOC4 S2

This course is designed to provide the knowledge and skills needed to design and run a (really good) short course or workshop. Thus includes evaluating a number of course design and learning models, applying principles of planning, conducting needs assessment of learners, thinking about structure and content, writing learning outcomes, designing learning activities, preparing learning resources and evaluating a short course or workshop. It is very practical in focus and you work on your own short course or workshop as you progress through the course. The assessment involves submitting a plan for your own short course or workshop.

PHCM9131
Research Skills for Public Health
School of Public Health and Community Medicine
Staff Contact: A Hodgkinson
UOC4 HPW2 S1 S2
Prerequisite/s: PHCM9502, PHCM9500

This course aims to explore concepts and develop skills related to conducting research in public health. Emphasis will be given to identifying research or development needs, developing conceptual and critical analysis skills, undertaking literature analysis, planning project aims, identifying practical administrative and ethical limits, and writing skills.

PHCM9133
Learning, Teaching and Assessment
School of Public Health and Community Medicine
Staff Contact: L Bloomfield
UOC4 S1

This course explores current views about the conditions which support learning in the health professions and the requirements these imply for teaching and assessment. It focuses on education at university and also in non-formal continuing education situations commonly encountered in health professions education. Note: external course; attendance at pre-session half-day workshop is highly desirable.

PHCM9136
Culture, Health and Illness
School of Public Health and Community Medicine
Staff Contact: M Eisenbruch
UOC4 HPW2 S1

This course is for students who want to improve their cultural competence - as health workers, academics, educators, researchers, or policy makers - in working in multicultural settings in Australia, or in developing countries. Students will learn the basic theories and methods of disciplines (including medical anthropology, transcultural psychiatry, cross-cultural psychology, and cultural aspects of international health, and health within culturally pluralistic societies) relevant to the study of health and illness in the setting of multicultural Australia and, at the same time, in developing countries in the Asia Pacific region.

PHCM9140
Project Design and Monitoring in International Health
School of Public Health and Community Medicine
Staff Contact: P Freeman
UOC4 S2
Prerequisite/s: PHCM9751

The planning of international health projects is a multi-phased process that must be performed well if sustainable high qualify improvements in health care are to be achieved. This subject is designed to equip professionals contributing to international health with the competencies necessary to develop a practical comprehensive project plan, in line with current international practice. Course topics will cover all the major steps necessary to produce this plan.
Note/s: External Course.

PHCM9144
Project (12UOC)
School of Public Health and Community Medicine
Staff Contact: A Hodgkinson
Enrolment requires School approval
UOC12 S1 S2

The project comprises in-depth study of a contemporary public health issue or topic. Candidates are expected to demonstrate their ability to apply knowledge and skills gained in the course, through: identifying and defining a significant issue; systematically collecting relevant, up-to date information about the issue; analysing, interpreting and discussing the information; drawing conclusions; making recommendations; and writing a report in a manner consistent with academic standards at Master's level. The project may be in the form of a small-scale research study, a case study, a program evaluation or a report on field placement. Although candidates are advised to start planning project early in their program, it is normally undertaken after completion of all core and elective courses. Appropriate course code will be advised on enrolment.

PHCM9302
Learning in Small Groups
School of Public Health and Community Medicine
Staff Contact: S Toohey
Enrolment requires School approval
UOC4 S2

This course explores how people operate as members and leaders of groups and the conditions underlying effective group work in both education and the work place. The emphasis is on experiential learning, observation of group process, improving skills in facilitating group learning and designing appropriate learning activities.Note: External Course/Workshop.

PHCM9304
Learning Clinical Reasoning
School of Public Health and Community Medicine
Staff Contact: P Harris
Enrolment requires School approval
UOC6 S1 S2

In this course the medical stream covers teaching of the steps in the clinical process, inductive and deductive strategies, data collection and its flaws, the reliability of clinical evidence, intuition and clinical memory, investigation and sufficiency of evidence, strength of clinical and investigational evidence, interpretation and misinterpretation, logical processes in clinical inference and plausibility of diagnosis, and the utility of expert systems and computer-aided diagnosis. For the nursing stream the course diverges to cover the reasoning called upon within different clinical units. Assignments include the study of clinical reasoning in the candidate's setting.
Note/s: External Course.

PHCM9306
Clinical Supervision
School of Public Health and Community Medicine
Staff Contact: C Hughes
Enrolment requires School approval
UOC4 S2

This course aims to help students develop a reflective and critical approach to the operational and educational supervision of staff and students that is effective, and that is based on relevant theory and on ethically defensible practice. It draws on models of supervision and facilitation taken from the management, adult education and clinical supervision literatures. The assignments focus both on the educational and operational supervision of individuals working on specific tasks, and on the planning and supervision of blocks of clinical experience for individuals or groups.
Note/s: External Course.

PHCM9307
Exploring and Managing Ethical and Moral Dilemmas
School of Public Health and Community Medicine
Staff Contact: C Berglund B Revay
Enrolment requires School approval
UOC4 S1 S2

This course guides the learner through the major ethical principles affecting clinical choices using a large array of contemporary clinical issues. The course is based on posing questions and search for answers. Ethicists differ in the way they search for answers. Not all believe that there is one truth to find. Many believe that the 'truth' depends on the context, or situation, or on the relative importance of opposing values. This course attempts to hear 'many voices' not only from ethicists and clinicians but from law, religion, administration and lay media. Ethicists themselves range across a spectrum from "You should...." (duty based deontologists) to "It depends...." (situationists). The courses aims to bring out that range. Assignments rely on students' consultations and clinical education experiences to explore ethical principles and their implications in the clinical setting.
Note/s: External Course.

PHCM9308
Learning Clinical Decision Making
School of Public Health and Community Medicine
Staff Contact: P Harris
Enrolment requires School approval
UOC4 S1 S2

In this course the medical stream deals with quantitative and qualitative aspects of decision making, management options, ambiguity and sufficiency of evidence at the test-treatment threshold, identification of possible outcomes, calculation of probabilities and utilities for each outcome, structuring with decision analysis, elicitation of patients' preferences, configuration of trade-offs and sensitivity analysis, influences operating in the context and in the personal psychology of doctor and patient, defensibility of decisions, and judgement in making choices under uncertainty. The nursing stream diverges at many points to cover the particular decisions required of the clinical nurse. Assignments include the analysis of a number of decision processes in the candidate's setting.
Note/s: External Course.

PHCM9309
Assessment of Clinical Performance
School of Public Health and Community Medicine
Staff Contact: P Harris
Enrolment requires School approval
UOC4 S2

This course covers the purposes, location, criteria, methods, timing, frequency, scoring methods and formats, and training of examiners to achieve consistency. The course includes development of assessments undertaken by self, peers, other health workers and patients. The course also addresses issues of judgment of others, and of innovation in developing accurate estimates of practical ability. Assignments include the study of performance assessment, and development of approaches to formative assessment.
Note/s: External Course.

PHCM9312
Research Into Clinical Education
School of Public Health and Community Medicine
Staff Contact: C Berglund
Enrolment requires School approval
UOC6 S2

This course introduces clinical educators to the research methods appropriate for understanding and studying complex, multifactorial, interactive, dynamic situations in which few variables can be controlled. Critical analysis as consumers of clinical research papers and the use of basic statistical concepts (parametric and non-parametric) and methods will be included. Candidates will plan a research project into clinical education as their principal assignment.
Note/s: External Course.

PHCM9315
Clinical Teaching
School of Public Health and Community Medicine
Staff Contact: P Harris
Enrolment requires School approval
UOC6 S1 S2

The course includes the planning and conduct of clinical teaching programs, preparation of the learners including assessment of the learner's readiness, briefing before patient encounter, demonstration of skills, perceptual skills in data collection, debriefing and reflection on the clinical encounter, explication of the clinical experience, in terms of available theory, translation of professional knowledge into working knowledge, and forward planning of reading and further practice. The course also deals with the micro-skills of listening, questioning, probing and challenging, demonstrating, and involving the patient and other staff. Assignments include the study of the candidate s clinical teaching and the study and practice of clinical micro-skills.
Note/s: External Course.

PHCM9316
Learning Consulting Skills
School of Public Health and Community Medicine
Staff Contact: P Harris
Enrolment requires School approval
UOC6 S2

In this course the medical stream deals with the identification and learning of consulting skills in communicating with patients, families and colleagues, in clarifying illness problems, in acquiring accurate information, interpreting evidence and diagnosing disease, in handling ambiguity and uncertainty, in referral to others and in negotiating trade-offs among management options. Differences between generalist and specialist tasks and contexts will be explored. Consulting skills in the nursing stream parallel these, but with differing responsibilities in assessment and patient care. Assignments include study in the candidates setting. Note: External Course/Workshop.Candidates need to be working in a clinical setting and have access to potential or actual students/ trainees.

PHCM9317
Clinicians as Managers
School of Public Health and Community Medicine
Staff Contact: A Hodgkinson
Enrolment requires School approval
UOC4 X1

This course focuses on the role of clinicians in the management of health and education programs. It aims to encourage review of organisational and management issues which influence the performance of clinical units. The material includes identification of the functions of management, the typical challenges faced by clinicians as managers, their contribution to leadership and team development, their role in planning, evaluation and their management of change. The assignments in this course will require a step-by-step review of the way activities and programs are managed and strategies to improve the effectiveness and efficiency of the organisational unit under study. Participants will be required to reflect on their performance as managers in tasks such as setting goals, organising, delegating, supervising and supporting staff development.

PHCM9321
Health Planning
School of Public Health and Community Medicine
Staff Contact: I Forbes
UOC4 HPW2 S1

This course focusses on planning in the Australian health system and uses a case study methodology. Examination is made of the major concepts used in planning health service systems within a context of resources allocation, at a community, regional and national level.Techniques used in data collection, analysis and modelling for health planning. Analysis of environments external to health service organisations of a societal, political and health status nature. Assessment of organisations within service areas. Management skills appropriate for policy making, program evaluation and health services resource distribution.

PHCM9331
Health Related Law and Ethics
School of Public Health and Community Medicine
Staff Contact: P McNeill
UOC4 S2

The aim of this course is to consider ethical and legal issues in management of health care institutions. The program includes an introduction to law and covers the main branches of law relating to health in Australia. Principle approaches in health care ethics will be outlined and considered from an institutional perspective. The course will also focus on particular issues in ethics and law of relevance to management of hospitals and other health care institutions.

PHCM9351
Health Economics
School of Public Health and Community Medicine
Staff Contact: T Ho
UOC6 HPW3 S2

Economic analysis as applied to resource allocation, planning and evaluation in health services. Topics: basic concepts and methods of economic analysis, economics of the public and private sector, decision making, supply and demand, pricing and nonpricing methods of allocation, welfare analysis, ethics of resource allocation, economic planning of health services, cost benefit evaluation, cost effectiveness analysis, economics of hospitals and economic impact of health insurance.

PHCM9360
Major Project (Clinical Education)
School of Public Health and Community Medicine
Staff Contact: P Harris
Enrolment requires School approval
UOC12 S1 S2

The final project is an important component of the MClinEd. Its purpose is to ensure that the knowledge and experience you gain from the program are transferable to seeking the solutions of clinical education in your own clinical setting. For this reason it is important that your project proposal should include information which will help you clarify and define the topic you wish to pursue and which will help you and your supervisor to proceed systematically with the exploration and planning of your project.
Note/s: External Course

PHCM9361
Physical Planning and Design
School of Public Health and Community Medicine
Staff Contact: J Carthey
UOC4 HPW2 S2

This course covers the management of physical facilities projects and introduces health service managers to the complex world of project management. Covered are the following. Planning processes applied to physical and environmental design. Regional, urban and local planning issues. Building design and building project management. Cost planning, network analysis and commissioning. Briefing, design and evaluation methods. Ergonomics and environmental psychology. Applications to health and welfare facilities. Administrative, medical and nursing policy implications.

PHCM9371
Research and Evaluation Methods
School of Public Health and Community Medicine
Staff Contact: M McLaws
UOC4 S1

Skills in research design, evaluation methods and literature review will be developed using applied learning methods. Skills will be developed in the formulation of a research question, questionnaire or evaluation methodology. Students will choose an area or areas of interest to develop during the session and the development of this research will be presented for weekly peer review. Peer review is aimed at providing students with a critique and a forum for students to learn, to appraise a variety of research problems.

PHCM9381
Policy Studies
School of Public Health and Community Medicine
Staff Contact: A Zwi
UOC4 S2

Contemporary health policy issues including the politics of health care; principles of policy formation and implementation analysis. Past topics have included: health care technology; occupational health and safety; government control of private medical practice; hospital cost containment; the impact of Medicare; Commonwealth/State financial relationships; quality assurance and utilization review; the regionalised administration of health services; health policy issues in developing countries.

PHCM9391
Health Services Strategic Management and Planning
School of Public Health and Community Medicine
Staff Contact: J Braithwaite
UOC4 S1

What is strategic planning? What does it mean to manage strategically? How do health service organisations (or, more accurately, the people with in them) express their strategic intent? How can you plan for the future when the environment is so complex and change so rapid? We investigate strategy in the health services by examining the ideas, tools and techniques of the strategist. Topics discussed include strategic planning, strategic behaviour, marketing, leadership and the learning organisation.

PHCM9401
Introduction to University Learning and Teaching
School of Public Health and Community Medicine
Staff Contact: C Hughes
Enrolment requires School approval
UOC4 S1 S2

This course introduces participants to a range of topics and issues in learning and teaching that impact on the teaching roles of academic staff in universities. The course builds on the introductory workshop series Foundations of University Learning and Teaching offered at UNSW as a staff development activity. Topics such as student and adult learning, reflective practice, planning for classes, large group teaching, small group teaching, online teaching, and assessment are addressed. The workshop sessions are designed to be highly interactive and encourage participants to draw from their own experience as a learner and a teacher, to introduce participants to the research literature in each topic area and to model good teaching practice. Participants also have the opportunity of designing and facilitating a short teaching session. Assessment in the course involves the selection of one area of teaching or learning for special study. Participants then describe their own practice and conduct a literature review in the area, and consider the relevance of the literature to their own practice, possible changes they might make and the issues that these changes would raise.

PHCM9402
Student Learning in Higher Education
School of Public Health and Community Medicine
Staff Contact: J McLean
UOC4 S1 S2

Student Learning in Higher Education considers the nature of student learning, the factors that impact on the way students approach their learning tasks, and the learning arrangements that support effective student learning in higher education settings. Student learning is considered from a number of different frameworks and research orientations, including adult learning, student approaches to learning, learning from experience, and reflective practice. In addition to considering accounts of student learning in the relevant literatures, students in this course investigate aspects of student learning in the courses that they teach using one or more of the frameworks considered. This course builds on the brief introductions to student learning presented in the course Introduction to University Learning and Teaching and together these courses form the core components of the Graduate Certificate of University Learning and Teaching. The face to face component of the course is two one day workshops which are run mid semester in Session 2.

PHCM9403
Teaching Strategies for Effective Learning
School of Public Health and Community Medicine
Staff Contact: F Trede
Enrolment requires School approval
UOC4 S1 S2
Prerequisite/s: PHCM9401, PHCM9402

This course provides a degree of flexibility for academics who wish to focus on teaching strategies most appropriate to the contexts in which they teach. Participants choose two from a series of teaching contexts which include Teaching Small Groups, Teaching Large Groups, Teaching in the Studio, Teaching in the Laboratory, Teaching On-Line and Fieldwork. The course is taught through workshops which are practical and experiential, allowing participants to observe or participate in many of the strategies under discussion. Project work for assessment requires participants to experiment with the some of the strategies in their own teaching and to evaluate the results.

PHCM9404
Course Planning and Assessment
School of Public Health and Community Medicine
Staff Contact: L Bloomfield
Enrolment requires School approval
UOC4 S1 S2
Prerequisite/s: PHCM9401, PHCM9402

This course is organised according to an instructional design framework to guide participants in planning their teaching and assessment activities for a university course or similar unit of study. It expands on the concepts introduced in the Course Introduction to University Learning and Teaching, and gives participants the opportunity to apply the planning concepts to their own teaching. They will learn to analyse the learning needs of their students, set learning goals and objectives, consider a range of sequencing principles for their course content, select the best teaching strategies for their goals, and plan appropriate assessment strategies for both formative and summative assessment of learning. The face to face component of the course is a two day workshop.

PHCM9405
Innovations in Education
School of Public Health and Community Medicine
Staff Contact: J McLean
Enrolment requires School approval
UOC4 S1 S2
Prerequisite/s: PHCM9401, PHCM9402

This course has been designed to integrate with the staff development programs available at UNSW and to encourage you to investigate trends, issues or innovations that relate to learning and teaching in your discipline. Participants will identify a trend, issue or innovation in learning or teaching they wish to explore, review the literature in their discipline and within education more generally that relates to the chosen focus, participate in a relevant staff development activity, and consider the implications of their investigations for their current teaching practice. Assessment is based on assignments that document their teaching and reflect on the impact of their investigations.

PHCM9406
Educational Technology in Learning and Teaching
School of Public Health and Community Medicine
Staff Contact: I McAlpine
Enrolment requires School approval
UOC4 S1 S2
Prerequisite/s: PHCM9401, PHCM9402

There is currently a strong interest in the potential for online technologies to support and enhance teaching at all tertiary levels. There are many ways to make use of online technologies. The most effective ways are likely to involve a reconsideration of approaches to teaching and learning, so that the methods that make the most effective use of the technologies, or are most effectively enhanced by the technologies, can be adopted. This course considers the rationale for using online technologies in teaching, and a range of approaches to instructional design, using techniques such as online conferencing and collaboration, project development and management, formative evaluation in project development and summative evaluation to establish the effectiveness of online courseware. Participants will have the opportunity to consider theoretical issues in online teaching and learning, and a range of practical applications that have a basis in appropriate theoretical issues. Assessment will be based on a project that the participant will develop in relation to a teaching programme. This will be considered in stages, such as a preliminary analysis, treatment or prototype, and the final project including a report that considers the theoretical basis in the literature and how this was applied to the development process. This course will be comprised of a regular weekly workshop during semester, additional workshops on WebCT that can be selected from the EDTeC website and some online activities. The WebCT workshops are offered several times so that course participants can select a time that suits them.

PHCM9422
Population Health, Epidemiology and Statistics
School of Public Health and Community Medicine
Staff Contact: M McLaws
UOC6 HPW3 S2

Population health is primarily concerned with the health status of populations and communities as distinct from clinical health or medicine which is primarily concerned with the health of individuals and families. The objectives for this course include: an examination of the determinants and causes of disease and injury in populations and communities and the impact on health service provision; the collection and bio-statistical analysis of data to create information about disease and injury patterns in populations and communities (the epidemiological approach); and the use of information about disease and injury in populations and communities in order to manage, plan and provide hospitals, health services and prevention strategies.

PHCM9431
Interpersonal Communications in Organisations
School of Public Health and Community Medicine
Staff Contact: R Iedema
UOC4 S1 X1

A theoretical and practical course which aims to increase students understanding of, and capacity to deal with, communication problems in organisations. Teaches students to improve their own communication skills by a series of communications exercises, role plays, simulations and games. Students are able to chart their progress with a checklist developed for the course.

PHCM9441
Healthcare Economics and Financial Management
School of Public Health and Community Medicine
Staff Contact: K Forde
UOC6 HPW3 S1

This course combines health economics and healthcare financial management. It analyses how economic concepts can be applied to the healthcare industry. An introduction to double entry accounting to provide a working knowledge of cash and accrual accounting, plus an analysis of balance sheets, income statements and cash flow statements. How to construct a budget in a healthcare environment is a core skill in this course.

PHCM9442
Health Resources Planning and Development
School of Public Health and Community Medicine
Staff Contact: I Forbes
UOC6 HPW3 S2

This course is intended for students dealing with resource planning of lesser developed countries. A case study approach is used and reflects circumstances likely to be experienced in developing countries. In Hong Kong, the Hong Kong health system is examined. Topics cover the basic concepts in planning using methods of systems analysis, examining issue of resource development in the public and private sector, decision making, resource supply and demand, welfare analysis and issues of resource allocation. Included is the planning and procurement of health resources including facilities, workforce and service programs in the light of cost benefit and cost effectiveness analysis.

PHCM9471
Comparative Health Care Systems
School of Public Health and Community Medicine
Staff Contact: J Dewdney
UOC6 HPW3 S1

Examination is made of the structure and function of different international health care systems with special reference to constitutional, legal, economic, social and political environments within which health care systems operate. Characteristics of institutional and non-institutional care; expenditure, funding arrangements and vaarious systems of health insurance and the health workforce; current policy issues affecting the health system in the country are reviewed.

PHCM9500
Epidemiology for Public Health
School of Public Health and Community Medicine
Staff Contact: J Kaldor
UOC6 HPW3 S1 S2
Prerequisite/s: PHCM9502

This course provides students with an understanding of the role of epidemiology as the quantitative science underpinning much of public health practice. Students will learn the basic methodological tools of epidemiology, such as statistics to measure disease frequency, skills to critically review literature and interpret epidemiological studies, and their application in a variety of research and public health contexts. Skills for measuring frequency of disease and testing for evidence of association between risk factors and disease in this course will build on statistics learnt in CMED9502 Statistics for Public Health. This course will cover topics pertaining to study design, basic statistical tests and interpretation of results.

PHCM9501
Computing Techniques for Health Services Management
School of Public Health and Community Medicine
Staff Contact: L Betbeder-Matibet
UOC4 HPW2 S1 S2

Introduction to, and practice of, transferable skills for the utilisation of personal computers in the workplace. The nature of tasks perofrmed in computing. The nature of computing systems, databases, and communication links. Use of software packages for clinical and managerial data acquisition, analysis, and report preparation. Use of the Internet for teleworking, compiling, and transmitting information. Conducted at laboratory terminals during residential schools, with students obliged to make their own arrangements for access to computers during term.

PHCM9502
Statistics for Public Health
School of Public Health and Community Medicine
Staff Contact: D Black
UOC6 HPW3 S1 S2

This is a core course for Master of Public Health Students. Provides an introduction to research methods and statistical techniques applicable to public health data. Statistical techniques will focus on data analysis of a single variable or linear relationships between two variables. In addition, students will learn to use SPSS for Windows to conduct statistical analyses on a set of data relevant to public health.

PHCM9516
Introduction to Public Health
School of Public Health and Community Medicine
Staff Contact: R Poulos
UOC4 HPW2 S1 S2

This course will introduce students to the discipline of public health. There will be 12 formal lectures and 2 weeks of student presentations. Topics covered include Australian health care system; population health; management of public health interventions; principles of prevention; health promotion; health protection; concepts of risk factors; socio-economic status and health; special needs groups; determinants of health status; disability and chronic illness.

PHCM9517
Advanced Biostatistics and statistical computing
School of Public Health and Community Medicine
Staff Contact: D Black
UOC4 HPW2 S2
Prerequisite/s: PHCM9502

Statistical design, analysis and reporting: a selection of topics from clinical trials and other controlled studies, non-experimental studies, rates and proportions, multi-way tables, analysis of covariance and repeated measures, multiple regression and other multivariate analysis, life tables and survival analysis; use of statistical software. Thorough individual instruction in the use of computers will be given in the laboratory.

PHCM9518
Case Studies in Epidemiology
School of Public Health and Community Medicine
Staff Contact: A Grulich
UOC4 HPW2 S1
Prerequisite/s: PHCM9500

Epidemiology has made a substantial contribution to public health policy and practice in a number of areas. The course will consider four areas (cancer, cardiovascular disease, hepatitis and screening for disease) and review the major epidemiological studies that have contributed to development of knowledge and in Public Health application in these areas. The emphasis of the course will be on substantive findings, and the role played by epidemiological methods.

PHCM9519
Demography
School of Public Health and Community Medicine
Staff Contact: I Burnley
UOC4 HPW2 S2

Introduction to demography; sources and processing of data, principles and applications. Life tables, mortality, marriage and divorce, natality, reproductivity. Martial characteristics and family groups. Migration. Distribution by area, sex, age, race; educational and economic characteristics. Population estimates and projections. Computer techniques.

PHCM9601
Public Health in Mental Health: International Perspective
School of Public Health and Community Medicine
Staff Contact: C Issakidis
UOC4 X1

Mental disorders account for 10% of the burden of disease in the world, 16% in the developed countries, not because of an epidemic of mental disorder in the developed world, but because the burden of communicable disease is less in the developed world. This course will provide students with an understanding of public health issues associated with mental disorders and equip students with skills to advise policy. Topics include: What are mental disorders; prevalence, morbidity, mortality, burden; what are the major correlates and determinants; do these provide an avenue for public health intervention or prevention? Mental disorders of greatest burden, controversies and future directions, mental health policy in the developed and developing world; cost and cost effectiveness of current and optimal interventions, reconciling equity, efficiency and societal demands and planning of written works.

PHCM9604
Alcohol and Other Drug Issues
School of Public Health and Community Medicine
Staff Contact: R Richmond
UOC4 HPW2 S2

Alcohol and Other Drug Issues is a wide ranging course that takes a public heath approach. It has relevance for population health related to drug use, health management of people who are drug users and abusers, drug policy, and raises important controversial issues. Use of alcohol and other drugs is a major issue in determining the health of individuals and populations in developed and developing countries. The four components of this course are: the size of the drug problem; model of dependence; harm reduction; and relapse prevention. This course is a distance learning course offered in flexible delivery mode. At the end of this course students will understand the patterns of dug use and health effects; and will have learnt about issues of drug dependence. Students will learn about the range of public health approaches available to minimise problems related to substance abuse such as harm reduction strategies. Students will develop skills in brief interventions to use with excessive drinkers and will appreciate the issues associated with relapse. This course provides students with important knowledge and skills that will enable them to plan effective alcohol and drug services.

PHCM9605
Health in Developing Countries
School of Public Health and Community Medicine
Staff Contact: J Hirshman
UOC4 HPW2 S1 S2

Economic, demographic and epidemiological aspects; communicable diseases, for example, diarrhoea and parasitism, chronic diseases including mental health in the Third World context; maternal and child health; family planning; nutrition, and food and nutrition policy; breast feeding promotion; immunisation; water supply and environmental sanitation; organisation of health services; primary health care; health personnel training; health education; pharmaceutical problems; role of international and non-governmental agencies; self-reliance.

PHCM9608
Rural Health Studies 1
School of Public Health and Community Medicine
Staff Contact: D Sutherland
UOC4

The subject covers the following issues: The health of rural populations and their determinants including locational disadvantage; sources of information for a rura; health needs assessment; data collection and analysis for needs assessments; developing plans and strategies to address local health needs identified in the needs assessment including primary, secondary and tertiary prevention, service development, workforce development.

PHCM9610
Food & Nutrition Policy Studies
School of Public Health and Community Medicine
Staff Contact: P Craig
UOC4 S2

The relationship between population, health and the food and nutrition system, i.e. the production, distribution and consumption of food. Discussion of development of intersectorial policies and strategies addressing specific segments of the food and nutrition system to improve the health of vulnerable populations in developed and developing countries. Students will work through a case study and demonstrate their understanding by preparing, presenting and defending a proposed food policy for a specified population or community group.

PHCM9611
Health of the Elderly
School of Public Health and Community Medicine
Staff Contact: F Ehrlich
UOC4 HPW2 S1

Demography of ageing; epidemiology of health, illness and disability in an ageing population; aged persons perspectives; gerontology - biological, sociological and psychological perspectives; problems and special needs of an ageing population; health maintenance; health policy for an ageing population; health services; institutional care; community and domiciliary services; non-government organisations; poverty; community attitudes; accommodation; income support; social and ethical issues.

PHCM9612
Environmental Health
School of Public Health and Community Medicine
Staff Contact: School Office
UOC4 S2
Prerequisite/s: PHCM9502

To introduce the principles of epidemiology, particularly in reference to environmental risk factors of disease and in reference to such principles as incidence and prevalence, aetiology and risk factors, epidemics and endemics, and primary, secondary and tertiary prevention of disease. In particular, it deals with environment and disease, radiation, chemical, hazards, air and water pollution, biological hazards, urban environment, ecology, ecosystems and interdependence and how these factors affect health, public health issues related to sustainable development.

PHCM9615
Delivery of Health Services in the Community
School of Public Health and Community Medicine
Staff Contact: M Harris
UOC4 HPW2 S2

The subject covers the following issues:

- The organisation of primary health care services in the community including prevention, health promotion, chronic and continuing care.
- Integration of services and care within the community and between it acute care including systems and structures to support this such as information systems.
- Evaluation of service reach, quality and care and health outcomes in the community.
- Planning service development to improve secondary and tertiary prevention for local communities.

PHCM9619
Evaluation/Review of Health & Community Based Organisations
School of Public Health and Community Medicine
Staff Contact: School Office
UOC4

Students will attend a three day educational course which will cover the principles of evaluation assessment and accreditation. They will work through, in detail, both the content and process for undertaking a Community Health Accreditation Standards Review. This program is highly interactive and includes role plays and case studies. After completion of the three day educational program students will be required to attend a two day review of a Community Health Service, after the review they will work with a team of two other reviewers to prepare a report. This report and assessment by the other reviewers will be the subject of the candidates evaluation for the course.

PHCM9621
HIV/AIDS: Australian and International Responses
School of Public Health and Community Medicine
Staff Contact: G Dore
UOC4 HPW2 S2

This course provides an introduction to biological, clinical and epidemiological aspects of HIV infection, and considers the impact of HIV/AIDS on a number of areas of the health care system and society, both now and in the future. The course is taught by internationally recognised experts in the field, and will have a particular focus on HIV/AIDS in Australia and the Asia/Pacific region.

PHCM9626
Inequalities and Health
School of Public Health and Community Medicine
Staff Contact: E Harris
UOC4 HPW2 X1

The course aims to provide practical skills in analysing inequalities and evaluating interventions designed to address them. These are critical skills in the Health Outcomes approach. The course comprises a three day workshop with teleconference after the workshop.

PHCM9627
Audit & Quality Assurance in Primary Care
School of Public Health and Community Medicine
Staff Contact: School Office
UOC4

This course aims to provide theory and practice in quality assurance and audit in General Practice. In the course students will develop knowledge and skills in quality assurance and audit principles and methods and in applying these to their own clinical practice by conducting audits of their practice over one year. The course will include distance education materials and manuals, teleconferences, one weekend workshop, audit manuals and material.

PHCM9633
International Tobacco Control
School of Public Health and Community Medicine
Staff Contact: R Richmond
UOC4 HPW2 S1

The worldwide toll of death and disability related to tobacco use is enormous. In this course we examine programs in countries that have made efforts to limit availability of tobacco and reduce its use, and the effectiveness of those efforts. This course examines the issues of tobacco control: what does it involve; how best can it be achieve; and how can it be evaluated. This course takes an international focus. Tobacco control initiatives are illustrated with examples from a wide range of countries, and the focus is specifically on how these approaches can be evaluated. Different approaches work best in different places, and this course explores how a tobacco control approach/strategy works in a particular country. This course includes how to evaluate an international tobacco control program. It is a valuable course for those concerned with how to prevent the damage that results from tobacco use, how to develop a tobacco control program and activities, and how to evaluate the effectiveness of such activities. This course is useful for doctors, nurses and other health practitioners, public health specialists, policy-makers and others in the public and private sectors of developed and developing countries. At the end of this course, students will understand the patterns of tobacco use and health effects of smoking, and will have learnt about nicotine dependence. Students will learn about the range of public health approaches available to reduce tobacco prevalence including the range of harm reduction strategies. Students will develop skills of brief interventions to use with smokers and will appreciate the issues associated with relapse. This course provides students with important knowledge and skills that will enable them to plan and evaluate an effective tobacco control program.

PHCM9661
Current Issues in Health
School of Public Health and Community Medicine
Staff Contact: A Whelan
UOC4 HPW2 S2

This interactive subject critically examines controversial issues involving those working in the health sector. Topics addressed include: changing trends in the delivery of health care towards shorter stays and day-surgery, the impact this has on the community and primary care services, the impact on the work of health professionals in the acute and community care sectors, the use of accident and emergency services and ambulance diversions, implications for the future training of health professionals.

PHCM9701
Management of the Work of Health Professionals
School of Public Health and Community Medicine
Staff Contact: A Whelan
UOC4 HPW2 S2

This subject identifies the context and various factors which may influence the organisation of both work and workers. It aims to develop

knowledge and skills in critically evaluating techniques and methods which have been recommended for organising work and managing responses of workers. In particular, features of health workplaces and the highly professionalised workforce are considered. Topics addressed include: assessing and improving worker performance, motivating professionals, workplace conflict, designing work, introducing technology, managerial aspects of employment law.

PHCM9711
Management of Organisations
School of Public Health and Community Medicine
Staff Contact: R Iedema
UOC6 HPW3 S1

Examines current theories of organisation and management, and evaluates their applicability to management work in health care settings. Examines the relationship between theory and practice in managing organisations; fosters an appreciation of the dynamics of managerial behaviour and extends understanding of what is entailed in accomplishing organisational change and in constituting management control.

PHCM9741
Management of Health Services
School of Public Health and Community Medicine
Staff Contact: J Braithwaite
UOC4 HPW2 S1

In this course we look into students' own managerial styles. We explore contemporary management issues and challenges facing those who are are responsible, now or in the future, for the managerial performance of health service organisation. We attempt in this course to bridge the theory - practice divide. A key concern is to examine various management tools, techniques and ideas and assess their usefulness. Specific topics examined include: some psychological aspects of management; organisational; communication; continuous improvement; and the management of change. Part of the course is devoted to providing insights into students own managerial style. A major theme is to develop the ability to generate improved solutions to managerial problems by utilising a reframing approach.

PHCM9743
Introduction to Casemix
School of Public Health and Community Medicine
Staff Contact: T Ho
UOC4

Diagnosis related groups (DRGs) and other casemix systems including their history, principles of construction and recent modifications including the Australian National DRGs (AN-DRGs). Problems in the use and interpretation of DRG data: the varying clinical and resource homogeneity of individual DRGs and the presence of outliers. Effects of errors in the coded medical record abstract data on DRG assignment; limitations imposed by the disease and procedure classification systems currently used. Future developments in the design of casemix systems.

PHCM9747
Clinical Work Process Control
School of Public Health and Community Medicine
Staff Contact: R Sorensen
UOC6 S2

This course examines the application of work process control structure methods in the organisation and management of clinical work. It examines how clinical pathways may provide methods for improving the evidentiary basis of clinical work and for improving the quality and technical efficiency of service delivery. The subject is structured as a case study of a health service which provides hospital and community services to a sector of the capital city, and is funded for the most part according to a budget-share casemix formula. Students adopt the roles of senior managers and are expected to provide advice on key decisions to the chief executive and the clinical service directors.

PHCM9748
Clinical Governance
School of Public Health and Community Medicine
Staff Contact: R Sorensen
UOC6 S1

This course develops an appreciation of the way that the role of clinicians in health care delivery is being affected by changes in the social, legal, economic, organisational, informational and political contexts of health service organisation. At its completion, students will understand the principles of clinical governance and of the range of issues and problems that it is meant to address. The course requires students to appraise different approaches to improving clinical effectiveness, quality, service integration and the use of external value for money consideration in service design and delivery. Students carry out an extended case study and a range of problem-based exercises. This will provide students an opportunity to examine what their changed role implies for their personal skills development.They are provided also with opportunities to acquire and practice skills they require to analyse and address issues arising from efforts to extend clinical accountability.

PHCM9750
Clinical Governance for Clinician Managers
School of Public Health and Community Medicine
Staff Contact: M McLaws
UOC4 S1 S2

Students will gain an understanding of the principles and application of clinical governance. The course develops in the student an appreciation of the role of clinician-managers in health care delivery systems within the social, legal, economic, organisational, informational and political contexts. The course will be taught within the broad imperative of social and economic accountability. The teaching methodology will be that of case study analysis and problem-solving. The aim of the methodology is to create student critical analysis and problem-solving that will develop clinician-management skills. On successful completion of the course students will be equipped to exercise managerial autonomy within cooperative structures and processes.

PHCM9751
Management for Public Health
School of Public Health and Community Medicine
Staff Contact: J Braithwaite
UOC4 S1

Note: This is a core course for Master of Public Health students. Extends students' understanding of the broad range of factors that can affect public health policy development and implementation and which can influence how public health services are organised and managed. The course extends students understanding of different approaches to developing and implementing public health policy and to organising and managing a unit within a public health service.

PHCM9761
Public Mental Health in Australia
School of Public Health and Community Medicine
Staff Contact: P Trebilco
UOC4 HPW2 S2

This course aims to introduce students to the current policies and strategies in mental health/illness in Australia using a discovery learning approach. In this course you will apply the principles of public health to the prevention of mental illness and the promotion of mental health, identify significant factors affecting mental health within a chosen community, critically review the differing models of mental health/illness, gain insight into researching mental health, and devise a project to either promote the mental health of a defined target group, or to prevent or reduce the susceptibility of a selected group to mental illness.

PHCM9781
Evidence-Based Clinical Management
School of Public Health and Community Medicine
Staff Contact: T Ho
UOC4 S2

The course has two main compoents. The first examines the philosophical debates concerning "Evidenced-based" approaches to health care and clinical management. It looks at different beliefs about the nature of knowledge (positivistic, phenomenological/ social construction and critical) and with thi explores issues about what can be considered "evidence". The difficulties of decision-making in a pluralistic work place and the problems that this poses for defining issues and work processes in clinical settings are also considered.The second component focuses on the developing of practical skills in incorporating

various sources and types of evidence in clinical management. Various types and sources of evidence, such as Cochrane Collaboration, hospital databases as well data resulting from the adoption of process control oriented approaches to clinical service provision, are presented and their relative merits discussed. Statistical methods directly applicable to creating visibilities about clinical process and practice will be presented and assessed. Hands-on practice with databases is included. Students will gain knowledge and experience in searching databases; assessing literature; evaluating statistical methods and results; appraising methods of data generation, collection and evaluation; and developing a strategy for introducing a more evidence-based approach into their daily management of clinical work.

PHCM9811
Sociology, Ethics and Health
School of Public Health and Community Medicine
Staff Contact: School Office
UOC4

The first part of this course focuses on the classical sociological tradition most closely associated with the work of the founding parents of sociology; Marx, Weber and Durkheim.In this first part, particular attention is paid to the social origins of ethics and the cultural construction of morality. The course then follows the development of health sociology through the examination of issues such a socio-economic inequality and health, the social construction of health knowledge, consumer participation in health care and the new public health.

PHCM9911
Health Informatics Principles
School of Public Health and Community Medicine
Staff Contact: T Zrimec
UOC6 HPW2 S2

This course provides an introduction to the area of health informatics with a broad overview of the field. It covers the basic theoretical concepts needed to understand informatics principles starting with the notion of what one means by information, what constitutes a model, what defines a system. The building blocks allow students to understand information and communication systems from first principles as well as to understand the different roles that communication and information systems play in health care. The course introduces various forms of computer-based health information systems and covers issues such as data privacy, security and confidentiality.

PHCM9922
Decision Support Systems
School of Public Health and Community Medicine
Staff Contact: T Zrimec
UOC4 HPW2 S2

This course enables participants to become familiar with the goals and different forms of decision support in health care, and gain knowledge of the practical issues of implementation. The course examines systems based on statistical and logical approaches to decision making that include statistical prediction, rule-based systems, case-based reasoning, neural networks, fuzzy logic etc. It gives an overview of the various computerized clinical decision support techniques together with a detailed assessment of successful and unsuccessful applications developed. The actual and potential impact of the technology together with the challenges associated with this kind of application will be examined.

PHIL5002
Themes in the History of Philosophy
School of Philosophy
Staff Contact: School Office
UOC8 HPW2 S1

Explores philosophical themes from the history of modern philosophy. Themes will be selected from a range of topics including: substance, mind and bodies, freedom, being, the ideal and the real, reason and judgement, and the social contract. Philosophical texts to be examined will be chosen from the work of influential thinkers from the 17th to the 19th centuries including: Descartes, Locke, Leibniz, Hume, Kant, Hegel, Nietzsche and Mill. No more than two themes will be selected for study in the work of no more than two theorists, depending on student requirements.

PHIL5004
Contemporary Epistemology and Metaphysics
School of Philosophy
Staff Contact: School Office
UOC8 HPW2 S2
Excluded: PHIL2208, PHIL2109

Examines some of the central issues in recent analytic epistemology such as those relating to theories of truth, evidence, scepticism, fallibilism, contextualism, relativism and the possibility of non-absolute knowledge. Depending on student requirements, the course also examines central issues in contemporary metaphysics such as the nature of natural and social reality, the existence of god, minds, free will, death and moral responsibility.

PHIL5005
Directions in European Philosophy
School of Philosophy
Staff Contact: School Office
UOC8 HPW2 S1 S2

The main themes in 20thC French and German philosophy, such as the structure of human existence, subjectivity and intersubjectivity, the production of meaning, and the nature of temporality, will be traced from the phenomenology of Husserl and Heidegger to developments through French philosophers such as Merleau-Ponty, Levinas, and Derrida.

PHIL5006
Developments in Moral Philosophy
School of Philosophy
Staff Contact: School Office
UOC8 HPW2 S1
Excluded: PHIL2508

Examines the emergence of the main branches of moral philosophy (eg utilitarianism, emotivism, and deontological ethics) from their historical roots in the philosophy of thinkers such as Mill, Hume, and Kant to recent developments in the late 20thC. Also examines some new applications for these moral theories in fields such as environmental ethics and bioethics.

PHIL5007
Issues in Philosophy of Mind
School of Philosophy
Staff Contact: School Office
UOC8 HPW2 S1 S2
Excluded: PHIL2206

Examines the main developments in philosophy of mind in the late 20thC. Issues explored include the nature of thinking, perception, and feeling, and different theories about the composition and structure of the mind. These developments in philosophy of mind will be applied to one of the following issues/fields, depending on students' requirements: personal identity, psychology, or artificial intelligence.

PHIL5008
Themes in Social and Political Philosophy
School of Philosophy
Staff Contact: School Office
UOC8 HPW2 S1

Explores different philosophical approaches to the concepts of equality, freedom, justice, rights, and community. These approaches are drawn from liberalism, Marxism, communitarianism and post-structuralism.

PHIL5009
Advanced Study Project
School of Philosophy
Staff Contact: School Office
UOC8 HPW2 S1 S2

Students can undertake close examination of either a philosophical theme or the work of one philosopher. The project is undertaken under the supervision of a member of staff who has expertise in the field and must have the approval of the Head of School.

PHIL5206
Artificial Intelligence And Computer Science
School of Philosophy
Staff Contact: P Staines
UOC8 HPW2 S1

An introduction to the methods, role and history of computation and artificial intelligence in cognitive science.

PHIL5400
Moral Theory and Moral Reasoning
School of Philosophy
Staff Contact: S Cohen
UOC8 HPW2 S1

Introduces students to basic concepts and theories of moral philosophy, as well as to the characteristics of systematic moral reasoning. Makes particular reference to practical application, drawing examples from the professional context.

PHIL5401
The Professions and Society
School of Philosophy
Staff Contact: S Cohen
UOC8 HPW2 S1

Covers the history, philosophy, and sociology of the professions in relating them to the social contexts which make them not only skilled occupations but ones with special social identities and responsibilities. Examines the history of modern professions, the sociological criteria applied to distinguish professions from other occupations, and the formation of professional identities with norms and procedures of practice.

PHIL5402
Ethical Issues in Business and the Professions
School of Philosophy
Staff Contact: S Cohen
UOC8 HPW2 S2

Deals with the ethical requirements of the professions and professionals. Offers the opportunity to investigate issues arising in professional practice and in practicing professionally in a business environment. Investigates the application of moral reasoning to professions and professionals, including the structure and content of codes of ethics, relationships with clients, third parties, employers and colleagues, and society.

PHIL5403
Ethics in Organisations
School of Philosophy
Staff Contact: School Office
UOC8 HPW2 S2

Provides practical experience in developing ethics within organisations. Offers the opportunity to develop one or more detailed case-studies which have particular application to each student's particular interests or vocations. Functioning as a seminar as well as a supervised project, the course brings together various interests, approaches, and strategies for implementation of responses to ethical issues in the professional context. Requires completion of individual projects by all students, and each student's active input into all projects being undertaken within the course.

PHIL5404
Supervised Readings in Professional Ethics
School of Philosophy
Staff Contact: S Cohen
UOC8 HPW2 S1 S2

A supervised reading program which extends aspects of applied ethics, particular to individual students' needs.

PHIL5405
Organisational Structures for Ethical Conduct
School of Philosophy
Staff Contact: S Cohen
UOC8 HPW2 S1 S2

The development of an extended case study concerned with systematic organisational provision for ethical practice. Students develop a topic appropriate to their particular organisation or profession.

PHIL5406
Research Project - Ethical Systems
School of Philosophy
Staff Contact: S Cohen
UOC8 HPW2 S1 S2

Research-oriented investigation of the possibility of systematically providing for ethical practice within a particular organisation or within a facet of an organisation's activities. Differs from PHIL5405 in that this course is more research-oriented and is available only to students who have shown research potential.

PHPH5413
Sports Injuries 1
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

Sports injuries 1 describes dermatomes and myotomes and the implications for sports injuries. The anatomy of the shoulder, elbow, wrist and hand is described which provides the basis for describing sporting injuries to the shoulder, elbow, wrist and hand. The anatomy of the head and neck is described in order to deal with sporting injuries to the head, neck, eye, ear, nose and face. The anatomy of the trunk is described in order to deal with sports injuries to the chest, abdomen, back. Finally, on-field management of sports injuries is described.

PHPH5414
Sports Science
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

The biochemistry is described for intermediary metabolism and specifically aerobic and anaerobic metabolism in muscle and the hormonal control. Energy expenditure is considered in the resting and exercising person. Muscle physiology deals with the contractile process and features of tensile force in relation to the different fibre types. The motor unit is described as are the sensory inputs to the central nervous system and its control of motor function. Biomechanical principles include a consideration of subjective, objective and predictive analysis. Gastrointestinal physiology surveys the motility and digestive and absorptive activities of the gut.

PHPH5416
Sports Nutrition/Sports Pharmacology
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

The course examines food composition labels and dietary intakes of various sections of the community both sedentary and active. Nutrients are dealt with such as protein, carbohydrate, fats, dietary fibre, fluid intake, minerals and vitamins. The recommended dietary intakes are compared with actual intakes of various groups. Nutrition for special groups of physically active people is considered such as children, adolescents, pregnant and lactating women, the elderly, different ethnic groups. Energy balance is considered in relation to weight control. Nutrition in performance-related activites is discussed in relation to requirements for metabolic fuels, dietary components, mineral and trace elements, fluid, aminoacid and vitamin supplements, training diet. Nutrition in health-related activities is discussed in reference to primary, secondary and tertiary prevention of problems in obesity, coronary heart disease, diabetes, eating disorders. Basic pharmacology will be outlined and factors affecting pharmacokinetics in relation to routes of administration, plasma levels, volumes of distribution, calabolism and elimination. The effect of exercise on drugs invivo are discussed such as the altered absorption rates with reduced mucosal blood flow and enhanced exercising muscle and skin blood flows; also, the effects of thermal regulation. The interactions of medically prescribed drugs on the physically active person will be discussed systemically regarding cardiovascular drugs, anti-diabetic drugs, respirary drugs, anti-inflammatory drugs (NSAIDs, corticosteroids), gastrointestinal drugs, psychotropics, antibiotics. Banned drugs or agents used to enhance performance are dealt with such as stimulants, narcotics, anabolic steroids, beta blockers, diuretics, hormones (human growth hormone, erythropoielin); blood doping, alkali agents. These will be discussed in relation to competitive activities and in relation to screening procedure. Identification procedures. Drug education and prevention of drug abuse are discussed.

PHPH5417
Sports Psychology/Clinical Biomechanics
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

The psychological effects of exercise are described in relation to stress management, management of depression. sleep disorders, concepts of self-esteem and self-efficacy, effect on mental acuity and day-time fatigue, the contribution to the control of addictive behaviour. The use of psychological procedures will be discussed in regard to motivation and compliance for subjects undertaking health-related activities as well as for athletes involved in performance-related activities. The psychological aspects of injury will be dealt with in considering the psychological problems encountered by the injured recreationally active person and also by the athlete. Behavioural problems are discussed such as exercise-addiction and body weight problems. In regard to stress, there will be discussion of the mental state and the functioning of the immune system and the inter-relations between stress exercise and the components of the immune system. This will be discussed in relation to the incidence of infection in the competitive athlete. Clinical biomechanics applies basic aspects of biomechanics to joint movements encountered in a wide variety of sporting activities to elucidate the problems that can arise from inappropriate repetitive movements resulting in micro- and macro-trauma.

PHPH5423
Sports Injuries 2
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

Sports Injuries 2 deals with normal soft tissues and injuries to these in relation to muscles, tendons, ligaments and cartilage. Bone structure and function are described to understand injuries to bone. Anatomy of the pelvis, hip and thigh precedes consideration of injuries and their management in the groin, hip and thigh. Functional anatomy of the knee lays the basis for understanding acute and chronic injuries to the knee. Anatomy of the leg, ankle and foot is considered in relation to injuries to these regions.

PHPH5424
Research Methods
School of Medical Sciences
Staff Contact: S Lord
UOC6 S1 S2

Biostatistics deals with basic statistical functions including graphical presentation and interpretation of data. Epidemiological principles deal with defining a population and how to sample it and elicit data and describes epidemiological variables and attributes. The student is introduced to the key components of a research study in sports medicine including the assessment of the relevance of a measurement technique to a given research question. The student develops an approved research project.

PHPH5426
Applied Sports Medicine
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

This subject brings together the strands dealt with in preceding subjects on sports injuries and medical applications of exercise. Weekly topics include: the prevention of injury, including the screening of athletes pre-season; imaging in sports medicine, considering the use of X-Rays, CT and MRI, ultrasound, nuclear medicine; principles of rehabilitation in relation to types of stretching and strengthening, physical methods of soft tissue treatment, manipulation and mobilisation, proprioceptive re-training, taping; the use of non-steroidal anti-inflammatory drugs and corticosteroid injections; the management of rheumatological conditions in relation to physical activity; medical coverage of fun runs and other community events; the role of the team physician; legal and ethical aspects of sports medicine. Genetic determinants of sporting performance are also discussed and the potential uses and abuses of gene therapy.

PHPH5433
Medical Applications of Exercise 1
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

Medical Applications of Exercise 1 surveys the physiology of the cardiovascular system in its control and reflex responses as well as the electrophysiology of the heart and the ECG. The effects of exercise on the cardiovascular system are discussed. Investigations of cardiovascular functions are illustrated, including stress testing. Primary, secondary and tertiary use of exercise in cardiac rehabilitation are considered. Cardiovascular aspects of special groups are described, in pregnant women, in hypertensive and diabetic patients.

PHPH5443
Medical Applications of Exercise 2
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

Temperature regulation is considered as a basis for understanding hyperthermia in the athlete. Physiological and medical considerations are described in relation to the female athlete and in relation to children. Respiratory physiology and respiratory medicine provide the basis for understanding exercise-induced asthma, diving and altitude problems for the athlete.

PHPH5445
Major Project and Report
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

The Project will be planned and approved in undertaking the subject Research Methods. The Project, conducted over six months part-time, will involve research into an area of sports medicine at a clinical or basic level which contributes new knowledge to the field. The Project is to be presented as a scientific Report of about 8-10 000 words.

PHPH5461
Principles of Pharmacology
School of Medical Sciences
Staff Contact: School Office
UOC12 S1

This subject introduces the principles of pharmacology and also covers the systematic pharmacology of selected drug groups. It is designed for students with a background in biotechnology but with little or no knowledge of pharmacology. The subject covers topics such as dose response relationships, drug absorption, metabolism and elimination, autonomic pharmacology, autacoids, pharmacokinetics and toxicology.

PHPH5471
Advanced Pharmacology
School of Medical Sciences
Staff Contact: L Wakelin
UOC12 S2
Prerequisite/s: PHPH3152, PHPH5461

This course is an advanced coverage of pharmacological topics including receptor binding, pharmacokinetics, drug assays, drug development, toxicology, autacoids and ion channels. The lecture material is supplemented by computerised analysis of data derived from experiments on receptor binding, dose response relationships and pharmacokinetics. Considerable emphasis is placed on the many aspects of drug development.

PHPH5491
Pharmacology Project
School of Medical Sciences
Staff Contact: L Wakelin
UOC6 S1 S2

A small laboratory or industry based project or an extensive literature review or extensive data analysis in the area of drug development.

PHPH5501
Basic Principles of Drug Actions Module 1 - Distance Education
M.App.Sc. in Biopharmaceuticals
School of Medical Sciences
Staff Contact: School Office
UOC6 S1 S2

This module covers general principals of pharmaco-dynamics and pharmaco-kinetics. Pharmaco-dynamics (what the drug does to the body) considers drug-receptor interactions, the basis of dose-response curves, reversible and irreversible antagonists, partial agonists and related topics. Events following the drug-receptor interaction, which include stimulation of second messenger systems and the pharmacology of ion channels, are described. The principles governing pharmaco-kinetics (what the body does to the drug) and their clinical importance are discussed in some detail. There are several simple graphical and problem solving exercises to be completed to aid your understanding of this material.

PHPH5511
Selected Topics in Pharmacology - Module 2 - Distance Education
M.App.Sc. in Biopharmaceuticals
School of Medical Sciences
Staff Contact: School Office
UOC6 S1 S2

For this module the topics were chosen to enable students to gain knowledge of the receptors in the human body with which drugs commonly interact to produce their main clinical effects, or their side-effects/toxicological actions. The module begins with an introduction to the autonomic nervous system, then works through autonomic receptors, receptors for histamine and serotonin, then to the newer areas of peptide receptors and cytokines, the latter areas being those for which drugs are now being developed. With this background, plus some reading material on receptors for drugs affecting the central nervous system, it is felt that students will be able to read and understand the pharmacology of most drugs in clinical use. A video which covers many autonomic drug effects on the cardiovascular system, plus questions based around this film, are included.

PHPH5513
Sports Injuries 1
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

Sports injuries 1 describes dermatomes and myotomes and the implications for sports injuries. The anatomy of the shoulder, elbow, wrist and hand is described which provides the basis for describing sporting injuries to the shoulder, elbow, wrist and hand. The anatomy of the head and neck is described in order to deal with sporting injuries to the head, neck, eye, ear, nose and face. The anatomy of the trunk is described in order to deal with sports injuries to the chest, abdomen, back. Finally, on-field management of sports injuries is described.

PHPH5514
Sports Science
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

The biochemistry is described for intermediary metabolism and specifically aerobic and anaerobic metabolism in muscle and the hormonal control. Energy expenditure is considered in the resting and exercising person. Muscle physiology deals with the contractile process and features of tensile force in relation to the different fibre types. The motor unit is described as are the sensory inputs to the central nervous system and its control of motor function. Biomechanical principles include a consideration of subjective, objective and predictive analysis. Gastrointestinal physiology surveys the motility and digestive and absorptive activities of the gut.

PHPH5516
Sports Nutrition/Sports Pharmacology
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

The course examines food composition labels and dietary intakes of various sections of the community both sedentary and active. Nutrients are dealt with such as protein, carbohydrate, fats, dietary fibre, fluid intake, minerals and vitamins. The recommended dietary intakes are compared with actual intakes of various groups. Nutrition for special groups of physically active people is considered such as children, adolescents, pregnant and lactating women, the elderly, different ethnic groups. Energy balance is considered in relation to weight control. Nutrition in performance-related activites is discussed in relation to requirements for metabolic fuels, dietary components, mineral and trace elements, fluid, aminoacid and vitamin supplements, training diet. Nutrition in health-related activities is discussed in reference to primary, secondary and tertiary prevention of problems in obesity, coronary heart disease, diabetes, eating disorders. Basic pharmacology will be outlined and factors affecting pharmacokinetics in relation to routes of administration, plasma levels, volumes of distribution, calabolism and elimination. The effect of exercise on drugs invivo are discussed such as the altered absorption rates with reduced mucosal blood flow and enhanced exercising muscle and skin blood flows; also, the effects of thermal regulation. The interactions of medically prescribed drugs on the physically active person will be discussed systemically regarding cardiovascular drugs, anti-diabetic drugs, respirary drugs, anti-inflammatory drugs (NSAIDs, corticosteroids), gastrointestinal drugs, psychotropics, antibiotics. Banned drugs or agents used to enhance performance are dealt with such as stimulants, narcotics, anabolic steroids, beta blockers, diuretics, hormones (human growth hormone, erythropoielin); blood doping, alkali agents. These will be discussed in relation to competitive activities and in relation to screening procedure. Identification procedures. Drug education and prevention of drug abuse are discussed.

PHPH5517
Sports Psychology/Clinical Biomechanics
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

The psychological effects of exercise are described in relation to stress management, management of depression. sleep disorders, concepts of self-esteem and self-efficacy, effect on mental acuity and day-time fatigue, the contribution to the control of addictive behaviour. The use of psychological procedures will be discussed in regard to motivation and compliance for subjects undertaking health-related activities as well as for athletes involved in performance-related activities. The psychological aspects of injury will be dealt with in considering the psychological problems encountered by the injured recreationally active person and also by the athlete. Behavioural problems are discussed such as exercise-addiction and body weight problems. In regard to stress, there will be discussion of the mental state and the functioning of the immune system and the inter-relations between stress exercise and the components of the immune system. This will be discussed in relation to the incidence of infection in the competitive athlete. Clinical biomechanics applies basic aspects of biomechanics to joint movements encountered in a wide variety of sporting activities to elucidate the problems that can arise from inappropriate repetitive movements resulting in micro- and macro-trauma.

PHPH5521
Techniques for Drug Development
School of Medical Sciences
Staff Contact: School Office
UOC6 S2

This course provides an introduction to genomics and proteomics as relevant to drug discovery, and introduces the general principles of target selection. It elaborates in more detail important aspects of molecular recognition and receptor binding as applied to rational drug design. Similarly, it delves more deeply into high through-put screening, compound libraries, and quantitative structure activity relationships. Lastly, the module gives an introduction to the use of transgenic animal models in the drug discovery process.

PHPH5523
Sports Injuries 2
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

Sports Injuries 2 deals with normal soft tissues and injuries to these in relation to muscles, tendons, ligaments and cartilage. Bone structure and function are described to understand injuries to bone. Anatomy of the pelvis, hip and thigh precedes consideration of injuries and their management in the groin, hip and thigh. Functional anatomy of the knee lays the basis for understanding acute and chronic injuries to the knee. Anatomy of the leg, ankle and foot is considered in relation to injuries to these regions.

PHPH5526
Applied Sports Medicine
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

This course brings together the strands dealt with in preceding subjects on sports injuries and medical applications of exercise. Weekly topics include: the prevention of injury, including the screening of athletes pre-season; imaging in sports medicine, considering the use of X-Rays, CT and MRI, ultrasound, nuclear medicine; principles of rehabilitation in relation to types of stretching and strengthening, physical methods of soft tissue treatment, manipulation and mobilisation, proprioceptive re-training, taping; the use of non-steroidal anti-inflammatory drugs and corticosteroid injections; the management of rheumatological conditions in relation to physical activity; medical coverage of fun runs and other community events; the role of the team physician; legal and ethical aspects of sports medicine. Genetic determinants of sporting performance are also discused and the potential uses and abuses of gene therapy.

PHPH5531
Discovery and Development of New Medicines - Module 4 - Distance Education MAppSc
School of Medical Sciences
Staff Contact: School Office
UOC6 S2

This module gives an overview of most aspects of the development of new drugs. There is a very short historical introduction and examples of the discovery and development of drugs from natural products (plants) plus some examples of drugs developed using synthetic programs (chemical modifications). There is an example of a Natural Products program with examples of broad based screens and follow up testing in animals (Phase 0) before a drug cn be tested in humans. Phase 1-4 of clinical trials are then discussed, followed by the Pharmaceutical Company s and the Clinical Investigator s viewpoints of drug development. Regulatory issues and some ethical problems are briefly considered.

PHPH5533
Medical Applications of Exercise 1
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

Medical Applications of Exercise 1 surveys the physiology of the cardiovascular system in its control and reflex responses as well as the electrophysiology of the heart and the ECG. The effects of exercise on the cardiovascular system are discussed. Investigations of cardiovascular functions are illustrated, including stress testing. Primary, secondary and tertiary use of exercise in cardiac rehabilitation are considered. Cardiovascular aspects of special groups are described, in pregnant women, in hypertensive and diabetic patients.

PHPH5543
Medical Applications of Exercise 2
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

Temperature regulation is considered as a basis for understanding hyperthermia in the athlete. Physiological and medical considerations are described in relation to the female athlete and in relation to children. Respiratory physiology and respiratory medicine provide the basis for understanding exercise-induced asthma, diving and altitude problems for the athlete.

PHPH5613
Sports Injuries 1
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

Sports Injuries 1 describes dermatomes and myotomes and the implications for sports injuries. The anatomy of the shoulder, elbow, wrist and hand is described which provides the basis for describing sporting injuries to the shoulder, elbow, wrist and hand. The anatomy of the head and neck is described in order to deal with sporting injuries to the head, neck, eye, ear, nose and face. The anatomy of the trunk is described in order to deal with sports injuries to the chest, abdomen, back. Finally, on-field management of sports injuries is described.

PHPH5623
Sports Injuries 2
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

Sports Injuries 2 deals with normal soft tissues and injuries to these in relation to muscles, tendons, ligaments and cartilage. Bone structure and function are described to understand injuries to bone. Anatomy of the pelvis, hip and thigh precedes consideration of injuries and their management in the groin, hip and thigh. Functional anatomy of the knee lays the basis for understanding acute and chronic injuries to the knee. Anatomy of the leg, ankle and foot is considered in relation to injuries to these regions.

PHPH5633
Medical Applications of Exercise 1
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

Medical Applications of Exercise 1 surveys the physiology of the cardiovascular system in its control and reflex responses as well as the electrophysiology of the heart and the ECG. The effects of exercise on the cardiovascular system are discussed. Investigations of cardiovascular functions are illustrated, including stress testing. Primary, secondary and tertiary use of exercise in cardiac rehabilitation are considered. Cardiovascular aspects of special groups are described, in pregnant women, in hypertensive and diabetic patients.

PHPH5643
Medical Applications of Exercise 2
School of Medical Sciences
Staff Contact: C Broderick
UOC6 S1 S2

Temperature regulation is considered as a basis for understanding hyperthermia in the athlete. Physiological and medical considerations are described in relation to the female athlete and in relation to children. Respiratory physiology and respiratory medicine provide the basis for understanding exercise-induced asthma, diving and altitude problems for the athlete.

PHPH9100
Discovery and Pre-clinical Development of New Medicines
School of Medical Sciences
Staff Contact: R Day
UOC6 S1

This course provides a general overview of the development of new medicines. It includes the following topics. History and philosophy of development of new medicines. Process of discovery: screening/ molecular modelling resulting in identification of lead compounds. High throughput screening, combinatorial chemistry. Refinement of lead compounds, biological testing in laboratory animals, tissues or tissue components. Choice of chemical entity for further development and identification of back-up compounds. Preclinical studies of selected compound: the value and limitations of animal models in predicting clinical efficacy and potential adverse effects; mechanism of action, screening for total biological effects, toxicology. Factors involved in choosing compounds of clinical development: scientific merit, medical utility, uniqueness, commercial value, compatibility with company strategies, facilities available for development. Selection of back-up compound. Project management: identification of commercial/medical objectives, pre-clinical issues, clinical development strategies. Company strategies: decision path analyses, resources, timelines.
Note/s: The course is compulsory for programmes 7370, 5504, and 9060.

PHPH9101
Principles of Drug Action
School of Medical Sciences
Staff Contact: R Day
UOC6 S1

This course provides a general overview of pharmacodynamics and pharmacokinetics including the following topics. The dose-response relationship as a function of pharmacokinetic and pharmacodynamic properties. Qualitative discussion of factors involved in determining pharmacokinetic properties: routes of administration, formulation, absorption, distribution, elimination (metabolism and excretion).

Qualitative investigation of pharmacokinetics variables (bioavailability, volume of distribution, clearance, half-lives, etc.). The use of pharmocokinetic variables in dosage optimisation. Qualitative discussion of pharmacodynamic mechanisms: specific and non-specific mechanisms. Receptors and signal transduction. Agonists, partial agonists and antagonists. Quantitative investigation of drug-receptor interactions. The influence of non-drug factors (disease states, age, genetics, etc.) on pharmacokinetic and pharmacodynamic parameters, and hence on the dose-response relationship. A major feature of this course is the emphasis placed on instruction in using on-line library resources. These skills are used in all subsequent courses.
Note/s: The course is compulsory for programmes 7370, 5504, and 9060.

PHPH9102
Pharmaceutical Development of New Medicines
School of Medical Sciences
Staff Contact: R Day
UOC6 S1

The course begins with an introduction to dosage forms, and describes their design, development and manufacture using tablets as an example. The relevance of the properties of active ingredients to product development is discussed. Concepts of sterility and sterilisation are introduced. The chapter on product quality outlines concepts of quality, quality assurance and quality control, discusses the significance of pharmacopoeial monographs, and gives reasons for the various tests of quality for raw materials and finished products. The fundamental relationship between ongoing quality and Good Manufacturing Practice is discussed, together with examples of validation of later changes or variations to products. Particular attention is given to methods of testing for impurity content, the significance of different types of impurity, disintegration and dissolution testing, and the design and interpretation of stability studies. The final chapter outlines the design, conduct and reporting of bioavailability and bioequivalence studies, and describes formulation strategies for drugs which have limited bioavailability.
Note/s: The course is compulsory for programmes 5504, and 9060.

PHPH9104
Law, Ethics and the Regulation of Medicines
School of Medical Sciences
Staff Contact: R Day
UOC6 S2

This course provides a general overview of the ethical issues and laws relevant to the development and marketing of medicines. It includes the following topics. State and Commonwealth Constitutional powers. Common law, statutory law, accountability, natural justice. Laws relating to the development and sale of medicines; patents, intellectual property, trade practices. Ethical issues in drug development and marketing. Preparation and submission of marketing applications, approval and appeal processes. Principles of Good Clinical Research Practice (GCRP). The ethical review process, consent procedures in biomedical research. The philosophy of regulation of drug use: input of industry, Government, consumer. The regulatory principles regarding the use of developmental drugs in human subjects and the practical consequences of these on the design and conduct of clinical investigations. The organisation of the regulatory processes in Australia: The Therapeutic Goods Administration and advisory bodies (ADEC, ADRAC, etc.) The Pharmaceutical Benefits Advisory Committee. Submissions regarding cost effectiveness. Preparation and submission of an application for approval to test or marker a drug and the relevant appeal process. Integration of regulatory affairs into the pre- and post-marketing planning and review of product development strategies. Input from international bodies and national agencies.
Note/s: The course is compulsory for programmes 7370, 5504, and 9060.

PHPH9107
Therapeutics and the Molecular Basis of Disease 1
School of Medical Sciences
Staff Contact: R Day
UOC6 S1 S2

This course provides a basis for understanding the mechanisms involved in the disordering physiology that underlies common disease states. The object is to provide an understanding of those disorders that are amenable to correction or amelioration with drug therapy. It thus provides a rationale for drug design and utilization. The subject consists of five main sections. Section 1 is a review of relevant features of general biology with emphasis on (a) modern systems of taxonomy (natural products are still a major source of lead compounds for developing new therapeutic agents) and (b) biochemistry with emphasis on those aspects relevant to molecular biology and biochemical pharmacology (the other two main areas involved in new drug development). Section 2 deals with cellular injury and death and covers causes of cell injury, general mechanism of cell injury an necrosis, apoptosis, stress proteins and cell injury, subcellular alterations in cell injury, intracellular accumulations, pathologic calcification, hyaline change cellular aging. Section 3 covers cellular growth and differentiation including control of cell growth, extracellular matrix and cell-matrix interactions, and cellular adaptions of growth and differentiation. Section 4 deals with inflamation and repair and covers acute inflammation, chemical mediators of inflammation, chronic inflammation, morphologic pattern in acute and chronic inflammation, systemic effects of inflammation, wound healing. Section 5 covers oedema, hyperaemia and congestion, haemorrhage, haemostasis and thrombosis, embolism and shock.
Note/s: The course is elective for programmes 5504, and 9060.

PHPH9108
Therapeutic Basis of Drug Use and Development 1
School of Medical Sciences
Staff Contact: R Day
UOC6 S2
Prerequisite/s: PHPH9107, PHPH9118

This course aims to provide an understanding of the medical problems and treatments that need to be understood in developing new therapeutic agents and optimizing their use. Emphasis will be on highlighting the strengths and weaknesses of present therapies and identification of current research aimed at developing new therapeutic agents. The course begins with a review of drug safety including mechanism of adverse drug reactions and drug interactions, together with the influence of age, race and disease states on the tendency to develop adverse responses to medication. The course provides and integrated description of relevant physiology, pathophysiology, disease states: (a) infectious disease: bacterial, fungal, viral and parasitic infections: (b) immunological disorders: immunodefiency, hypersensitivity, transplantation: (c) haemotology: anaemias, haemorrhagic disorders, disorders of white blood cells, leukaemias, lymphomas; (d) cardiovascular disorders: cardiac arrhythmia, ischaemic heart disease, heart failure, hypertension, vascular disorders; (e) respiratory tract disorders: upper respiratory tract disorders, asthma, chronic obstructive pulmonary disease, acute bronchitis, bronchiectasis, cystic fibrosis, pneumonia; (f) renal tract disorders: renal failure, disorders of renal tubule function, obstructive uropathies, myoneurogenic disorders, incontinence, neoplasms: (g)) gastrointestinal disorders: oesophageal disorders, gastritis, peptic ulcer, diarrhoea and constipation, gastroenteritis, malabsorption syndromes, chronic inflammation of the bowel, gastrointestinal neoplasms; (h) hepatic and biliary disorders: jaundice, ascites, fibrosis, cirrhosis, hepatitis, neoplasms.
Note/s: The course is elective for programmes 5504, and 9060.

PHPH9109
Therapeutic Basis of Drug Use and Development 2
School of Medical Sciences
Staff Contact: R Day
UOC6 S2
Prerequisite/s: PHPH9107, PHPH9118

The objectives of this course are the same as describe for course PHPH 9108. The course will provide and intergrated description of relevant physiology, pathophysiology, disease state manifestations and clinical pharmacology with respect to the following disease: (a) nutritional and metabolic disorders: nutrition, nutritional deficiencies, obesity, water/electrolyte/acid-base metabolism; (b) endocrine disorders: disorders of the pituitary, thyroid, adrenal glands; disorders of carbohydrate metabolism; (c) gynaecological disorders: common problems, amenorrhoea and abnormal bleeding, endometriosis, breast disorders, neoplasms; (d) neurologic disorders: seizure disorders, sleep disorders, cerebrovascular disease, CNS infection and neoplasms, demyelinating diseases, disorders of movement, spinal cord disorders peripheral nervous system disorders: (e) psychiatric disorders: personality disorders, drug dependence, neuroses, mood disorders, schizophrenic disorders, delusional disorders: (f) musculoskeletal and connective tissue disorders: reheumatoid arthritis and other diffuse connective tissue disease, arthritis associated with spondylitis, osteoarthritis, infections and neoplasms of the bones, crystal-induced conditions, bone and cartilage disorders, nonarticulare rheumatism; (g) ophthalmological disorders: disorders of the eyelids, conjunctiva, and cornea, cataract, uveal tract disorders, retinal disorders, glaucoma, disorders of the optic nerve; (h)

dermatological disorders: dermatitis, scaling disorders, disorders of the hair folicles and sebaceous glands, skin infections - bacterial, viral, parasitic, fungal, drug eruptions and similar inflammatory disorders of skin, disorders of cornification, tumours. .
Note/s: The course is elective for programmes 5504, and 9060.

PHPH9111
Advanced Pharmaceutical Development of Medicines
School of Medical Sciences
Staff Contact: R Day
UOC6 S1

This subject extends the principles covered in Pharmaceutical Development of Medicines and includes detailed treatment of the formulation and in vitro/in vivo assessment of oral controlled-release products and novel dosage forms such as transdermal therapeutic systems and osmotic pumps. There is an extensive chapter on the formulation and testing of inhalation products, including metered dose inhalers, dry powder inhalers and nebulisers. Regulatory aspects of the quality of all of these products are discussed. Students will have the opportunity to conduct an evaluation of a bioavailability study 'in the shoes of' a regulator, with emphasis on European requirements. The chapter on formulation of protein pharmaceuticals explains the particular problems associated with this group of products including stability and compatibility, and describes how the challenges are addressed. Case studies illustrate application of the principles that have been introduced. (An alternative to the topic of protein formulation will be provided for students who are also taking Biopharmaceuticals electives).

PHPH9112
Advanced Pharmacokinetics
School of Medical Sciences
Staff Contact: R Day
UOC6 S2

This course greatly extends the introduction to pharmacokinetics given in the core module Principles of Drug Action, with particular emphasis being given to new aspects of pharmacokinetics. Topics to be covered include (a) rigorous discussion of accumulation kinetics; (b) computerised methods of fitting theoretical equations to the time course of plasma concentrations in individual patients; (c) population kinetics - this is an important aspect of modern pharmacokinetics in which limited data from individual patients can be used to obtain pharmacokinetic parameters; and (d) analysis of the time course of drug effect - pharmacodynamic/pharmacokinetic analysis provides an understanding of the factors controlling the time course of drug effect and is used widely in modern pharmacokinetic research.

PHPH9113
Advanced Regulatory Affairs
School of Medical Sciences
Staff Contact: R Day
UOC6 S2

This course will extend the core module Law, Ethics and the Regulation of the Development and Use of Medicines, for example, by providing a comprehensive examination of the role of the international regulatory agencies such as those of the European Union and the United States and their influence on the Australian regulatory processes examined. Other aspects of the regulatory process mentioned briefly in the core module, such as issues relating to pharmaceutical chemistry, will be considered in more detail. However, the major emphasis of the module will be on case study and critical appraisal. Students will review registration dossiers, write evaluation reports and prepare Pre-ADEC responses. The focus of this work will be the optimisation of the regulatory process. Students will also participate in a mock Australian Drug Evaluation Committee (ADEC) meeting to gain an understanding of that Committee's procedures and decision-making processes.

PHPH9114
Pharmacoeconomics
School of Medical Sciences
Staff Contact: R Day
UOC6 S1

As limits are placed on health care budgets, from the national to the individual level, the relative value of competing uses of scarce resources is becoming a significant part of decision making. Pharmacoeconomics assists the decision-maker by determining the comparative value of a product, and whether this value is worth the loss of benefits that could have been obtained by using the money in a different way. In the Australian environment, pharmacoeconomic analyses are considered by the Pharmaceutical Benefits Advisory Committee who advises the Minister on whether the product should be reimbursed on the Pharmaceutical Benefits Scheme. They are also used in hospital formulary submissions within the public hospital setting, and in support material and publications for doctors. Another role for pharmacoeconomics occurs early in the drug development process. Pharmacoeconomic models can help to assess the potential value of a product and they can also identify threshold levels of efficacy that must be met for the product to be commercially viable. This module focuses on the principles of pharmacoeconomics, the process of obtaining reimbursement of a product on the Pharmaceutical Benefits Scheme, and issues in applying pharmacoeconomic theory to the real world. The module also covers economic concepts, efficiency, equity and ethics of decision making in the health care field and provides an overview of pharmacoeconomics internationally. Specific areas covered include the different types of economic analysis, sources of data, randomized trials versus naturalistic or pragmatic trials, quality of life and assessment of utility, and league tables. The module will be of benefit to those wanting to work in the area of pharmacoeconomics and also to those wanting to broaden their knowledge base about this important area.

PHPH9116
Advanced Clinical Trials Management
School of Medical Sciences
Staff Contact: R Day
UOC6 S2
Prerequisite/s: PHPH9100

The focus of the advanced module will be the practical application of the underlying principles encountered in the core course on clinical trials management. Students will prepare a complete data package for the research ethics committee (REC) for a study submitted as part of the clinical trials notification (CTN) scheme as the major focus and assessment task for this module. The trial will be multi-centred and early phase, that is Phase II to III. There will be potential serious toxicities and a data safety monitoring committee will need to be established. Students will develop the clinical trials protocol, the draft patient consent form, and case report form (CRF). The application package will be assessed by a mock REC and the student will be asked to respond to questions and criticisms raised by the REC.

PHPH9118
Therapeutics and the Molecular Basis of Disease 2
School of Medical Sciences
Staff Contact: R Day
UOC6 S1 S2
Prerequisite/s: PHPH9107, PHPH9118

This course is a continuation of the material covered in PHPH9107 and, like the previous course, aims to provide a basis for understanding the mechanisms involved in disordered physiology that underlies common disease states. The objective is to provide an understanding of those disorders that are amenable to correction or amelioration with drug therapy. It thus provides a rationale for drug design and utilization. The subject consists of four main sections: immunology and diseases of immunity; infection, genetic disorders; and neoplasia. Immunology and diseases of immunity includes a review of normal immune system mechanisms (cells of the immune system, cytokines, histocompatibility antigens, and hypersensitivity reactions); mechanisms of autoimmune diseases, immunologic deficiency syndromes, other actual or suspected immune system diseases (e.g. amyloidosis). Infection includes a brief introduction to mircobiology, general principles of microbial pathogenesis, discussion of selected human infectious diseases. Genetic disorders includes a brief section on the new genetics , mutation, mendelian disorders, disorders with multifactorial inheritance, normal karyotype cytogenetic disorders, single-gene disorders with nonclassic inheritance, molecular diagnosis. Neoplasia includes definitions and nomenclature, characteristics of benign and malignant neoplasms, epidemiology, molecular basis of cancer, biology of tumour growth, carcinogenic agents and their cellular interactions, host defence mechanisms, clinical features of tumours. Aspect of molecular biology relevant to the preceding topics (e.g. gene therapy) will be discussed.
Note/s: The course is elective for programmes 5504, and 9060.

PHPH9119
Providing Independent Drug Information for General Practice
School of Medical Sciences
Staff Contact: R Day
UOC6 S2

A minimum of 3 students is required to allow delivery and a maximum of 6 students are allowed to enroll.Provision of drug information to General Practitioners has been largely undertaken by the Pharmaceutical Industry. The most practised and effective methods of providing independent drug information to GPs will be explored in this course. Whilst focussing largely on educational visiting / academic detailing, this course will also explore other ways of transmitting independent information to doctors, including Web-based programs. This course will be of interest to health professionals and organisations associated with providing drug information to General Practitioners. GPs participate actively in the teaching program. Facilitation is provided by experienced educational visitors. In 2004 this course is offered in two modes:(1)a three-day residential workshop with pre-workshop preparation and a post-workshop task, followed by two assignments (Minimum 3 students for this option to be available)(2)a distance learning package including two teleconferences, with pre-teleconference preparation and post-teleconference tasks and two assignments. (Minimum 5 students)The course aims to: Provide communication and interaction skills training in the techniques of educational visiting/academic detailing; Provide a knowledge base on rational prescribing and policy developments with respect to quality use of medicines (QUM); Provide students with critical appraisal skills training for the provision of independent drug information. You can expect to: Identify the strategies that are effective in promoting changes in clinical behaviour; Implement these strategies effectively in a variety of ways; Identify where gains can be made for doctors and patients in quality use of medicine and cost effective prescribing; Identify effective ways of using data about the prescribing pattern of individual doctors.

PHPH9120
Clinical Development of Medicines
School of Medical Sciences
Staff Contact: R Day
UOC6 S2

This module consists of two volumes which focus on safety in the use of medicines in the postmarketing period. Volume 1 looks at Pharmacovigilance which has been described as 'All methods of assessment and prevention of adverse drug reactions' (Begaud 1993), and will incorporate systems set up to collect, assess and monitor adverse reactions to medicinal products. The course will discuss the history of major adverse events that has lead to the current monitoring programmes as well recent approaches to improving methods for detecting potential adverse drug reactions. The responsibilities of the pharmaceutical companies is covered; the aims of the collection of ADR/ADE information and the data bases used in this process are addressed. Information from the impact of international harmonization of procedures to the local operating company procedures is covered. Also covered are causality assessment, categories of causal relationship, the incidence of adverse reactions and their assessment, and risk/benefit issues. A major chapter on the classification and mechanisms of adverse drug reactions provides pharmacological understanding of the types of ADRs, long-term effects and effects on the embryo, foetus and neonate. The classification and mechanisms of drug interactions often associated with ADRs are covered. Volume 2 of this Module will address Pharmaceutical Information. The course will discuss the information resources and information services required to bring together and utilize all the information about a drug product which has been generated during its development and marketing. It provides an introduction to and an understanding of the restrictions under which pharmaceutical companies operate in terms of the provision of information, promotion and advertising. Core to this will be an understanding of the requirements and the writing of the Product Information and Consumer Medicine Information documents. The advertising and promotion of therapeutic goods as controlled by government and industry regulations are discussed. The course is compulsory for program 7370, 5504, and 9060.

PHPH9121
Postmarketing Development of Medicines
School of Medical Sciences
Staff Contact: R Day
UOC6 S1

This module consists of two volumes which focus on safety in the use of medicines in the postmarketing period. Volume 1 looks at Pharmacovigilance which has been described as 'All methods of assessment and prevention of adverse drug reactions' (Begaud 1993), and will incorporate systems set up to collect, assess and monitor adverse reactions to medicinal products. The course will discuss the history of major adverse events that has lead to the current monitoring programmes as well recent approaches to improving methods for detecting potential adverse drug reactions. The responsibilities of the pharmaceutical companies is covered; the aims of the collection of ADR/ADE information and the data bases used in this process are addressed. Information from the impact of international harmonization of procedures to the local operating company procedures is covered. Also covered are causality assessment, categories of causal relationship, the incidence of adverse reactions and their assessment, and risk/benefit issues. A major chapter on the classification and mechanisms of adverse drug reactions provides pharmacological understanding of the types of ADRs, long-term effects and effects on the embryo, foetus and neonate. The classification and mechanisms of drug interactions often associated with ADRs are covered. Volume 2 of this Module will address Pharmaceutical Information. The course will discuss the information resources and information services required to bring together and utilize all the information about a drug product which has been generated during its development and marketing. It provides an introduction to and an understanding of the restrictions under which pharmaceutical companies operate in terms of the provision of information, promotion and advertising. Core to this will be an understanding of the requirements and the writing of the Product Information and Consumer Medicine Information documents. The advertising and promotion of therapeutic goods as controlled by government and industry regulations are discussed.
Note: This course is a compulsory programmes 5504, 9060.

PHPH9171
Physiology for Medical Physics 1
School of Medical Sciences
Staff Contact: L Ulman
UOC6 HPW6 S1

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.

PHPH9172
Physiology for Medical Physics II
School of Medical Sciences
Staff Contact: L Ulman
UOC6 HPW6 S2

The Areas of Physiology covered in this unit build on the fundamental physiological principles introduced in PHPH9171 Physiology for Medical Physics I. 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.

PHYS9060
Advanced Optics
School of Physics
Staff Contact: M Gal
UOC6 HPW3 S2

Review of geometrical optics, matrix methods; physical optics; Fresnel and Fraunhofer diffraction, transfer functions, coherence, auto and cross correlations, applications of modern optics, holography, lasers. Additional research on topics of current interest, literature search, seminar.
Note/s: This course may also be offered via distance education.

PHYS9310
Physics of Solid State Devices
School of Physics
Staff Contact: M Gal
UOC6 HPW3 S2

Review of electronic structure of semiconductors; pn junctions, bipolar and field effect transistors including formation, characterisitics and electrical breakdown. Optical devices includign light emitting diodes, junction lasers. Integrated circuit structures. Additional readings on chosen topics.
Note/s: This course may also be offered via distance education.

PHYS9411
Medical Physics 1
School of Physics
Staff Contact: M Gal
UOC3 HPW2 S1

Magnetic Resonance Imaging (MRI). Ultrasound. Dosimetry and radiotherapy planning. Radioisotopes, brachytherapy. Nuclear Medicine: Radioisotope production. Radiopharmaceuticals. Basic instrumentation. Gamma camera. Safety and quality control in Medical Physics.

PHYS9412
Medical Physics 2
School of Physics
Staff Contact: M Gal
UOC3 HPW2 S2

X-rays and C.T.SPECT and PET. Radiotherapy: radiation sources, interactions of radiation with the body, radiation detection and measurement. Devices and special topics.

PHYS9413
Medical Physics Project
School of Physics
Staff Contact: M Gal
UOC6 HPW9 S1 S2

Projects are usually undertaken in a hospital setting under the supervision of a practising Medical Physicist, though university or industry-based projects may also be offered. Students will provide a written report on their project and will present a seminar on their work.

PHYS9414
Medical Physics Report
School of Physics
Staff Contact: M Gal
UOC3 HPW2 S1 S2

A report or literature survey on a topic relevant to the program of study.

PHYS9710
Lasers and Applications
School of Physics
Staff Contact: M Gal
UOC6 HPW3 S1

Theory of lasers, interaction between light and matter, optical amplifiers, oscillators, laser-cavity design, modes, Q switching, model locking, ultra-short pulse generation, specific lasers, including gas, solid state, dye lasers, semiconductor diode lasers, applications of lasers in medicine, spectroscopy, communications, consumer electronics. Additional research on topics of current interest, literature search, seminar.
Note/s: This course may also be offered via distance education.

PHYS9720
Optoelectronics
School of Physics
Staff Contact: M Gal
UOC6 HPW3 S1

OPTICAL COMMUNICATIONS: Introduction, definitions, waveguides, step and graded index fibers, polarization, maintaining fibers, dispersion, attenuations, fibre amplifiers, modulation schemes, communication systems. FIBRE OPTIC SENSORS: Active and passive sensors, fibre optic interferometers, specific examples. SEMICONDUCTOR OPTICS: Physics of semiconductors: band theory, electrons/holes, effective mass, direct/indirect band gaps, Si, GaAS; recombinant processes, optoelectronic materials and growth, MOCVD, MBE: semiconductor junctions: pn junctions, p-I-n junction, heterojunction; quantum wells. OPTOELECTRONIC DEVICES (a) emitters: Light emiting diodes, physics of lasers, laser diodes, heterostructure lasers, types of diode lasers including gain guiding, index guiding, stripe geometry lasers, quantum well lasers, distributed feedback lasers, VCSEL's. (b) detectors: defintions, noise, figures of merit, thermal detectors, photon detectors: photoconductors, PMT, photodiodes, p-i-n diodes, avalanche photodiodes, CCD's. QWIP's. Additional research on topics of current interest, literature search, seminar.
Note/s: This course may also be offered via distance education.

PHYS9761
Optoelectronics Laboratory I
School of Physics
Staff Contact: S Hagon M Gal
UOC6 HPW5 S1 S2 X1

Methods and techniques employed in fibre optics and optical spectroscopy, includign measurement of attenuation in fibres, NA of single and multi-mode fibres, construction of an OTDR system, principles of WDM, spectroscopy of various light sources and detector characteristics, spectroscopy of quantum wells.

PHYS9762
Optoelectronics Laboratory 2
School of Physics
Staff Contact: S Hagon M Gal
UOC6 HPW5 S1 S2 X1

Methods and techniques employed in laser technology and spectroscopy, including laser safety procedures, measurement of laser characteristics, high resolution speed of lasers, study of laser modes and laser intensity, construction of diode pumped Nd:YAG laser; reflection and transmission holography, Fourier transform spectroscopy.

POLS5100
Issues in Australian Public Policy: Internship Program
School of Politics and International Relations
Staff Contact: E Thompson
Enrolment requires school approval
UOC8 HPW2 S2

Involves a two day per week research internship attachment where the student undertakes research for a selected organisation such as the Asia-Australia Institute, Amnesty International, The Refugee Council, The International Women's Development Agency, Paul Keating's Office, the US Information Agency and others. Students will meet weekly for debriefings on their internships and to discuss policy-related issues. These meetings may include lectures where appropriate and/or visitors of interest.
Note/s: Students are expected to undertake a research project or project as required by the organisation with which they are placed.

POLS5102
Australia in the World
School of Politics and International Relations
Staff Contact: M McDonald
UOC8 HPW2 S1

A study of Australia's place in the world. Strategic, diplomatic, economic, historical and legal approaches.

POLS5103
Law, War and Justice
School of Politics and International Relations
Staff Contact: J Pemberton
UOC8 HPW2 S2

A study of classical and modern theories of war and peace with a specific focus on ethical and legal issues.

POLS5108
Regional Orders in the Asia Pacific
School of Politics and International Relations
Staff Contact: A Mack
UOC8 HPW2 S2

Applies a critical eye to the dominant concept of regional order in the Asia Pacific. As the plural in the title implies, there is no one order in this region, but rather a number of competing regional orders. Examines the different orders constructed by different issues separately. Investigates how the political order differs from the economic order, and from the security order, and from the cultural order. Also examines competing regional definitions, concerns, and orders: Southeast Asia, Northeast Asia, the North Pacific; Oceania, North America, and the Americas. At each level, the analysis will also scrutinize how each of these definitions and orders relate to each other, whether complementary or conflicting.

POLS5113
Research Project
School of Politics and International Relations
Staff Contact: S Scott
UOC8 S1 S2

A 10,000 word research project on an agreed subject. Students should arrange contact times with supervisor.
Note/s: This project may only be undertaken with the permission of the MA Coordinator and is available only to students enrolled in a full MA program who have achieved distinction level over three completed courses and demonstrated research capacity. Application forms to undertake this course are available from the School Office and must be lodged for consideration by the end of the teaching period of the session preceding the one in which the research project will be taken.

POLS5120
The International System
School of Politics and International Relations
Staff Contact: M Williams
UOC8 HPW2 S1

Examines the international system in a theoretical and historical perspective. Explores the contribution of the main approaches in International Relations to an understanding of the contemporary world. Analyses the economic and political organisation of world politics with specific attention to the evolution of the international system since the end of the Second World War. Explores the roles of the major actors in international relations.

POLS5121
International Institutions
School of Politics and International Relations
Staff Contact: M Williams
UOC8 HPW2 S2

Examines selected representative international institutions, particularly in terms of their structure; their activities and procedures; their role in and contribution to global order; and their viability and future directions. The selection includes the United Nations Organisation itself, one or two specialised agencies and one or two international non-governmental organisations.

POLS5122
The International Political Economy
School of Politics and International Relations
Staff Contact: E Thurbon
UOC8 HPW2 S2

Analyses the nature and dynamics of the international political economy. Provides a critical introduction to the evolution of a global economy and considers the implications of the globalisation of economic activity for states and other international actors. Investigates the relationship between the growth of international economic activity and the domestic economic and social policy objectives of states. Contributes to an enhanced understanding of the relationship between politics and economics.

POLS5125
The Politics of International Law
School of Politics and International Relations
Staff Contact: S Scott
UOC8 HPW2 S1 S2

International law plays an integral role in the system of international politics. This course challenges students to analyse that role and the major interpretations of that role. The content covered includes topics such as: the core principles and concepts of international law; distinguishing a political from a legal interpretation of a multilateral treaty, consent and verification; the operation of the International Court of Justice and the relationship between foreign policy formulation and international law. No prior knowledge of international law is required.

POLS5126
Nationalism and Ethnicity in International Relations
School of Politics and International Relations
Staff Contact: E Nimni
UOC8 HPW2 S1 S2

Investigates the resurgence of ethnicity and nationalism in the international arena. The post cold-war international order sustains the expansion of a market oriented global culture that transcends nation-states' boundaries, but the resurgence of ethnic and nationalist movements appears to contradict this globalising trend. Aims to examine the resurgence of ethnicity and nationalism in the contemporary world and evaluate the challenge that this resurgence imposes to a world of nation-states and to the post-cold war international order. The central question is to what extent is the nation state a viable and effective political unit in a world of global markets, inter-state organisations and political movements for ethnic resurgence. A number of case studies will be discussed.

POLS5127
China and Asia-Pacific Security
School of Politics and International Relations
Staff Contact: J You
UOC8 HPW2 S1

An examination of China's relations with the outside world in the post-Cold War era. Topics include: the theoretical foundation on which China formulates its foreign policy, China's security perceptions; its current relations with major powers; its arms build-up and the regional response. Through identifying China's common interests with the international community and its problems with Western powers, efforts are made to evaluate China's place in the world. The course is issue-oriented, although theoretical analysis will not be ignored.

POLS5154
International Business and International Politics
School of Politics and International Relations
Staff Contact: S Fortescue
UOC8 HPW2 S1

Introduces students to the key developments in the contemporary global business environment, and the key debates on the role of business in the international system. Examines the structural context of the development of international business, and focuses on the relationship between national governments and international business.

POLS5156
The International Political Economy of East Asian Development
School of Politics and International Relations
Staff Contact: E Thurbon
UOC8 HPW2 S1

Provides a theoretical and empirical analysis of the dramatic industrial transformation of East Asia from the end of WWII to the present, with a specific (though not exclusice) focus on the Northeast Asian countries of Japan, South Korea and Taiwan. Begins with an analysis of the political-economic dynamics of the region's rapid economic development over the post-war period and then moves on to examine the Asian crisis of 1997-8, including the complex ways in which international actors and insititutions such as the US and the IMF were implicated in the causes and cures of the crisis. Concludes with an examination of the post-crisis revival of the region in light of a number of emerging economic and political challenges, including globalisation and the rise of China.

POLS5157
Exceptional Empire? US Foreign Relations in the 'American' Century
School of Politics and International Relations
Staff Contact: R Bell
UOC8 HPW2 S2

Explores the rise of American power and influence from the end of continental expansion in the 1890s to the 'War on Terror' after September 11, 2001. Major crises in US foreign relations are considered in the light of changing historiography and international relations paradigms, notably those centred on: American 'exceptionalism'; Open Door imperialism; realist and national interest perspectives; isolationism and

intervention; containment and bi-polar Cold War theories; decolonisation, post-colonialism and 'new imperialism'; globalisation and 'soft power'; Americanisation and anti-Americanism; debate over American empire and hegemony in the post-Cold War world; and the implications of the war on terror for the exercise of American power in the twentieth century.

POLY5000
Polymer Science
School of Chemical Eng and Industrial Chemistry
Staff Contact: School Office
UOC19 HPW6

Polymer Processes: Classification of polymers, methods of polymerisation; bulk, solution, emulsion, suspension, high pressure; processes; step growth, chain growth; the chemistry and applications of polymer systems including polyesters, polyamides, phenolic condensation resins, vinyl polymers, synthetic elastomers. Natural polymers. Mechanism and Kinetics: Step growth polymerisation, kinetics, structure effects; chain growth polymerisation. Free radical polymerisation, chemistry and properties of free radicals and initiators; kinetics of propagation and termination reactions; co-polymerisation; monomer radical structure and reactivity. Cationic and anionic polymerisation; stereoregular polymers. Polymer Characterisation: Molecular weight; averages and distributions; thermodynamics of polymer solutions; theta temperature; fractionation methods; measurement of number-average molecular weight and weight-average molecular weight. Polymer Physics: Principles of operation of conventional polymer processing equipment; safety procedures; polymer compound design; stress strain behaviour of polymers in tension, compression, shear and flexure; elementary rheological behaviour of polymers; rubber elasticity; thermal characteristics of polymers.

PSYC5000
Graduate Diploma (Psychology)
School of Psychology
Staff Contact: R Richardson
UOC48 S1 S2

Coursework and a research project to be determined in consultation with the Head of School.

PSYC6000
Alternative Higher Degree Qualifying Program
School of Psychology
Staff Contact: M Taft
UOC48 S1 S2

Refer to the School of Psychology for details.

PSYC7000
Research and Evaluation Methods
School of Psychology
Staff Contact: M Gleitzman
UOC6 HPW2 S2

An examination of threats to the validity of casual inferences from randomised experiments, quasi-experiments and passive observational studies, with particular reference to field studies and program evaluations. Statistical power analysis, the analysis of data from nonequivalent control group designs, interrupted time series analysis, and structural modelling.

PSYC7001
Psychological Assessment 1
School of Psychology
Staff Contact: S McDonald
UOC6 HPW3 S1

A theoretical basis, background information and practical skills in methods of assessment typically used in clinical, forensic, and organisational psychology. Topics will include: the assessment of intelligence in adults and children, assessment of adult abilities, vocational interests, and personality, use of behavioural/structured interviewing, computerised test administration and expert scoring systems, assessment centres, special purpose testing, preparation of assessment reports, the provision of feedback to clients and subjects, and ethical, legal and professional issues. Emphasis will be on the development of practical skills in the administration, scoring and interpretation of standardised psychological instruments.

PSYC7002
Psychological Assessment 2
School of Psychology
Staff Contact: K Bird
UOC6 HPW2 S1

The psychometric foundations of psychological assessment. Classical and modern test theory. Item analysis and item response theory. Differential change measurement. Single case profile analysis, with applications to the WAIS-R and WISC-3. Applications of exploratory and confirmatory factor analysis to test construction and evaluation. Clinical and statistical prediction. Decision theoretic approaches to testing and assessment. The use of intraclass correlations to evaluate the reliability of ratings and other assessment methods.

PSYC7100
Psychology of Organisations 1
School of Psychology
Staff Contact: C von Hippel
UOC6 HPW2 S1

General framework for understanding organisational settings and how social structures and procedures affect work motivation, job satisfaction, performance and health. Emphasis placed on the particular contribution which psychologists can make to such areas as job analysis and design, selection, and performance appraisal, interpersonal and intergroup relations, social influence, leadership style, job enrichment, and communication patterns.

PSYC7101
Psychology of Organisations 2
School of Psychology
Staff Contact: J Bright
UOC6 HPW2 S2

An advanced examination of some topics covered in PSYC7100 Psychology of Organisations 1 with a particular emphasis on the application of sound measurement and research principles to selection, job evaluation, work motivation and occupational health and stress. Special attention given to the application of social psychological principles to the work setting.

PSYC7102
Psychological Principles of Training
School of Psychology
Staff Contact: E Kehoe
UOC6 HPW2 S2

Relevant principles from learning theory and cognitive psychology applied to training in industry and retraining for new technology. Training for adaptability and transfer; the important role of automaticity and attitudes in training. Development of work related cognitive, motor and social skills, and the use of computerised packages. Research on the effectiveness of different methods of training.

PSYC7115
Vocational Interviewing and Counselling
School of Psychology
Staff Contact: J Bright
UOC6 HPW2 S1

The theory and practice of career development, and approaches to career decision making and work adjustment throughout life. The role of occupational information and psychological tests, and the impact of work, leisure, retirement and unemployment on these areas will be considered. The specific problems of minority groups in these areas will be highlighted.

PSYC7117
Advanced Topics in Organisational Psychology
School of Psychology
Staff Contact: J Bright
UOC6 HPW2 S2

Advanced treatment of established and emerging areas in organisational psychology.

PSYC7122
Professional and Ethical Practice (Organisational) 1
School of Psychology
Staff Contact: E Kehoe
UOC6 S1

Attendance at professional practice meetings (including reviews of professional ethical issues) and career development workshops (including a thorough understanding of ethical principles and practices within professional settings) and the completion of placements to a total of 250 hours.

PSYC7123
Professional and Ethical Practice (Organisational) 2
School of Psychology
Staff Contact: J Bright
UOC6 S2

Attendance at professional practice meetings (including reviews of professional ethical issues) and career development workshops (including a thorough understanding of ethical principles and practices within professional settings) and the completion of placements to a total of 250 hours.

PSYC7124
Professional and Ethical Practice (Organisational) 3
School of Psychology
Staff Contact: J Bright
UOC6 S1
Prerequisite/s: PSYC7122, PSYC7123

Attendance at professional practice meetings (including reviews of professional ethical issues) and career development workshops (including a thorough understanding of ethical principles and practices within professional settings) and the completion of placements to a total of 250 hours.

PSYC7125
Professional and Ethical Practice (Organisational) 4
School of Psychology
Staff Contact: E Kehoe
UOC6 S2
Prerequisite/s: PSYC7122, PSYC7123

Attendance at professional practice meetings (including reviews of professional ethical issues) and career development workshops (including a thorough understanding of ethical principles and practices within professional settings) and the completion of placements to a total of 250 hours.

PSYC7126
Research Thesis (Organisational) 1
School of Psychology
Staff Contact: E Kehoe
UOC12 S1 S2

Research thesis involving an investigation into some aspect of organisational psychology.

PSYC7127
Research Thesis (Organisational) 2
School of Psychology
Staff Contact: E Kehoe
UOC12 S1 S2
Prerequisite/s: PSYC7126

A continuation of the research thesis begun in PSYC7126.

PSYC7204
Child Clinical Psychology
School of Psychology
Staff Contact: K Salmon
UOC6 HPW2 S1

Description, assessment and treatment of child and adolescent psychopathology. Role of constitutional and environmental factors in behavioural and emotional dysfunction. Theoretical bases of behavioural, cognitive, and family treatment approaches. Integrated cognitive behavioural management programs.

PSYC7210
Human Neuropsychology
School of Psychology
Staff Contact: S McDonald
UOC6 HPW3 S2

Neural bases of human behaviour, with particular emphasis on clinical applications. Issues in assessment and rehabilitation, functional analysis of each cerebral lobe, and particular disorders such as the dementias and aphasias.

PSYC7212
Experimental Clinical Psychology 1
School of Psychology
Staff Contact: R Bryant
UOC6 HPW4 S1
Excluded: PSYC7400

An introduction to clinical practice and covers the major anxiety and mood disorders. This course reviews the major models and research strategies for understanding psychopathology and clinical interventions. Specific psychological disorders are analysed in detail to illustrate the interplay of biological, cognitive, and behavioural models of psychological dysfunction. Each disorder is also described in terms of practical assessment and treatment procedures.

PSYC7220
Psychology of Health and Illness
School of Psychology
Staff Contact: G Huon
UOC6 HPW2 S2

Applications of psychological principles, derived from human and animal research, to human health, including health promotion, risk factor reduction, and the psychological assessment and management of medical illnesses, with a special focus on chronic illnesses.

PSYC7221
Experimental Clinical Psychology 2
School of Psychology
Staff Contact: R Bryant
UOC6 HPW4 S2

A continuation of the problem-oriented approach begun in PSYC7212 and deals with a range of psychological problems, including schizophrenia, personality disorders, eating disorders, psychopharmacology, and other clinical dysfunctions. This course continues the integration of theoretical models of each disorder with applied descriptions of assessment and treatment procedures.

PSYC7222
Experimental Clinical Psychology 3
School of Psychology
Staff Contact: R Bryant
UOC6 HPW2 S1

The assessment and management of a range of disorders including schizophrenia, post-traumatic stress disorders, and dissociative disorders.

PSYC7223
Professional and Ethical Practice (Clinical) 1
School of Psychology
Staff Contact: R Bryant
UOC6 S1

This course focuses on practical training of clinical skills and thorough understanding of ethical principles and practices within professional settings. Attendance at one-day workshops and once-weekly meetings is required. Skills training includes interviewing, cognitive therapy, providing expert testimony, and interviewing children. There will be a strong focus on the code of professional conduct and ethical issues that arise in the context of working with individuals, cultural groups, organisations, other professionals and the public at large.

PSYC7224
Professional and Ethical Practice (Clinical) 2
School of Psychology
Staff Contact: R Bryant
UOC6 S2
Prerequisite/s: PSYC7223

This course continues with the training of psychological skills and ethical practices required in the professional context. Attendance at one-day workshops and once-weekly meetings is required. Skills training includes interviewing families, group processes, professional supervision, and report writing. Weekly meetings will also deal with the conduct of professional psychologists, with a strong focus on the maintenance of ethical practices.

PSYC7225
Professional and Ethical Practice (Clinical) 3
School of Psychology
Staff Contact: R Bryant
UOC6 S1
Prerequisite/s: PSYC7224

Across PSYC7225 and PSYC7226 students must complete three field placements, totalling 800 hours. These will normally comprise one adult mental health setting, one child setting, and one specialised setting. In addition, students will complete supervised clinical work in the Psychology Clinic. Students will also attend once-weekly meetings that will continue reviews of professional and ethical issues.

PSYC7226
Professional and Ethical Practice (Clinical) 4
School of Psychology
Staff Contact: R Bryant
UOC6 S2
Prerequisite/s: PSYC7224

In addition to field placements, students will also attend once-weekly meetings that will continue reviews of professional and ethical issues.
Note/s: See under PSYC7225.

PSYC7227
Research Thesis (Clinical) 1
School of Psychology
Staff Contact: R Bryant
UOC12 S1 S2

Research thesis involving an investigation into some aspect of clinical psychology.

PSYC7228
Research Thesis (Clinical) 2
School of Psychology
Staff Contact: R Bryant
UOC12 S1 S2
Prerequisite/s: PSYC7227

A continuation of the research thesis begun in PSYC7227

PSYC7400
Interventions in Forensic Psychology 1
School of Psychology
Staff Contact: R Bryant
UOC6 HPW2 S1
Excluded: PSYC7212

An introduction to clinical practice and covers the major anxiety and mood disorders. This course reviews the major models and research strategies for understanding psychopathology and clinical interventions. Specific psychological disorders are analysed in detail to illustrate the interplay of biological, cognitive, and behavioural models of psychological dysfunction. Each disorder is also described in terms of practical assessment and treatment procedures.

PSYC7401
Interventions in Forensic Psychology 2
School of Psychology
Staff Contact: K Salmon
UOC6 HPW2 S1

An examination of the approaches to intervention employed by psychologists in various forensic settings. It will focus specifically on the theory and practice of interviewing and counselling forensic clients. Areas to be covered will include: the assessment, treatment and prevention of child maltreatment; interviewing child witnesses; specific issues in interventions with crime victims; dealing with spousal violence; counselling and mediation in the Family Court; the prevention of juvenile offending; and the interventions involving violent offenders.

PSYC7402
Applications of Forensic Psychology
School of Psychology
Staff Contact: J Delahunty
UOC6 HPW2 S1 S2

The relationship between work and the legal system. It includes issues relating to work and work organisation, such as equal employment opportunity, unfair dismissal, stress in the workplace, and issues relating to workers compensation such as the assessment of the effects of harmful workplace exposures on performance, the effects of work injury on work performance and the effects of the compensation system itself. It also includes issues relating to testimony for cases in coronial, compensation and other criminal courts.

PSYC7403
Experimental Psychology and Law
School of Psychology
Staff Contact: J Delahunty
UOC6 HPW2 S2

Examination of contributions to the application of forensic psychology in different settings that come from theory and research in social and experimental psychology and allied fields. Topics may include eyewitness identification, jury selection, lie detection, use of hypnosis, trial advocacy tactics, individual and jury decision making, laypersons' perceptions of insanity, judges instructions, the effects of the media, to name a few.

PSYC7409
Professional and Ethical Practice (Forensic) 1
School of Psychology
Staff Contact: J Delahunty
UOC6 S1

Across PSYC7409, PSYC7410, PSYC7411 and PSYC7412 students must complete 1000 hours of professional practice, including professional seminars, workshops, and external placements, Students must complete a minimum of three different field placements, of approximately 35 days in length, in setting that may include the courts, police, prisons , or other related forensic settings. This course provides an introduction to skills training in a variety of tasks undertaken by forensic psychologists. It focuses on practical training of forensic skills and a thorough understanding of ethical principles and practices within professional settings. Attendance at one-day workshops and once-monthly meetings is required. Skills training includes interviewing, cognitive techniques, providing expert testimony, and interviewing children. There will be a strong focus on the code of professional conduct, and ethical issues that arise in the context of working with individuals, cultural groups, organisations, other professionals and the public at large.

PSYC7410
Professional and Ethical Practice (Forensic) 2
School of Psychology
Staff Contact: J Delahunty
UOC6 S2
Prerequisite/s: PSYC7409.

In addtion to field placements, this course continues with the training of psychological skills and ethical practices required in the professional context. Attendance at one-day workshops and once-monthly meetings is required. Skills training includes interviewing families, group and jury processes, professional supervision, and mediation counselling. Weekly meetings will also deal with the conduct of professional psychologists, with a strong focus on the maintenance of ethical practices.
Note/s: See under PSYC7409.

PSYC7411
Professional and Ethical Practice (Forensic) 3
School of Psychology
Staff Contact: J Delahunty
UOC6 S1
Prerequisite/s: PSYC7410

In addition to field placements, students will also attend regular meetings that will continue reviews of professional ethical issues. Assessment will be conducted by audio and videotaped practice, case presentations, and formal reports.
Note/s: See under PSYC7409.

PSYC7412
Professional and Ethical Practice (Forensic) 4
School of Psychology
Staff Contact: J Delahunty
UOC6 S1 S2
Prerequisite/s: PSYC7410

In addition to field placements, students will attend regular meetings that will continue reviews of professional and ethical issues. Assessment will be conducted by audio and videotaped practice, case presentations, and formal reports.
Note/s: See under PSYC7409.

PSYC7413
Research Thesis (Forensic) 1
School of Psychology
Staff Contact: J Delahunty
UOC12 S1 S2

Research thesis involving an investigation into some aspect of forensic psychology.

PSYC7414
Research Thesis (Forensic) 2
School of Psychology
Staff Contact: J Delahunty
UOC12 S1 S2
Prerequisite/s: PSYC7413

A continuation of the research thesis begun in PSYC7413.

PTRL5001
Fluid Dynamics in Porous Media
School of Petroleum Engineering
Staff Contact: V Pinczewski
UOC6 S1 S2

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.

PTRL5003
Well Pressure Testing
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

Theory of transient well testing. Practical aspects of design and performance of field test instrumentation. Pressure drawdown tests. Fall-off tests. Multi-rate tests. Gas well testing. Flow-after-flow. Isochronal and isochronal modified. Interference testing. Pulse testing. Drillstem tests. Fractured reservoir tests. Analysis of multiphase flow tests.

PTRL5004
Numerical Reservoir Simulation
School of Petroleum Engineering
Staff Contact: V Pinczewski
UOC6 S1 S2

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

PTRL5007
Reservoir Engineering
School of Petroleum Engineering
Staff Contact: V Pinczewski
UOC6 S1 S2

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.

PTRL5008
Petroleum Production Economics
School of Petroleum Engineering
Staff Contact: W Allinson
UOC6 S1 S2

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).

PTRL5009
Well Drilling Equipment and Operations
School of Petroleum Engineering
Staff Contact: S Rahman
UOC6 S1 S2

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.

PTRL5012
Drilling Mud - Formulation, Selection & Maintenance
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

Students in this course will be given a thorough understanding in the classification of mud systems and the roles of different mud additives, their chemistry and interactions. Students will then learn how to implement this knowledge to aid in the design, maintenance, and development of an efficient mud system for a given drilling scenario by varying mud composition (to achieve optimum rheological and physical mud properties). Course covers: Basics of water- and oil-based drilling and completion fluids. API mud properties & testing procedures and chemical analysis. Clay and polymer chemistry and their applications to drilling fluid formulations. Classification and structure of clays. Hydration mechanism of clays. Cation exchange capacity of clays and influence on clay properties. Rheology of clay suspensions, yield of clay. Structure and properties of polymers used in drilling fluids. Fluid-loss additives. Viscosifying agents. Surface active agents used in drilling fluids. Drilling fluid filtration - bridging mechanism, filtration-control materials and techniques, prevention of formation damage, filtration effect on drilling rate. API mud properties. Mud systems and treatments for hole conditions - torque and drag, stuck pipe, lost circulation and borehole instability. Prevention of corrosion. Mud program design - Mud weight, weighting materials, and mud weight calculations.

PTRL5016
Well Completions and Stimulation
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

Students enrolled in this course will learn how to develop cost-effective completion designs. Completion design and optimisation is taught from a practical, technical, and economic point of view, with consideration of future workover and stimulation options. Students will also learn how to use the latest tools to design and optimize completion scenarios.Course covers: Interval selection and productivity considerations, effect of producing mechanisms, influence of reservoir heterogeneity, required producing rate, inflow performance relationship, summation of pressure drops, matching completion and reservoir performance, and artificial lift requirements. Inflow performance and multiple tubing performance

analyses using the latest optimisation tools, well stimulation and workover planning, tubing packer movement and forces calculations. 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, hydraulic fracturing.

PTRL5021
Reservoir Characterisation
School of Petroleum Engineering
Staff Contact: H Salisch
UOC6 S1 S2

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.

PTRL5022
Drilling Systems Design & Optimisation
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

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.

PTRL5107
Formation Evaluation
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

Reservoir petrophysics. Basic parameters and relationships. Data control, acquisition and interpretation from cores, well logs and well tests. Integration of these data for the evaluation of hydrocarbon reservoirs. General purpose well logs. Fluid and formation resistivities. Porosity measurements from cores and well logs. Wellsite log interpretation. Lithology, saturation and permeability studies. Hydrocarbon mobility determination. Shaly sand analysis. Complex reservoir interpretation. Practical work with core, log and well test data for reservoir quality evaluation and quantitative reservoir studies.

PTRL6001
Reservoir Engineering 1
School of Petroleum Engineering
Staff Contact: V Pinczewski
UOC6 S1 S2

Basic concepts of origin, accumulation and recovery of hydrocarbon fluids. Fluid properties, PVT behaviour and classification of hydrocarbon reservoirs. Material balance equations for gas cap, solution gas, depletion and water drive reservoirs, and gas reservoirs. Reservoir rock properties and core analysis procedures, porosity-permeability relationships. Darcy's law for linear and radial flow, steady-state and pseudo steady-state flow. Wellbore damage, skin-factor and well productivity. Horizontal wells. Wettability, capillary pressure and vertical distribution of reservoir fluids.

PTRL6003
Well Pressure Testing
School of Petroleum Engineering
Staff Contact: V Pinczewski
UOC6 S1 S2

Theory of transient well testing. Practical aspects of design and performance of field test instrumentation. Pressure drawdown tests. Fall-off tests. Multi-rate tests. Gas well testing. Flow-after-flow. Isochronal and isochronal modified. Interference testing. Pulse testing. Drillstem tests. Fractured reservoir tests. Analysis of multiphase flow tests.

PTRL6004
Numerical Reservoir Stimulation
School of Petroleum Engineering
Staff Contact: V Pinczewski
UOC6 S1 S2

Formulation of reservoir simulation equations. Explicit and implicit solution procedures. Cartesianand radial geometry. Single dimension, two-phase flow. Commercial reservoir simulation software. Planning and execution of reservoir simulation projects. Use of reservoir simulation as a management and development tool. Reservoir simulation workshop - a series of real-world reservoir simulation problems including water and gas coning and water flood project.

PTRL6007
Reservoir Engineering II
School of Petroleum Engineering
Staff Contact: V Pinczewski
UOC6 S1 S2

Pore-scale description of fluid distribution and displacement. Relative permeability and extension of Darcy's law to multi-phase flow. Fractional flow theory and displacement efficiency. Heterogeneity and sweep efficiency. Estimation of field recovery factors. Gravity stabilized displacements. Water and gas coning for vertical and horizontal wells. Decline curve analysis. Natural water influx and aquifer history matching. Pseudo-relative permeability and capillary pressure, calculation of dynamic and vertical equilibrium pseudos. Use of pseudo functions in reservoir simulation.

PTRL6008
Petroleum Production Economics
School of Petroleum Engineering
Staff Contact: W Allinson
UOC6 S1 S2

Cash Flow Analysis - definitions, cash flow and profit, cash flow and taxation, cash flow and production sharing contracts, incorporating inflation, fiscal drag, real and nominal cash flows. Economic Indicators - net present value, internal rate of return, pay back, capital productivity index. Incremental investment analysis (accelerating production, lease/buy economics). Risk Analysis - expected value, decision trees, value of information, sensitivity analysis, probability analysis, Monte Carlo simulation, risk and selection of discount rate. Fiscal Analysis - structure of petroleum fiscal regimes, severity and efficiency, incremental fiscal effects. Australian Crude Oil Levy and Resource Rent Tax Fiscal Regimes - structure, detailed cash flow modelling, severity, efficiency, incremental effects, effect on exploration and development in Australia. Indonesian Production Sharing Contract Regime - structure, detailed cash flow modelling, severity, efficiency, incremental effects, effect on exploration and development in Indonesia.

PTRL6009
Well Drilling Equipment and Operations
School of Petroleum Engineering
Staff Contact: S Rahman
UOC6 S1 S2

This course is taught from a practical view with the aim that students will learn how to streamline and optimize rig operations and gain the technical skills to provide cost-effective solutions to common rig problems associated with day-to-day operations. Students enrolled in this course will be given an in-depth view of the physical processes involved in drilling oil and gas wells, both on-shore and off-shore. Moreover, students will learn the functions and roles of key rig equipment and apparatus. Course covers: Powering and transmission system. Hoisting system. Rotary systems - including top-drive. Rotary drilling bit classification and selection. Circulating systems - including pump selection and design. Derrick design and selection. Offshore drilling technology - including anchoring systems, surface motion. compensation systems, marine risers, riser tensioning systems. Blow-out preventers - including selection and stack design, accumulator systems, mud monitoring systems.

PTRL6012
Drilling Mud - Formulation, Selection & Maintenance
School of Petroleum Engineering
Staff Contact: S Rahman
UOC6 S1 S2

Students in this course will be given a thorough understanding in the classification of mud systems and the roles of different mud additives, their chemistry and interactions. Students will then learn how to implement this knowledge to aid in the design, maintenance, and development of an efficient mud system for a given drilling scenario by varying mud composition (to achieve optimum rheological and physical mud properties). Course covers: Basics of water- and oil-based drilling and completion fluids. API mud properties & testing procedures and chemical analysis. Clay and polymer chemistry and their applications to drilling fluid formulations. Classification and structure of clays. Hydration mechanism of clays. Cation exchange capacity of clays and influence on clay properties. Rheology of clay suspensions, yield of clay. Structure and properties of polymers used in drilling fluids. Fluid-loss additives. Viscosifying agents. Surface active agents used in drilling fluids. Drilling fluid filtration - bridging mechanism, filtration-control materials and techniques, prevention of formation damage, filtration effect on drilling rate. API mud properties. Mud systems and treatments for hole conditions - torque and drag, stuck pipe, lost circulation and borehole instability. Prevention of corrosion. Mud program design - Mud weight, weighting materials, and mud weight calculations.

PTRL6016
Well Completions and Stimulation
School of Petroleum Engineering
Staff Contact: S Rahman
UOC6 S1 S2

Students enrolled in this course will learn how to develop cost-effective completion designs. Completion design and optimisation is taught from a practical, technical, and economic point of view, with consideration of future workover and stimulation options. Students will also learn how to use the latest tools to design and optimize completion scenarios.Course covers: Interval selection and productivity considerations, effect of producing mechanisms, influence of reservoir heterogeneity, required producing rate, inflow performance relationship, summation of pressure drops, matching completion and reservoir performance, and artificial lift requirements. Inflow performance and multiple tubing performance analyses using the latest optimisation tools, well stimulation and workover planning, tubing packer movement and forces calculations. 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, hydraulic fracturing.

PTRL6021
Reservoir Characterisation
School of Petroleum Engineering
Staff Contact: H Salisch
UOC6 S1 S2

Reservoir characterisation and modelling problems. Basic univariate, bivariate and multivariate statistics for geological data analysis. Petrophysical predictions from well logs. Introduction to petroleum geostatistics. Variogram and covariance models. Kriging and cokriging. Stochastic simulation. Sequential simulation. Gaussian and indicator simulation. Uncertainty quantification. Integrating secondary data. Integrating dynamic data. Reservoir upscaling.

PTRL6025
Well Control & Blowout Prevention
School of Petroleum Engineering
Staff Contact: S Rahman
UOC6 S1 S2

As you progress through this course you will be exposed to: 7 Basic concepts and procedures in well control; 7 Advanced theory and mathematical applications; 7 Preliminary equipment designs; 7 Advanced equipment designs and applications; 7 Onshore and offshore scenarios for advanced well design. The objective of this course is to expose engineers to advanced well control concepts and apply those skills to individual projects. Course content includes: Causes of Kicks, Kick Detection, Pressure Concepts and Calculations, Procedures, Gas Characteristics and Behaviour, Fluids, Constant Bottom Hole Pressure Well Control Methods, Equipment, Government & Industry and Company Rules & Orders and Policies, Sub-sea Well Control, Special Situations.

PTRL6027
Casing Design & Cementing
School of Petroleum Engineering
Staff Contact: S Rahman
UOC6 S1 S2

Casing Design - API properties of casing and casing couplings. Performance properties of casing under load conditions - Tension, burst pressure, collapse pressure,biaxial loading and buckling. Principles of casing design for vertical, deviated and horizontal wells - Setting depth design procedures, casing string sizes,and selection of casing weight, grade & couplings. Preparation of casing programs for different well types. Optimisation of casing program. Cementing - Basics of cement - Manufacture, composition and standardisation. Measuring and controlling cement properties. Cement additives. Slurry design - Wellbore temperatures, retardation, density, filtration control, strength stability, viscosity/suspension, gas migration theory and control, cement job simulation, 'wait-on-cement' time. Cementing calculations - Primary cementing, plug balancing, and squeeze cementing. Rheology and types of flow - Rheological models, types of flow, and flow in pipes & annuli. Mechanism of mud removal by cement - Well preparation, mud conditioning, running casing, mud displacement. Cementing equipment. Planning, conducting and monitoring primary and secondary cementing jobs. Post-job considerations and evaluation. secondary cementing jobs. Post-job considerations and evaluation.

PTRL6028
Practical Aspects of Well Planning and Drilling Cost Estimates
School of Petroleum Engineering
Staff Contact: S Rahman
UOC6 S1 S2

Students will learn a technical and analytic approach to cost-effective well planning from site selection to casing landing and cementing with an emphasis on trajectory analysis based on borehole stability, torque and drag of tubulars, and hole cleaning. This course binds together key concepts from mud design, cementing and casing design, and directional and ERD well design. Students will learn how to use these concepts to plan and optimize well trajectories in a systematic and practical manner. The course objectives are reinforced by practical examples and a case study.Course covers: Data acquisition, pore pressure prediction, fracture gradient prediction, in-situ stress determination, stress analysis, trajectory analysis and optimisation, wellbore stability analysis, mud weight selection and optimisation, casing program design, BHA selection and design, torque and drag analysis, determination of cuttings transport efficiency.

PTRL6029
Directional Horizontal and Multilateral Drilling
School of Petroleum Engineering
Staff Contact: S Rahman
UOC6 S1 S2

Students in this course will learn about the application of deviated and multilateral wells, well planning and surveying, and methods and equipment used to monitor and maintain directional control. In doing so, students will gain a thorough understanding of the economic benefits and technical challenges associated with implementation of directional well technology.Course covers: Applications of directional, horizontal and multilateral wells. Planning and executing the drilling of directional, horizontal and multilateral wells. Planning of well trajectory. Graphical and analytical representations of Build & Hold and Build, Hold & Drop. Planning of well paths with single and multiple targets. Surveying methods, tools and calculations (tangential method, balanced tangential method, average-angle method, radius of curvature method, minimum curvature method, and Akgun/Kuru method). Drilling tools and methods. Selection of appropriate bottom-hole assembly and optimisation - slick BHA, single-and multi-stabiliser BHAs. Steerable Rotary Systems Downhole mud motors. Drilling and drill string considerations.

PTRL6107
Formation Evaluation
School of Petroleum Engineering
Staff Contact: H Salisch
UOC6 S1 S2

Reservoir petrophysics. Basic parameters and relationships. Data control, acquisition and interpretation from cores, well logs and well tests. Integration of these data for the evaluation of hydrocarbon reservoirs. General purpose well logs. Fluid and formation resistivities. Porosity measurements from cores and well logs. Wellsite log interpretation. Lithology, saturation and permeability studies. Hydrocarbon mobility

determination. Shaly sand analysis. Complex reservoir interpretation. Practical work with core, log and well test data for reservoir quality evaluation and quantitative reservoir studies.

REST0001
Real Estate Investment Analysis
Building Construction Management Program
Staff Contact: J Kim
UOC6 HPW3 S2

A systematic analysis of the principles and methods of contemporary property investment is offered in this course including modern portfolio theory. Property is viewed as one among several asset classes in financial markets.

REST0002
Information Technology and Data Analysis in Real Estate
Building Construction Management Program
Staff Contact: School Office
UOC6 HPW3 S1

This course provides students with a working knowledge of various commonly used information technology and statistical techniques in real estate economics. The information technology component of the course focuses on the nature and scope of information technology for the real estate industry. The themes of change over time and risk are used to unify the treatment of statistical topics such as descriptive statistics, probability, correlation and regression, time series analysis, forecasting and model building.

REST0003
Real Estate Market Forecasting
Building Construction Management Program
Staff Contact: School Office
UOC6 HPW3 S2

The course aims to show how a forecasting capability should be established within a real estate organisation and how that capability is integrated with marketing. It examines the purposes of real estate forecasting, the methods used, data sources, resources required and management systems that provide forecasts. It considers the principles of forecasting and the application to real estate and the relationship forecasting has with decision-support systems and information management.

REST0004
Real Estate Finance
Building Construction Management Program
Staff Contact: School Office
UOC6 HPW3 S1 S2

Accepting the premise that real estate encompasses land, property and infrastructure, this course considers how the development, operation and investment of real estate are financed. It places contemporary financial practice within a context of theory and recent history of change in the financial sector of national and global economies. This course is broader in approach than REST0001 and is complementary in the approaches to common topics.

REST0005
Real Estate Valuation
Building Construction Management Program
Staff Contact: C Warren
UOC6 HPW3 S2

This course provides a graduate level introduction to valuation theory and practice. Topics include the concept of value in economics, valuation and related fields; the meaning of valuation as defined by statute and case law; property rights and land tenure; principles and methods of valuation; and the practice of valuation.

REST0006
Real Estate Development
Building Construction Management Program
Staff Contact: J Kim
UOC6 HPW3 S1
Excluded: UDES0008.

This course examines the process of real estate development, in the context of pluralistic market economics and underpins the analysis with economic theory. It covers all aspects of the development process from evaluation, through preparation, implementation, to disposal, and uses projects and cases to give students skills in organising and solving feasibility analysis problems.

REST0007
Facilities Management
Building Construction Management Program
Staff Contact: J Kim
UOC6 HPW3 S1

This course introduces the key issues in facilities management and how it relates to organisational strategies within the context of corporate infrastructure resourcing. Topics include facility planning, financial forecasting, real estate strategies, property management, maintenance and operation and performance measurement as enablers of business.

REST0008
Corporate Real Estate
Building Construction Management Program
Staff Contact: G De Valence
UOC6 HPW3 S2

This course provides an overview of two important issues relevant to the needs of real estate of real estate/ property professionals, corporate managers, and companies with international activities. There are; (i) the role of real estate in corporate settings, and (ii) the relationship between corporate and real estate objectives. Globalisation of real estate markets and the increasing importance of international business is emphasised. General characteristics of various countries are examined, and students are required to develop in-depth knowledge of the real estate market of a country of their choice.

REST0010
Modern Property
Building Construction Management Program
Staff Contact: School Office
UOC6 HPW3 S1

The real estate industry is rapidly moving from essentially responding to client requirements for structures towards providing business solutions and sustainable communities. And the infrastructure that forms the strategic framework for economic and social development draws upon the same skills and resources that are used to develop land and construct buildings for the purposes of residence, commerce, recreation hospitality and social services. Real estate now covers these fields and is thus a key sector of the economy. Starting from this premise the course explores how real estate needs to be understood and traverses the core areas of this diverse field including facility management.

REST0011
Generating and Executing Ideas
Building Construction Management Program
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: REST0010 and 24 UOC in the postgraduate program

In a rapidly changing and increasing competitive world, the ability to solve problems and generate new ideas are essential aspects of the pursuit of excellence. What is the creative process, and how people of different backgrounds and interests participate in this process is the core of this course. It not only considers how to be creative and solve problems, but also explores how solutions might be implemented. This course uses examples across the lifecycle of buildings and therefore gives particular attention to the use of real estate as an asset of the organisation, the implications of rapid workplace changes and the influence of IT.

REST0012
Working with People
Building Construction Management Program
Staff Contact: C Warren
UOC6 HPW3 S2
Prerequisite/s: REST0010 and 24 UOC in the postgraduate program

This course examines the way people behave and relate to each other within organisations and with regulatory agencies and the community. It presents the methods required for effective communication and the organisation of human resources to meet the strategic interests of the firm and society.

REST0013
Strategic Management of IT in FM
Building Construction Management Program
Staff Contact: C Warren
UOC6 HPW3 S1
Prerequisite/s: REST0007 or
Corequisite/s: REST0007

The rapid growth of FM as a recognised discipline has been paralleled by the rapid growth of IT as a tool for strategic development. The scope for IT applications in FM is diverse and covers a range of activities including strategic management; building and engineering services management; environmental management; domestic services; administration and service support. The challenge for Facilities Managers is to strategically exploit the power of IT in the pursuit of organisational goals and objectives. Although the emphasis in this course is on how to manage IT, it is important that facilities managers have a good knowledge of fundamental IT applications such as relational databases and industry specific software such as computer aided facilities management (CAFM).

REST0014
Property Rights and Valuation
Building Construction Management Program
Staff Contact: School Office
UOC6 HPW3 S1 S2

The traditional practice of valuation is being changed by the integration of property markets and capital markets, but some traditions remain critical to public policy and valuation of certain property classes. These have to do with the nature of property rights, their relationship to land use and environmental management and indigenous interests, and the pressure for tradable rights to improve the allocation of scarce resources and price the use of common property resources such as air, water and flora and fauna.

SAED9002
Practices of Research in Art, Design and Education
School of Art Education
Staff Contact: School Office
UOC6 HPW3

Research is broadly conceived in this course 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 aims to introduce 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 their instrumental and political significance it is nevertheless the goal of this course 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.

SAED9003
Issues in Design Education
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S2

Issues in Design Education comprises a critical investigation of the principal discourses shaping and influencing design in the curriculum. Design is problematised as an issue within the curriculum as it has become invested with the competing histories of the Technological and Applied Studies KLA, the aspirations of technology and the discourses of the individual and the creative process.

SAED9004
Curriculum in Art, Design and Education
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S1 S2

This course provides students with modernist and post structural theoretical frameworks of curriculum evaluation and critique. Curriculum as an educational construct is problematised. Curricula investigations aim to reveal and interpret the force, agency and power in curriculum policy and practice. Particular reference will be made to the critical methodologies as appropriate to an interpretation of the visual arts in education.

SAED9006
Theoretical Frameworks in Art, Design and Education
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S1

This course aims to introduce students to the theoretical frameworks which form the basis for the conception of visual arts education as a distinctive field. Theoretical frameworks in art education will be explained as a largely discontinuous collection of histories. These histories are united by ruling paradigms many originating outside of the field in the human sciences, and in the practices of the visual arts. Examples include, psychoanalytical approaches to creativity, anthropological and socio-cultural studies, and cognitive theories.

SAED9009
Applying the Conceptual Framework in the Art Museum
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S2

This course is organised around five museum concepts (sites, objects, contexts, display and publics). These are engaged with the Visual Arts Stage 6 Syllabus Conceptual Framework (artwork, artist, audience, world) to generate strategies promoting effective use of the museum environment with senior visual arts students. Museums are conceived of educationally as places to enact visual arts critical and historical practices.

SAED9010
Dialogues, Communities and Cultural Development
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S2 X2

In 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.

SAED9018
Research Project in Elective Studies 1
School of Art Education
Staff Contact: School Office
UOC6 HPW1.5 S2

This course aims to enable students to prepare a proposal for art educational research into a chosen specialisation in art education. Course content will include a review of major factors entailed in - historical, descriptive, experimental, and philosophical methods; literature reviews including - computer-assisted searches and descriptors, annotations, abstracts; instrumentation and data collection, qualitative and quantitative methods, the pilot study, sampling, research evaluation; introduction to descriptive, analytical, and interpretative approaches to the statistical measures of central tendency, variability, correlation, probability, frequency; qualitative measures of conceptual and structural analysis, auditing, triangulation; proposal writing, framing a question, setting the limitations of the study.

SAED9020
Art and Design History in Art Education
School of Art Education
Staff Contact: School Office
UOC6 HPW3

The course introduces a range of contemporary theories of art and design history. Students will examine and evaluate art-historical methodologies and apply them to educational settings within the context of general education. The textual, interpretive and revisionist character of the historical act are experienced, analysed and understood as a set of interpretive and explanatory practices which enable identification and revision of historical narratives.

SAED9021
Introduction to Frameworks of Research in Art & Design Education
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S2

This course will further investigate theoretical frameworks which have been adopted by art education in the twentieth century. It is an elective orientation to research in the professional field. Frameworks include neokantianism and the experience of language; cognitive psychology, the influence of new stage theory and the notion of visual thought; behaviourism and the dictate of evaluation; psychoanalytic theories of art education; pragmatism, aesthetics and the central role of experience; theories of creativity; neo-realism in child art.

SAED9022
Research Seminar in Art Education
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: SAED9021

The aim of this course is to focus on a theoretical framework of current significance to the field of art education and engage it in critical analysis. This course will enable students to see explanatory frameworks in art education as histories of belief which govern the notion of practice and truth in art education.

SAED9026
Contextual Studies in Teaching Art and Design
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S2

This course provides opportunities for teachers to develop skills in the practice of classroom research and experiment with ways to study, interpret and apply contemporary visual arts teaching theories and methodologies within the practical context of their school, as appropriate to individual teaching responsibilities. Utilising clinical supervision and action research methods, individual projects focus on models of effective teaching and documentation, supervision, professional development and evaluation.

SAED9029
Bodies of Work and the Practice of Art Making
School of Art Education
Staff Contact: School Office
UOC6 HPW3

Bodies of work and the practice of Art Making investigates the background developments, contexts and need for this innovation in visual arts assessment and curriculum. This course comprises a combination of theoretical discussions and workshops investigating bodies of work. Bodies of work are considered in contrast to portfolios and diaries; as related to artistic ability; in the functional relation between the teacher and the student; along with the epistemic and psychological properties of the body of work.

SAHT9111
Management and Organisation: Systems, Services and Survival
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3

This course examines the management and administrative skills and knowledge required from individuals to take up positions as directors and managers of arts and related organisations. It covers aspects of management and organisational structures in existing institutions both large and small, public and commercial. It includes the establishment of new organisations and the planning and development of systems designed to ensure the delivery of services and the long term survival of arts organisations and institutions, their human and material resources and the ideas and ideals which drive them.
Note/s: Core course MArtAdmin.

SAHT9112
Writing for Different Cultures and Audiences
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3

This course is about the kinds of writing that those working in art institutions most commonly undertake: writing from the perspective of the institution. It recognises that writing may have many different functions and writers must learn to adapt their style, vocabulary and technique, according to who will read the product. Questions to be considered include the current debate on captions, writing for children and non-specialist publics, research techniques including oral history, press kits and media management, and different types of catalogues. The method of study is very much hands on . It involves, among other things, the editing and layout of an edition of Artwrite, a magazine of student writing.

SAHT9113
Cultural Property, Ethics and the Law
School of Art History and Theory
Staff Contact: J Mendelssohn
UOC6 HPW3 S1 S2

This course examines the ethical and legal implications of the interactions generated between artists, exhibiting spaces and the viewing/purchasing public in contemporary society. It enables the development of a broader critical perspective on the cultural, legal, political and moral contexts of gallery and museum management. Issues discussed include contracts, copyright, acquisitions and disposal of works, moral rights and censorship, conflict of interest, the responsibilities of trustees.

SAHT9114
Exhibition Management and Curatorial Studies
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S1 S2

This course examines the theoretical and practical aspects of exhibition management. It develops a knowledge of curatorial procedures with particular reference to the initiation, presentation, interpretation and planning of art works in exhibition settings. Specific attention is paid to the administrative skills necessary to mount exhibitions, the production of visual and written documentation and the methods of critical engagement with images and objects. Visits to exhibitions as well as participation in the planning and implementation of an exhibition form an essential part of this subject.

SAHT9115
Internship
School of Art History and Theory
Staff Contact: F Fenner
UOC6 S1 S2

Students undertake a project-based industry placement consisting of a minimum of 180 hours. This may involve more than one host institution. Industry placements enable students to gain practical, supervised experience of gallery management, curatorial practice, public programs, art writing and other work areas related to the course. The industry placement is ungraded but successful completion requires the submission of reports both by the host institution and the student. Students are also required to attend a report-back session with lecturers involved in the program. Industry placements have been hosted locally, interstate and overseas by the following, among others: the National Gallery of Australia, Metropolitan Museum of Art (New York), Art Gallery of New South Wales, regional and commercial galleries in New South Wales, Sotheby's Australia Pty Ltd, Australian Centre for Photography, State Library of New South Wales, Visual Arts/Craft Board of the Australia Council, Powerhouse Museum, and the Ministry for the Arts, New South Wales.

SAHT9116
Research Paper
School of Art History and Theory
Staff Contact: J Mendelssohn
UOC6 S1 S2

This allows for the focussing of investigative, analytical and theoretical skills. Topics must relate to the broad area of the internship and are chosen in consultation with a supervisor who will guide and direct the project. The 10,000 word study, one copy of which is retained by the College, may include the use of film, video and audio tape or photographic documentation where relevant. While it may draw directly on experiences gained during the internship, the research paper must be treated as an independent project.

SAHT9121
Exhibition and Gallery Design Development
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S1 S2

This course considers two areas of design development. These are the theoretical and practical aspects of exhibition design and display techniques and the specific design demands of a gallery space. The ways in which the objectives of an exhibition may be identified are discussed, and all aspects related to project initiation and completion examined. These include planning and design management, budget formulation and controls, production and installation management, spatial requirements and evaluation, light and lighting.

SAHT9122
Education and Public Programs
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S1

This course covers issues surrounding public programs and education in the context of art galleries, museums and related institutions. It addresses questions to do with the identification and definition of audiences, examines the needs of non-specialist communities as well as educational institutions, and takes account of the practicalities of budgeting and planning. The development of programs using volunteer guides (and their training), floor talks, lectures, seminars and conferences is presented as a subject for practical purposes as well as critical consideration. Also included is a consideration of exhibitions for purely educational purposes.

SAHT9123
Marketing and Promotion
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S2

This course focuses on issues in marketing for those working in arts and related fields. Topics covered include methods of audience research and ways of undertaking group surveys and their implementation. How to define the unique qualities of a target institution and create a public image around this separateness are issues explored, together with detailed studies of promotional and fundraising strategies.

SAHT9124
Arts and Cultural Policy
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3

This course reviews the development of arts and cultural policy and policy implementation in Australia. Particular attention is paid to the role of the Australia Council and the development of national and regional infrastructure, and factors determining the level and allocation of public funding. Comparisons are drawn with other nations, particularly the United Kingdom, Canada and the United States of America.

SAHT9125
The Australian Art Market
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3

This course investigates the art market as a process of bringing art works to sale. It offers an historical overview from the Renaissance artists workshops and guilds and a detailed study of contemporary Australian art. The subject explores the development of patronage, taste and collecting, and the impact of these phenomena on the subsequent rise of the international art market. Key elements in the Australian art market under investigation in this course include the fragmentation of the art market, Australian Movable Cultural Heritage, and artistic reputation. The subject assists students to understand commodification in the art world and the processes by which artworks are brought to sale.

SAHT9126
Human Resources Management
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3

This course provides individuals working in an arts based organisation with competencies relevant to the inter-personal and inter-group skills demanded in the efficient and effective management of organisations. It aims to fulfil the needs of individuals interested in the principles of planning, organisation, communication and evaluation of personnel within an organisation and, as well, the needs of directors and supervisors who wish to develop expertise in essential personnel management aspects of their job within an appropriate theoretical framework.

SAHT9127
Conservation and Collections Management
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3

This course introduces the principles of conservation and illustrates its role as an integrated component of collections management. It examines the physical nature of works of art and the interactions with their environment. The range of responses of conservation to collections is discussed as well as conservation's relationship with an institution's custodial responsibilities and public programs. Conservators and registrars at selected Sydney institutions are visited in order to facilitate a comparative overview of conservation practice.

SAHT9128
History of Exhibitions of Australian Art
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S2

This course introduces issues in Australian art by a detailed examination of those art exhibitions that have attempted to define either Australian art or crucial moments in Australian art. The course examines both the curatorial rationales behind the exhibitions and the art that was perceived by different generations as significant. Major exhibitions, both here and overseas, will be considered in the context of a broad cultural history.

SAHT9130
Art Galleries and Collections in Australia
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3

This course balances the historical and theoretical aspects of collections (public, private and corporate) with the practical issues involved. How and why collections are formed; the aesthetic and political assumptions behind collecting policies; how well various collections serve their constituencies are some of the issues that are explored, together with aspects of conservation, storage, documentation and access as they relate to the practical aspects of collection management. Visits are made to various public institutions including state and regional galleries and, where possible, selected private and corporate collections.

SAHT9131
Visual and Museum Cultures of the Asia-Pacific Region
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S2

This course introduces a comparative study of contemporary visual art and museum cultures in the Asia-Pacific region. As arts professionals - curators, administrators, writers, etc - develop relationships with colleagues through the region, an understanding, not only of the visual arts but also of the museum sector, is becoming essential. Case studies of international exhibitions, and related arts programs, will be examined.

SAHT9132
Festivals and Biennales
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3

This course covers the history, conception and implementation of arts festivals and recurrent national and international exhibitions. Particular attention is paid to events in Australia such as the Biennale of Sydney, the Australian Sculpture Triennial and the Adelaide Festival (including Artist's Week). Overseas events include the history of the Biennale commencing in Venice in 1895 to Sao Paulo and Paris, as well as major expositions such as the Indian Triennial, Documenta and the Carnegie International. The history of these complex programs is discussed, in particular, the administrative skills, conceptual insights and artistic resources essential to their successful realisation.

SAHT9133
Pornography, Art and Politics
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3

This course will explore the boundary between art and pornography and the social function of that boundary in western society. It will look at the ways in which bodies are eroticised and/or designated as pornographic or perverse. Concepts such as fetishization, voyeurism, sadism and masochism will be discussed in relation to art history and contemporary art practice. The politics of pornography will be debated in relation to such issues as gender/feminism, child sexuality, censorship and AIDS.

SAHT9134
Memory and Self
School of Art History and Theory
Staff Contact: School Office
UOC6 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. 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'.

SAHT9136
The Art and Culture of Everyday Life
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S2

This course looks critically at the different formulations of art in relation to mass culture. It gives an overview of the social and technological development of mass culture including the advent of photography, film, television, advertising and the popular press. Special attention is paid to the ways in which the relationship between art and mass culture has been conceptualised by such seminal thinkers as Michael de Certeau, Fernand Braudel, Paul Virilo and Jean Baudrillard.

SAHT9137
Art and Cultural Difference
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW2 S2

The conceptualisation and evaluation of cultural difference has occupied a central position in western art and culture, particularly since the period of colonisation began. This subject sees cultural difference as a series of narratives and counter-narratives. Topics covered include the ways in which cultural difference has been addressed in art and literature by colonised subjects, the place of art in anti-colonial liberation movements of the twentieth century and French constructions of the Orient in scultpture and painting. Particular attention is paid to the writings of, among others, Walter Benjamin, Theodor Adorno, Luce Irigaray and Franz Fanon.

SAHT9138
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 undergraduate course. These approaches will be brought to bear on a range of artworks produced in Australia and internationally over the last decade. It will offer an overview of many of the contemporary developments, themes and issues that have concerned artists in the period after postmodernism, that is, during the late eighties and nineties. Issues to be considered will include how objects and images come to have meaning and how stable this meaning is, the ways in which artworks differ from other objects, the relations between language and visual images, the ways in which 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 the visual, tactile and kinaesthetic and the significance of artworks in relation to the politics of information dissemination, gender, postcolonialism, class and ethnicity.

SAHT9139
Art, Technology and New Media
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 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 subject incorporates a certain amount of hands-on experience and also demonstrations of artists work.

SAHT9141
Current Issues in Art
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course explores current issues in art, placing these issues in the contexts of current cultural concerns and theoretical frameworks. Drawing on recent work by Australian and international artists, the course facilitates an attitude of self-reflectivity in student's own practice

SAHT9143
Design History and Theory 1
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course will provide candidates with the opportunity for advanced study in the history/theory of design. Attention will be paid to a critical analysis of design history as cultural signifier for a range of cultures including European, American, Asian and Australian examples: a detailed discussion of the cross-cultural connections international design history represents: a comparative analysis of the influence of design philosophers and practitioners on the history of design styles and practice both, nationally and internationally: analysis and application of historical research methodologies to the further elaboration of pre-20th Century design history. Specific attention will be paid to the impact on design of the philosophy of aesthetics with critical analysis and application (to design) of the aesthetic theories of a range or theorists including Hegel and Kant. The import for design of an in-depth sociological analysis of a range of design cultures, including Europe, America, Asia and Australia; the critical analysis of research in the sciences and technologies and their impact on design theory and methodologies.

SAHT9144
Design History and Theory 2
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW2 S2

This course will provide candidates with the opportunity for further investigation of the history/theory of design. Attention will be paid to a critical analysis of design history as cultural signifier for a range of cultures including European, American, Asian and Australian examples: a detailed discussion of the cross-cultural connections international design history represents: a comparative analysis of the influence of design philosophers and practitioners on the history of design styles and practice both, nationally and internationally: analysis and application of historical research methodologies to the further elaboration of pre-20th Century design history. Specific attention will be paid to the impact on design of the philosophy of aesthetics with critical analysis and application (to design) of the aesthetic theories of a range or theorists including Benjamin, Foucault and Derrida. The import for design of an in depth sociological analysis of a range of design cultures, including Europe, America, Asia and Australia; the critical analysis of research in the sciences and technologies and their impact on design theory and methodologies.

SAHT9145
Design History and Theory Project
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course/module will provide candidates with the opportunity to undertake research projects resulting in a body of data from which considerations and applications of selected philosophical, aesthetic, historical, sociological and psychological positions can be made towards the development of design theory. Candidates may investigate the role of design theory in the development of a range of design cultures with specific reference to the Australian context. Comparative analysis of design theory models, toward the articulation of more complex systems for design analysis will be considered.

SAHT9690
Special Project
School of Art History and Theory
Staff Contact: School Office
UOC6

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. This course is intended to facilitate the College in developing its educational program for postgraduate 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.

SAHT9693
Museum Development- fundraising and philanthropy
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S2

This subject considers the issues surrounding the development of alternative funding streams for arts organisations, in particular the extra funding needs of museums. It discusses strategies for encouraging philanthropy, and examines the law governing bequests and wills. Students study corporate sponsorship merchadising, catering, and personal support under the cultural gifts program. Issues surrounding support in kind - including the "friends"of the institution and volunteers.

SART9701
Painting 1
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

To develop practical and conceptual abilities at a professional level appropriate to a contemporary painting practice. Students will be encouraged to critically analyse their work within a supportive environment, develop investigative skills, and examine their own individual creative processes.

SART9702
Painting 2
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

To develop practical and conceptual abilities at a professional level appropriate to a contemporary painting practice. Students will be encouraged to critically analyse their work within a supportive environment, develop investigative skills, and examine their own individual creative processes.

SART9703
Painting 3
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

To develop practical and conceptual abilities at a professional level appropriate to a contemporary painting practice. Students will be encouraged to critically analyse their work within a supportive environment, develop investigative skills, and examine their own individual creative processes.

SART9704
Painting 4
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

To develop practical and conceptual abilities at a professional level appropriate to a contemporary painting practice. Students will be encouraged to critically analyse their work within a supportive environment, develop investigative skills, and examine their own individual creative processes.

SART9705
Drawing 1
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

To develop practical and conceptual abilities at a professional level appropriate to a contemporary drawing practice. Students will be encouraged to critically analyse their work within a supportive environment, develop investigative skills, and examine their own individual creative processes.

SART9706
Drawing 2
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

To develop practical and conceptual abilities at a professional level appropriate to a contemporary drawing practice. Students will be encouraged to critically analyse their work within a supportive environment, develop investigative skills, and examine their own individual creative processes.

SART9707
Drawing 3
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

To develop practical and conceptual abilities at a professional level appropriate to a contemporary drawing practice. Students will be encouraged to critically analyse their work within a supportive environment, develop investigative skills, and examine their own individual creative processes.

SART9708
Drawing 4
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

To develop practical and conceptual abilities at a professional level appropriate to a contemporary drawing practice. Students will be encouraged to critically analyse their work within a supportive environment, develop investigative skills, and examine their own individual creative processes.

SART9709
Printmaking 1
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

To pursue in-depth investigation into conceptual and technical aspects of the subject, and to further the development of skills and aesthetic considerations within areas of specialisation in the medium.

SART9710
Printmaking 2
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

To pursue in-depth investigation into conceptual and technical aspects of the subject, and to further the development of skills and aesthetic considerations within areas of specialisation in the medium.

SART9711
Printmaking 3
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

To pursue in-depth investigation into conceptual and technical aspects of the subject, and to further the development of skills and aesthetic considerations within areas of specialisation in the medium.

SART9712
Printmaking 4
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

To pursue in-depth investigation into conceptual and technical aspects of the subject, and to further the development of skills and aesthetic considerations within areas of specialisation in the medium.

SART9721
Sculpture, Performance and Installation 1
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

Self-initiated programs of creative experiment appropriate to an informed and contemporary sculpture practice will be developed through critiques and tutorials. Within this area students are encouraged to critically analyse the conceptual basis of their work in the contexts of studio and history/theory. A cross-disciplinary attitude within the studies area of Sculpture is encouraged.

SART9722
Sculpture, Performance and Installation 2
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

Self-initiated programs of creative experiment appropriate to an informed and contemporary sculpture practice will be developed through critiques and tutorials. Within this area students are encouraged to critically analyse the conceptual basis of their work in the contexts of studio and history/theory. A cross-disciplinary attitude within the studies area of Sculpture is encouraged.

SART9723
Sculpture, Performance and Installation 3
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

Self-initiated programs of creative experiment appropriate to an informed and contemporary sculpture practice will be developed through critiques and tutorials. Within this area students are encouraged to critically analyse the conceptual basis of their work in the contexts of studio and history/theory. A cross-disciplinary attitude within the studies area of Sculpture is encouraged.

SART9724
Sculpture, Performance and Installation 4
School of Art
Staff Contact: School Office
UOC6 S1 S2

Self-initiated programs of creative experiment appropriate to an informed and contemporary sculpture practice will be developed through critiques and tutorials. Within this area students are encouraged to critically analyse the conceptual basis of their work in the contexts of studio and history/theory. A cross-disciplinary attitude within the studies area of Sculpture is encouraged.

SART9727
Introduction to Drawing
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

This course will provide the opportunity for students at any level of drawing experience to investigate many aspects of drawing. Students will explore a range of visual images and ideas supported by an examination of historical and contemporary drawing practice. Through interpreting and translating two and three dimensions students will develop observational skills and begin to build a personal graphic language.

SART9728
Introduction to Painting
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

This course will introduce students to basic skills in painting and encourage them to understand both the inter-relationship of form and content and the creative possibilities of various media and techniques. Students will explore aspects of contemporary art practice and develop an understanding of the historical development of painting. This course will use a series of projects and workshops to extend the student s personal creative interests.

SART9729
Introduction to Etching
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

This course will introduce students to basic procedures and attitudes in the contemporary art practice of etching. Through lectures, demonstrations and projects, students will gain understanding and skills in the use of traditional and contemporary techniques in etching as a means of creating unique and original works of art. After gaining understanding and proficiency in established approaches, students will be introduced to current developments in photo-etching and solar plate etching.

SART9732
Introduction to Sculpture
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

This studio based course will introduce students to sculptural practice within a contemporary context, through a series of projects and technology based workshops. The projects extend the student's personal creative enquiries, foster an awareness and recognition of historical precedents and sculptural theory, and with an interdisciplinary focus, capitalise on the student's existing capabilities. The course is intended

to provide a challenging catalyst for the production of sculptural works within a supportive program to further the student's art practice.

SART9733
Drawing Elective
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

This course will enable students to explore the drawing of the human figure. Students will develop an understanding of the structure and form of the human body. They will also expand their knowledge of anatomy. Emphasis will be placed on direct observations and their interpretation in various graphic media.

SART9734
Painting Elective
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

The aim of this course is to enable students to extend their command of painting as a visual arts discipline whilst consolidating and extending previously acquired painting skills. Students will be encouraged to explore both the inter-relationship of form and content and the creative possibilities of various media and techniques from a contemporary perspective. Students will explore aspects of contemporary art practice and further develop an understanding of the historical development of painting.

SART9735
Etching Elective
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

This course will introduce students to advanced concepts and procedures in contemporary etching practice. Through lectures, demonstrations and projects, students will gain understanding and skills in the use of contemporary techniques in etching as a means of creating unique and original works of art. Students will be encouraged to remain abreast of current developments in contemporary art and to relate their etching activities to these premises.

SART9738
Sculpture Elective
School of Art
Staff Contact: School Office
UOC6 HPW3 S1 S2

This studio based course will extend students' knowledge and understanding of sculptural practice within contemporary context, through a series of projects and workshops. The projects will extend the student's personal creative enquiries, foster an awareness and recognition of historical precedents and sculptural theory, and with an inter disciplinary focus, further the student's art practice. The course is intended to provide a challenging catalyst for students to develop a poetic, imaginative and exploratory approach to sculptural language, ideas and processes and to facilitate the production of sculptural works with an understanding of the work's position in relation to art history and theory and contemporary practice.

SDES9201
Design Seminar 1
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course will provide a forum for discussion and debate about relevant and current issues in design. It aims to develop candidates' understanding of the range and depth of issues derived from the interaction of design with industry and culture. Guest lecturers and candidates will combine in the critical analysis of the impact that current aesthetic, philosophical, cultural, social, economic, environmental and technological issues have on the responsible solution of design projects. Guest lecturers will include industry representatives, academic researchers and distinguished practising designers.

SDES9202
Design Seminar 2
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course will provide a forum for further discussion and debate about relevant and current issues in design. It is aimed at further extending candidates' understanding of the range and depth of issues derived from the interaction of design with industry and culture. Guest lecturers and candidates will combine in the critical analysis of the impact that current aesthetic, philosophical, cultural, social, economic, environmental and technological issues have on the responsible solution of design projects. Guest lecturers will include industry representatives, academic researchers and distinguished practising designers.

SDES9203
Design Seminar 3
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course will provide a forum for further discussion and debate about relevant and current issues in design. It is aimed at further extending candidates' understanding of the range and depth of issues derived from the interaction of design practice with industry and culture. Guest lecturers and candidates will combine in the critical analysis of the impact that current aesthetic, philosophical, cultural, social, economic, environmental and technological issues have on the responsible solution of design projects. Guest lecturers will include industry representatives, academic researchers and distinguished practising designers.

SDES9204
Design Process Workshop 1
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course will provide candidates with an opportunity to further develop their understanding of a range of design processes such as; design approaches to problem solving, concept representation and communication techniques, specification techniques and design interface with manufacturing processes. It is aimed at extending the candidate's capacity to manipulate materials, techniques and processes towards the resolution of design projects.

SDES9206
Design Studio: Graphics/Media 1
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course aims to provide candidates with the opportunity to investigate advanced theoretical and practical aspects of graphics/media design. It is aimed at extending the candidate's level of understanding about new research and developments in the materials, techniques and concepts of the print, photographic and multimedia areas of graphic design. Specific attention will be paid to the application of computer imaging in the creative development of innovative concepts in graphic design.

SDES9207
Design Studio: Graphics/Media 2
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course aims to provide candidates with further opportunities to investigate advanced theoretical and practical aspects of graphics/media design. It will further extend the candidate's level of understanding about new research and developments in the materials, techniques and concepts of the print, photographic and multimedia areas of graphic design. Specific attention will be paid to the application of computer imaging in the creative development of innovative concepts in graphic design.

SDES9208
Design Studio: Environments 1
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course will involve candidates in a critical study of theoretical and practical aspects of environments design. It is aimed at developing the candidate's capacity to discern current environments design issues and to apply these understandings in sophisticated and comprehensive solutions to a range of design projects. Specific attention will be paid to the application of experimental materials and structures as well as innovative applications of traditional materials and structures; application of critical analysis to the design of modes of interaction between environmental systems both built and natural; application of CAD and other computer programs as effective tools in the research, design and development of environments projects.

SDES9209
Design Studio: Environments 2
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course will involve candidates in further investigation of theoretical and practical issues in environments design. It is aimed at further developing the candidate's capacity to discern current environments design issues and to apply these understandings in sophisticated and comprehensive solutions to a range of design projects. Further attention will be paid to the application of experimental materials and structures as well as innovative applications of traditional materials and structures; application of critical analysis to the design of modes of interaction between environmental systems both built and natural; application of CAD and other computer programs as effective tools in the research, design and development of environments projects.

SDES9210
Design Studio: Integrated Design Studies 1
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course will provide candidates with the opportunity for advanced study in the multidisciplinary nature of integrated design. It is aimed at extending the candidate's level of understanding about the way in which concepts and processes in graphics, object and environments design may be integrated to contribute to the development of complex and appropriate design solutions. Specific attention will be paid to study of the cross-disciplinary opportunities in the adaptation, development and management of materials, techniques and personnel from two or more areas of design. Specific attention will also be paid to the advanced study of computer imaging (both 2D and 3D programs) in the creative development of integrated design.

SDES9211
Design Studio: Integrated Design Studies 2
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course will provide candidates with the opportunity for further study in the multidisciplinary nature of design integration. It will further extend the candidate's level of understanding about the way in which concepts and processes in graphics, object and environments design may be integrated to contribute to the development of complex and appropriate design solutions. Specific attention will be paid to study of the cross-disciplinary opportunities in the adaptation, development and management of materials, techniques and personnel from two or more areas of design. Specific attention will also be paid to the advanced study of computer imaging (both 2D and 3D programs) in the creative development of integrated design.

SDES9212
Design Studio Project
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course will provide candidates with the opportunity to develop an individual design project that applies selected studio practices to an approved problem.

SDES9216
Design Management and Practice 1
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course will provide candidates with the opportunity to study the nature and role of design management in the development of a design culture. Attention will be paid to the analysis and application of design management processes to the notion of design cultures as a management goal in both commercial and institutional environments; study of the management of new technologies, materials and services; management of research and development, planning models and techniques, predictive models; research into the role of design management principles in the development of a design consciousness as an integral part of responsible design and manufacture in the Australian context. Additionally attention will be paid to a critical analysis of design practice in both consultant and design department situations; comparative analysis of design management concepts and economic and business concepts in research and design development; analysis and application of psycho/social concepts in the development of design project co-ordination models.

SDES9217
Design Management and Practice 2
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course will provide candidates with the opportunity to further investigate models of design management in conjunction with the development of a design culture. Attention will be paid to the analysis and application of design management processes to the notion of design cultures as a management goal in both commercial and institutional environments; study of the management of new technologies, materials and services; management of research and development, planning models, predictive models and techniques; research into the role of design management principles in the development of a design consciousness as an integral part of responsible design and manufacture in the Australian context. Additionally attention will be paid to a critical analysis of design practice in both consultant and design department situations; comparative analysis of design management concepts and economic and business concepts in research and design development; analysis and application of psycho/social concepts in the development of design project co-ordination models.

SDES9218
Design Management Project
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course will provide candidates with the opportunity to undertake a research project resulting in a body of data that reflects the application of various design practice and management models to individually selected design problems. Specific attention will be given to aspects of design management and practice such as information and communication design; consideration of design management in the context of a range of commerical and institutional environments including those not traditionally viewed as design locations.

SDES9740
Design Studio: Ceramics 1
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course focuses on the materials, techniques, processes and contexts that inform the design and production of ceramic objects. The studio program ranges across traditional, contemporary and new technologies and supports diverse outcomes from 'one-off' objects to architectural and industrial applications and small-scale studio production. Practical work is contextualised by consideration of the material, cultural, theoretical and historical issues/debates that frame contemporary ceramic practice.

SDES9741
Design Studio: Ceramics 2
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course provides a setting in which candidates extend and advance practical and theoretical knowledge as applied to ceramic design and studio practice. It highlights interdisciplinary contexts for ceramic design/ production and (within a framework of research, critical analysis and reflection) encourages exploratory, speculative and innovative solutions to studio enquiry.

SDES9742
Design Studio: Jewellery 1
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course focuses on the materials, techniques, processes and contexts that inform the design and production of jewellery pieces. The studio program ranges across traditional, contemporary and new technologies and supports diverse outcomes — from 'one-off' objects to small-scale studio production. Practical work is contextualised by consideration of the material, cultural, theoretical and historical issues/debates that frame contemporary jewellery practice.

SDES9743
Design Studio: Jewellery 2
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course provides a setting in which candidates extend and advance practical and theoretical knowledge as applied to jewellery design and studio practice. It highlights interdisciplinary contexts for jewellery design/production and (within a framework of research, critical analysis and reflection) encourages exploratory, speculative and innovative solutions to studio enquiry.

SDES9744
Design Studio: Textiles 1
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course involves the study of theoretical and practical aspects of contemporary textiles for art and design practice. The course develops the candidate's understanding of historical and contemporary textile practice, current textile design issues, textiles processes and new technologies. The studio provides a framework for facilitating learning in the candidate's elected area, to question the conditions of making, ways of interpreting, designing and informing individual practice.

SDES9745
Design Studio: Textiles 2
School of Design Studies
Staff Contact: School Office
UOC6 HPW2 S1 S2

This course allows for the extended study and investigation of theoretical and practical aspects of contemporary textile for art and design practice. The course further develops the candidate's understanding of contemporary textiles practice, current textile design issues, textiles processes and new technologies. Individual studio projects provide a framework for the innovative application of materials, structures and designs, and to question the conditions of making, ways of interpreting and informing individual practice.

SENG9338
Networks Project
School of Computer Science and Engineering
Staff Contact: R De Silva
UOC6 HPW3 S1 S2
Prerequisite/s: Enrolment in MInfSc Internetworking COMPHS8508 and COMP9331 and COMP9332.

Students will complete a substantial project individually or in small groups, under the supervision of a member of the academic staff. Project areas include network design.

SESC6010
Descriptive Statistics
School of Safety Science
Staff Contact: D Leonte
UOC3 HPW3 S1

Introduction to the theory of statistics and to statistical techniques for describing data. Topics include measures of central tendency and dispersion, probability and probability distribution and statistical inference.
Note/s: May not be taken as part of a 48UOC Masters program. Also offered in off-campus mode in S1 and S2.

SESC6110
Physical Principles of Safety 1
School of Safety Science
Staff Contact: J Cross
UOC3 HPW3 S1

This course introduces physics principles applied to safety and ergonomic issues. Topics include energy and safety, materials handling, equilibrium and balance, biomechanics, linear motion, friction and collisions.
Note/s: May not be taken as part of a 48UOC Masters program. Also offered in off-campus mode in S1.

SESC6800
Fundamentals of Toxicology
School of Safety Science
Staff Contact: A Hayes
UOC3 HPW3 S1

This course provides a background to the underlying principles of toxicology. It provides an introduction to chemical, biochemical and cellular principles. This course is aimed at students who have not previously studied chemistry or biology.
Note/s: May not be taken as part of a 48UOC Masters program. Also offered in off-campus mode in S1 and S2.

SESC8101
Introduction to Fire and Explosion Phenomena
School of Safety Science
Staff Contact: A Green
UOC6 HPW6 S1

This course gives an overview of legislation for fire and explosion safety management in buildings and industry by the australian Building Code, the Health and Safety Act.The Risk Management process to prevention, protection and emergency planning will be discussed. The course will then discuss basic gas, liquid and solid fire phenomenon and their application to the dynamics of fires, explosions and suppression. The course will then discuss the use of test methods for the measurement of flammability, explosion and fire resistance properties and focus on the use of these methods to deduce key properties required for fire and explosion safety analysis, the development of new test methods and regulatory approval tests.
Note/s: Also offered in off-campus mode in S1.

SESC8111
Fire and Explosion Modelling
School of Safety Science
Staff Contact: A Green
UOC6 X2

The course will provide discussion of deterministic models for the prediction of fire growth, smoke spread, detection and suppression. Probabilistic models will then be discussed and their application to predictions of reliability and for human behaviour. Computer simulations of example problems ranging from fuel spillage, dispersion and fire, building fire growth, detection, control and egress to explsion simulation will be given and current developments in technology and research issues discussed.
Assumed Knowledge: SESC8101
Note/s: Short Course mode only (compulsory 5 day workshop plus assessable tasks completed subsequently).

SESC8121
Risk Assessment for Major Hazards
School of Safety Science
Staff Contact: A Green
UOC6 HPW6 S1

The course will provide a background in qualitative and quantitative techniques for assessment of risk using logic trees. Event and consequence modelling based on fire and explosions, chemical and biological dispersal and probabilistic models for human response will be discussed. The course will then address reliability, the prediction of the frequecy of events, the use of risk curves with discussion of uncertainties in these analyses. Finally risk assessment methods for emergency planning will be discussed. Case studies and examples will be used throughout to exemplify the various techniques.
Assumed Knowledge: SESC8101
Note/s: Also offered in off-campus mode in S1.

SESC8131
Building and Transport Fire Management
School of Safety Science
Staff Contact: A Green
UOC6 HPW6 S2

The course provides an overview of the Building Code of Australia and discusses fore growth in buildings - fire, smoke and toxic gases. Building systems are discussed in relation to structural stability, compartmentation, evacuation, suppression, materials control, smoke control, detection, alarm and communications, materials control, building management, test methods and alternative assessment. Fire safety in transport systems and for evacuation assessment are then discussed.
Assumed Knowledge: SESC8101
Note/s: Also offered in off-campus mode in S2.

SESC8141
Major Hazards, Fire Prevention and Protection in Industry
School of Safety Science
Staff Contact: A Green
UOC6 HPW6 S1

The course provides an overview of the legislation for industrial safety in hazardous facilities. Australian and overseas legislation is discussed together with the use of safety reports and Environmental Impact Assessments. The course then discusses, in relation to the topic, risk assessment and hazard identification - perception of risk, accident development, methods of hazard identification including an overview of systems used throughout the world for evaluation of fire and explosiohn hazards. The course then addresses prevention and protection using case studies to highlight principles of control.
Assumed Knowledge: SESC8101
Note/s: Also offered in off-campus mode in S1.

SESC8151
Explosion Prevention and Protection in Industry
School of Safety Science
Staff Contact: A Green
UOC6 HPW6 S2

The course provides an evaluation of explosion hazards through the use of TNT, multi-energy, CFD techniques. It then discusses gas, dust and liquid mist explosions and runaway reactions. The course will then focus on prevention and protection requirements through aviodance of flammable mixtures, elimination of ignition sources, plant layout and control of atmospheres, codes of practice for venting, suppression and isolation.
Assumed Knowledge: SESC8101
Note/s: Also offered in off-campus mode in S2.

SESC9010
Research Methods
School of Safety Science
Staff Contact: R Hall
UOC3 HPW3 S1

This course covers issues in research methodology including research problem formulation, null and alternative hypotheses, qualitative and quantitative research designs, statistical inference, the analysis of quantitative data and epidemiological concepts. Students will be expected to be able to recognise and avoid common methodological problems in research. The course will not provide a detailed coverage of statistical theory but an understanding of statistics is required.
Assumed Knowledge: SESC6010
Note/s: Also offered in off-campus mode in S1 and S2.

SESC9020
Occupational Health and Safety Law 1
School of Safety Science
Staff Contact: School Office
UOC3 HPW2 S1 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 legislation.
Note/s: Also offered in off-campus mode in S2.

SESC9030
Occupational Health and Safety Law 2
School of Safety Science
Staff Contact: School Office
UOC3 HPW2 S2

This course extends concepts of law introduced in SESC9020, and covers other workplace legislation and procedures, such as workers compensation and rehabilitation legislation; cases and actions under common law.
Assumed Knowledge: SESC9020
Note/s: Also offered in off-campus mode in S2.

SESC9060
Principles of Safety, Health and Environmental Auditing
School of Safety Science
Staff Contact: C Winder
UOC3 HPW3 S1 S2 X2
Excluded: SESC9340, SESC9341

An introdruction to planning and conducting safety, health and environmental management systems audits. Law, management and management standards. Principles of auditing. ISO 14000 Environmental management standards. AS/NZS 4801/4 Occupational health and safety management standards. Audit frameworks, the audit process, collecting evidence, audit reporting. Assessment for the course includes planning and carrying out an audit of a SHE topic.
Assumed Knowledge: SESC9020, SESC9100, SESC9200, SESC9400, SESC9600, SESC9810
Note/s: Only offered in short course mode on-campus (2.5 days).

SESC9091
Safety, Health and Environmental Practice
School of Safety Science
Staff Contact: C Khalil
UOC6 HPW6 S2

A workplace assessment based course, where students are required to report on the safety, health or environmental issues following visits to a number of diverse industrial sites.
Assumed Knowledge: SESC9100, SESC9600

SESC9121
Fire and Explosion
School of Safety Science
Staff Contact: A Green
UOC6 S2

This course introduces the students to the principles of combustion in fire and explosion processes. The first section deals with the control of industrial fires (liquids and gases). The second section deals with the control of building fires and the third section deals with explosion prevention and control.
Assumed Knowledge: SESC9100
Note/s: Short course mode only.

SESC9130
Noise Management
School of Safety Science
Staff Contact: School Office
UOC3 X2

Physical, perceptual and legislative aspects of noise. AS1269. Descriptive properties, propagation, loudness and frequency, types of noise. Measurement, decibels, hertz, octaves, time and frequency, weighting, spectral analysis. Perception, loudness, annoyance, phons, dB(A) Leq. Lbgt. Anatomy of and function of the ear, and noise injury. Audiometry exercise in measuring hearing levels. Management of noise.

Assumed Knowledge: SESC9100 and SESC9600
Note/s: Short course mode only (compulsory 3 day workshop plus assessable tasks completed subsequently). This course may not run every year.

SESC9140
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.
Assumed Knowledge: SESC9100

SESC9150
Electrical Safety
School of Safety Science
Staff Contact: K Kothiyal
UOC3 S1 S2

Regulations and codes of safe practice relating to electricity. Identification assessment and control of electrical hazards including electrocution, electrical fires, static electricity, electrical wiring in hazardous areas, the effect of electric and magnetic fields, safety related systems.
Assumed Knowledge: SESC9100
Note/s: Off-campus mode only.

SESC9160
Safety, Health and Environment in the Construction Industry
School of Safety Science
Staff Contact: R Trethewy
UOC3 HPW2.5 S1

This course examines current issues and problems in ensuring the safety, health and environment in the building and construction industry. Topics include OHS and environmental legislation, legal responsibilities, implications of changes in legislation to building and construction safety, contractual relationship with sub-contractors, risk assessment and control strategies, positive performance indicators, safeguarding of plant, systems management, audit reviews, hazards in building and construction work, human behaviour and incident investigation. Best practice initiatives in the construction sector.
Assumed Knowledge: SESC9100, SESC9200

SESC9201
Safety Risk Management
School of Safety Science
Staff Contact: J Cross
UOC6 HPW3 S2

Principles of OHS risk management and its legal context. Methods of risk identification assessment and control applied to physical hazards including, mechanical equipment, noise, vibration. Ionising and non ionising radiation, electricity, materials failure, fire and explosion and construction related hazards.
Excluded: SESC9100 and SESC9200
Note/s: Also offered in off-campus mode in S1 and S2.

SESC9211
Risk Management
School of Safety Science
Staff Contact: J Cross
UOC6 HPW3 S1 S2 X1

This course gives an overview of Risk Management following the format of the Australian Standard in Risk Management (AS/NZS4360). Tools and techniques applicable to each step of the risk management process are discussed using examples application to the class. The same risk management process is applied to manage all types of risk in all types of organisations. This course is therefore relevant as part of a wide variety of postgraduate courses and students from any postgraduate course are accepted if numbers permit. 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.
Note/s: Also offered in off-campus mode in S2, short course mode in X1 (XB) (compulsory 4 day workshop plus assessable tasks completed subsequently), and web delivery mode in S1.

SESC9221
Major Hazards Management
School of Safety Science
Staff Contact: A Green
UOC6 HPW3 S1 S2

This course discusses the management of major hazardous facilities. Australian and overseas legislation is discussed, together with the preparation of safety cases, environmental impact statements and emergency planning. Analysis techniques that are required for these assessments will be discussed including how to quantify likelihood and the consequences through the use of modelling. Finally, the requirements for emergency plans are discussed.
Assumed Knowledge: SESC9100, SESC9200
Note/s: Also offered in off-campus mode in S1.

SESC9231
Risk Analysis
School of Safety Science
Staff Contact: D Leonte
UOC6 HPW3 S2

This course introduces methods used to analyse risk in different disciplines. Techniques covered include Fault Tree analysis and quantification, Trend analysis, Monte Carlo and other computer modelling techniques, use of risk analysis software. The methods are applied to examples which include decision making in financial, environmental and safety management. In addition students undertake a case study selecting areas of risk of their choice.
Note/s: Also offered in off-campus mode in S2.

SESC9241
Introduction to Injury Risk Management
School of Safety Science
Staff Contact: A Williamson
UOC6 HPW2 S1 X2

Introduction to Injury Risk Management - This course will introduce students to the main concepts in injury risk management and will provide students with an understanding how injury differs from other public health problems. The course will present an overview of injury issues in different contexts, including transport, the workplace, sport and recreation, product safety and patient safety. It will also look at different approaches to injury intervention including regulatory, design, engineering, organisational and behavioural interventions.

SESC9251
Current Issues in Injury Prevention
School of Safety Science
Staff Contact: A Williamson
UOC6 HPW2 S2

Current Issues in Injury Prevention - This course will expose students to the breadth of the field of injury prevention through examples of recent major issues in injury prevention. It will take up selected topical issues in injury and look at prevention opportunities in each case. The issues will be selected in a range of areas including injury databases, injury surveillance, risk assessment and risk management, human factors and vulnerable groups for injury.

SESC9261
Introduction to Environmental Risk Assessment
School of Safety Science
Staff Contact: D Leonte
UOC6 HPW3 S1 S2

This course introduces the methods used to quantify human health and ecological risks associated with the presence of hazardous chemicals and pathogens in the environment. Environmental risks can be quantified when the following elements are known:-The source of the chemical/ pathogen posing risk(s) to human and/or ecological recptors; the fate and transport mechanisms by which a chemical/pathogen moves from

the source of the receptors; exposure scenarios; the dose to the receptors. These elements will be evaluated during the course. Theoretical concepts used in environmental risk assessment will be illustrated with simple, real life examples. Relevant guideline documents will be used to highlight the practice of environmental risk assessment in Australia and compare it with that of countries in Europe and the United States.
Note/s: Also offered in off-campus mode in S1.

SESC9271
Advanced Topic in Environmental Risk Assessment
School of Safety Science
Staff Contact: D Leonte
UOC6 HPW3 S2

This course builds on the principles of environmental risk assessment introduced in course SESC9261, by focussing on the detailed evaluation of risks to human health through exposure to chemicals and pathogens in the environment. The course presents the latest scientific and practical advancements in evaluating risks to humans exposed to harmful agents through more than one exposure pathway, while accounting for the uncertainty and variability of risk estimates in the decision-making process. Important course components include guidelines for the correct selection of risk assessment models and the use of Bayesian principles to account for human judgement in the presence of uncertainity. The course will involve the use of various software packages to quantify risks, evaluate uncertainties and make decisions. Lectures will combine the presentation of theoretical concepts, case study illustrationas and hands-on applications. The relationship of risk assessment with risk management will be illustrated through the Risk-Based Corrective Action (RBCA) process - a consistent, streamlined decision process for selecting corrective actions at chemical release sites.
Assumed Knowledge: SESC9261

SESC9300
Effective Behaviour in Organisations
School of Safety Science
Staff Contact: School Office
UOC3 HPW3 S1

This course examines a range of issues related to the effective implementation of systems for the management of occupational health and safety, environmental and other organisational concerns. A range of topics in organisational behaviour and management is covered, including theoretical issues and practical applications to areas such as motivation, communication, training, attitude change and stress in the work place.
Note/s: Also offered in off-campus mode in S1 and S2.

SESC9320
Effective Management
School of Safety Science
Staff Contact: School Office
UOC3 HPW3 S1

This course continues to explore some of the issues raised in SESC9300 Effective Behaviour in Organisations. A range of topics related to interpersonal behaviour is covered including leadership, group dynamics, the management of conflict and organisational change, in order to examine how interactions among individuals can affect organisational performance. Emphasis is also placed on the implementations, measurement and improvement of management systems.
Assumed Knowledge: SESC9300
Note/s: Also offered in off-campus mode in S1 and S2.

SESC9400
Ergonomics 1
School of Safety Science
Staff Contact: K Kothiyal
UOC3 HPW3 S1

This course will give a basic introduction to ergonomics, emphasising the principles of designing user centered machine-environment systems. Specific topics include definition of and justification for ergonomics, design and human error, human capabilities and limitations, introduction to anthropometry, and the reduction of musculoskeletal loading of workers.
Assumed Knowledge: ANAT6151, SESC6010, SESC6110
Note/s: Also offered in off-campus mode in S1 and S2 and web delivery in S2.

SESC9410
Ergonomics 2
School of Safety Science
Staff Contact: K Kothiyal
UOC3 HPW3 S1

This course follows on from SESC9400 Ergonomics 1, and covers displays & 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: SESC9400
Note/s: Also offered in off-campus mode in S1 and S2 and web delivery in S2.

SESC9411
Principles of Ergonomics
School of Safety Science
Staff Contact: R Hall K Kothiyal
UOC6 HPW3 S1

This course will give an introduction to ergonomics, emphasising the principles of designing user-centred, human-machine-environment systems. Specific topics include definition of and justification for ergonomics, design and human error, human capabilities and limitations, introduction to anthropometry and the reduction of musculoskeletal loading of workers, displays & 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: ANAT6151, SESC6010, SESC6110
Note/s: Also offered in off-campus mode and web delivery in S1 and S2.

SESC9421
Applied Ergonomics
School of Safety Science
Staff Contact: R Hall
UOC6 HPW3 S2

This course will focus on the application of ergonomics principles to real world problems and the difficulties involved. It requires a knowledge of the principles of ergonomics and will provide in-depth knowledge and skills in ergonomics research methodology - analysing the exact nature and extent of the problem, and evaluating the outcome of solutions to the problem. Topics include ergonomics methodologies, analysis techniques, benefit-cost & practical case studies, mock trial, professional ethics, and participatory ergonomics.
Assumed Knowledge: SESC9410 or SESC9411 or equivalent
Note/s: Compulsory 5 day on-campus workshop prior to the commencement of session with assessable tasks completed in subsequent weeks.

SESC9431
Physical Ergonomics
School of Safety Science
Staff Contact: K Kothiyal
UOC6 S2

This course discusses various analytical tools and techniques used by ergonomists to assess or solve practical, physical ergonomics problems. It requires a knowledge of the principles of ergonomics and will provide in-depth knowledge and skills in assessing the physical ergonomics aspects of work systems. Topics include applied anthropometry, biomechanical models, electromyography, manual handling jobs with multiple tasks and work physiology. Students will gain hands-on experience with relevant equipment and software such as Mannequin, 2D and 3D SSP Programs, Energy Expenditure Program, and the revised NIOSH 1991 equation.
Assumed Knowledge: SESC9410 or SESC9411 or equivalent
Note/s: Compulsory 3 day on-campus workshop prior to the commencement of session with assessable tasks completed in subsequent weeks.

SESC9441
Ergonomics and New Technology
School of Safety Science
Staff Contact: R Hall
UOC6 HPW3 S1

The course will focus on the ergonomics issues related to the design and implementation of new technology. It assumes a knowledge of the principles of ergonomics and in particular it will look at cognitive aspects of human-computer interaction, human error and software design, usability and its assessment, user interface design, evaluation techniques, guidelines and standards, and the introduction of new systems into organisations.
Assumed Knowledge: SESC9410 or SESC9411 or equivalent
Note/s: Compulsory 3 day on-campus workshop prior to the commencement of session with assessable tasks completed in subsequent weeks.

SESC9451
Experimental Biomechanics
School of Safety Science
Staff Contact: A McIntosh
UOC6 HPW3 S1

This course commences with 4 lectures on experimental methods, instrumentation, optical measurement and data analysis methods in biomechanics. The student then undertakes a series of experiments in the areas of quantitative gait and human movement, EMG, exercise testings and impact biomechanics.

SESC9460
Biomechanics of Impact Injury
School of Safety Science
Staff Contact: School Office
UOC3

Impact injury occurs in the workplace, on the sports field, during recreation, and in traffic accidents. The course will cover mechanisms of trauma, research methods, human tolerance to impact and methods for reducing injury. The course will bring together biomechanics, engineering and traumatology.
Assumed Knowledge: SESC6110.
Note/s: Short Course Mode. May not run every year.

SESC9471
Industrial Ergonomics
School of Safety Science
Staff Contact: K Kothiyal
UOC6 HPW3 S2

This course discusses the principles of ergonomics and their application to engineering systems. Topics include Introduction to ergonomics, works systems design and evaluation, neuromuscular function, perceptual motor skills, biomechanics of human body movement, work physiology, anthropometry and workplace design, human information processing, human error and design, job design and work organisation, psychophysical measurements, manual materials handling, visual tasks measurements and design, environmental ergonomics, work schedules and sustained human performance (shift work), participatory ergonomics, ergonomics in manufacturing, ergonomics cost/benefits analysis.
Note/s: Also offered in off-campus mode and web delivery in S1 and S2. Not available to Safety Science students.

SESC9510
Occupational Hygiene Hazards
School of Safety Science
Staff Contact: C Winder
UOC3 HPW3 S2

This course covers practical consideration of recognising and evaluating workplace hazards. Topics include identification and assessment of workplace hazards such as gases, particulates, chemicals, noise, radiation and biohazards.
Assumed Knowledge: SESC9100, SESC9600
Note/s: Also offered in off-campus mode in S2.

SESC9530
Personal Protective Equipment
School of Safety Science
Staff Contact: C Winder
UOC3 X1

This course provides an introduction to personal protective equipment. Protection for head, eyes, hearing, skin, respiration, feet and protection against falling. Relevant standards for personal protection. Personal protection programs.
Assumed Knowledge: SESC9100, SESC9600
Note/s: Short course mode only (compulsory 3 day workshop plus assessable tasks completed subsequently). This course may not run every year.

SESC9541
Assessment of Workplace Environment
School of Safety Science
Staff Contact: K Kothiyal
UOC6 HPW3 S1

This is an experimental and workplace based course where students will be required to assess ergonomics, physical and chemical hazards encountered in the occupational environment. Students will design and carry out a number of practical measurement programs to assess and report on workplace environmental parameters. Topics include measurement and analysis of noise, lighting, vibration, ventilation, air quality, thermal environment, radiation and magnetic fields, assessment of chemical hazards, and floor slip resistance characteristics.
Assumed Knowledge: SESC9100, SESC9600
Note/s: Compulsory 3 day on-campus workshop prior to the commencement of Session with assessable tasks completed in subsequent weeks.

SESC9550
Occupational Hygiene Controls
School of Safety Science
Staff Contact: School Office
UOC3 HPW3 S2

This course builds on the introduction to workplace hazards introduced in SESC9510 covering practical considerations of the control workplace hazards, such as ventilation and personal protective equipment.
Assumed Knowledge: SESC9510.
Note/s: Also offered in off-campus mode in S2.

SESC9600
Occupational Health
School of Safety Science
Staff Contact: C Winder
UOC3 HPW3 S1

Introduction to occupational health, including chemical, biological and psychological workplace hazards and risks, approaches to workplace safety, occupational health and safety legislation, management of workplace safety, the hierarchy of controls, occupational epidemiology and occupational rehabilitation.
Note/s: Also offered in off-campus mode in S1 and S2.

SESC9620
Occupational Diseases and Injuries
School of Safety Science
Staff Contact: C Winder
UOC3 HPW3 S1
Excluded: SESC9631 and students enrolled in Occupational Medicine programs (7444, 5674, 8734)

The ways in which work can affect the health of workers. Covers occupational diseases and injuries. Occupational diseases of skin, respiratory system, nervous system, reproductive system, musculoskeletal system, kidney and occupational cancer.
Assumed Knowledge: ANAT6151
Note/s: Also offered in off-campus mode in S1 and S2.

SESC9631
Occupational Medicine
School of Safety Science
Staff Contact: C Winder
UOC6 HPW3 S1
Excluded: SESC9620

This course deals with the role of the occupational physician in practice and research. This includes health promotion, health screening, medical surveillance and biological monitoring.
Note/s: This course may not run every year. Only available to medical practitioners.

SESC9651
Occupational Rehabilitation
School of Safety Science
Staff Contact: C Winder A McIntosh
UOC6 HPW2.5 S1 S2

This course provides a scientific basis upon which to base rehabilitation. The main focus will be on examining methods in physical rehabilitation. Other issues, for example relating to case management, will be covered briefly. Concepts and practice from areas such as exercise physiology, training/conditioning, biomechanics, medicine, physiotherapy and occupational therapy will be covered in the context of the rehabilitation.
Note/s: Off-campus mode only. Medical or allied health background desirable.

SESC9711
Environment Planning and Assessment
School of Safety Science
Staff Contact: School Office
UOC6 HPW2.5 S1

This course provides the conceptual framework for understanding interactions between development, humans, nature, philosophy, law, politics, ethics and decision making and how this is related to environmental planning and assessment.
Note/s: Also offered in off-campus mode in S1 and S2.

SESC9721
Environment and Medicine
School of Safety Science
Staff Contact: C Winder
UOC6 HPW2.5 S1 S2

Aspects of medicine bearing upon physiological consequences of pollutants. Metabolic mechanisms; chemical interactions, synergism and antagonism; photosynthesis and phytotoxicity. Ozone depletion and greenhouse effects. Morbidity and mortality surveys. Studies of particular pollutants and environmental contaminants.
Note/s: Also offered in off-campus mode in S1.

SESC9741
Environmental Management Systems
School of Safety Science
Staff Contact: C Khalil
UOC6 S2

This course describes useful approaches for organisations to fulfil their professional obligations regarding the environment. It focuses on the management of environmental issues, incorporating current legislative requirments and due diligence. In addition it addresses customer requirements, safety aspects and competitive pressure of firms. The course responds to multidisciplinary management challenges which require integrated management systems options. A number of case studies examples will be presented. The main part of the assessment of this course will be a project looking at the development of an EMS for industry.
Assumed Knowledge: A good working knowledge of environmental management, environmental science or environmental engineering is required for this course.
Note/s: Short course mode (compulsory 3 day workshop plus assessable tasks completed subsequently).

SESC9751
Introduction to Environmental Science
School of Safety Science
Staff Contact: C Khalil
UOC6 HPW3 S1

This course describes the current and fundamental knowledge in the area of environmental sciences and is a core in the Environmental Science degrees. Covered are the current global legal frameworks that affect environmental science practice, latest modeling and research in global system and climate change, current practices and directions of environmental planning and impact assessment.
Note/s: Also offered in off-campus mode in S1 and S2.

SESC9761
Environmental Auditing
School of Safety Science
Staff Contact: D Leonte
UOC6 S1 S2

With an increase in regulation and new standards as well as stronger awareness of environment protection, industry will need to rely increasingly on environmental auditing to systematically manage its impacts. This course covers the basic elements of the different types of environmental auditing undertaken by industry with a focus on the ISO 14,010 EMS Environmental Auditing standard. Attendees will learn about thevarious types of environmental audits undertaken and the tools required for conducting these. The principle aims are to identify and evaluate potential environmental liabilities, risks and hazards in industry. The main part of the assessment of this course will be a project looking at the application of environmental auditing to industry.This course has been recognised by the Quality Society of Australasia (Reg No EA70) as meeting the training requirements for Environmental Auditor certification.
Assumed Knowledge: A good working knowledge of environmental management, environmental science or environmental engineering is required for this course.
Note/s: Short course mode only (compulsory 5 day workshop plus assessable tasks completed subsequently).

SESC9810
Toxicology
School of Safety Science
Staff Contact: C Winder
UOC3 HPW3 S2

An introduction to chemical hazards, including disposition and biotransformation, principles of toxicological assessment and effects of exposure to toxic hazards. Occupational hygiene aspects of workplace exposure to chemicals. Legislation and standards for the identification and control of chemicals.
Assumed Knowledge: SESC6800
Note/s: Also offered in off-campus mode in S1 and S2.

SESC9820
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, toxic and irritant gases, pesticides, carcinogens, hazardous wastes and dioxins are used as case studies.
Assumed Knowledge:SESC9810
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.

SESC9850
Management of Dangerous Materials
School of Safety Science
Staff Contact: C Winder
UOC3 HPW3 S1 S2

Chemicals legislation, the dangerous goods system, the hazardous substances regulation, systems for management of hazardous wastes and systems for the 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.

SESC9860
Applied Laboratory Safety
School of Safety Science
Staff Contact: C Winder
UOC3 S1 S2

Identification of hazards found in laboratories (chemicals, radiation, biohazards, physical hazards), the ways in which they can be controlled, and development of management systems for laboratory safety.
Assumed Knowledge: SESC9600
Note/s: Only offered in short course or off-campus mode. The short course may not run every year.

SESC9871
Environmental and Toxicological Laboratory Science
School of Safety Science
Staff Contact: A Hayer
UOC6 HPW3 S1 S2

A laboratory based course which provides basic requirements of laboratory based research, especially in chemical safety and applied toxicology. The course covers literature review, methodology, experimental design, data collection and analysis, discussion and presentation skills, through undertaking a research project.
Assumed Knowledge: SESC9820

SESC9900
Project Methods
School of Safety Science
Staff Contact: J Cross
UOC3 HPW3 S2

This course covers the development of a research project including the research proposal, research design and data analysis and the writing of the research report. Students will be expected to be able to recognise and avoid common methodological problems in research.
Assumed Knowledge: SESC9010
Note/s: Also offered in off-campus mode in S1 and S2.

SESC9903
Report (3 units of credit)
School of Safety Science
Staff Contact: J Cross
UOC3 S1 S2

A 3 units of credit report on a topic relevant to the study program.
Note/s: Also offered in off-campus mode in S1 and S2.

SESC9906
Report (6 units of credit)
School of Safety Science
Staff Contact: J Cross
UOC6 S1 S2

A 6 units of credit report on a topic relevant to the study program.
Note/s: Also offered in off-campus mode in S1 and S2.

SESC9912
Project (12 units of credit)
School of Safety Science
Staff Contact: J Cross
UOC12 S1 S2

A 12 units of credit project relevant to the study program. Students will be required to undertake an investigative project with supervision and to present a satisfactory report.
Assumed Knowledge: SESC9900
Note/s: Also offered in off-campus mode in S1 and S2.

SESC9918
Project (18 units of credit)
School of Safety Science
Staff Contact: J Cross
UOC18 S1 S2

An 18 units of credit project relevant to the study program. Students will be required to undertake an investigative project with supervision and to present a satisfactory report (only for students in 1.5 or 2 year masters programs in special circumstances).
Assumed Knowledge: SESC9900
Note/s: Also offered in off-campus mode in S1 and S2.

SESC9924
Major Project (24 units of credit)
School of Safety Science
Staff Contact: J Cross
UOC24 S1 S2

A 24 units of credit project relevant to the program of study. Students will be required to undertake an investigative project with supervision and to present a satisfactory report (only for students in 1.5 or 2 year masters programs in exceptional circumstances).
Assumed Knowledge: SESC9900
Note/s: Also offered in off-campus mode in S1 and S2.

SLSP5001
Policy Analysis
School of Social Science and Policy
Staff Contact: School Office
UOC8 HPW2 S1

What is policy, and why does it matter? Examines the way in which the term 'policy' is mobilised to make sense of what happens in and around organisations, and to shape the action. Also examines the different dimensions of policy, and the significance of each for policy analysis.

SLSP5002
Information and Research for Policy
School of Social Science and Policy
Staff Contact: School Office
UOC8 HPW2 S1

An examination of the various sources of information available and the ways in which they are used to inform policy. This includes methods of social research, both quantitative and qualitative, the production of official statistics and social indicators, case studies and documentary research; the locations in which such information is produced (universities, think-tanks, government bureaux etc) and the nature of the information produced (basic research, strategic research, intelligence and monitoring etc). The political, ethical, social and economic context in which information is produced and used in policy is examined through the analysis of examples from a range of policy areas.

SLSP5004
Management and Policy in Organisations
School of Social Science and Policy
Staff Contact: S Keen
UOC8 HPW2 S2
Excluded: SLSP7006

Examines issues relating to the management and steering of organisations such as effective policy making, administration, strategy and leadership. It includes the provision of an understanding of the principles of new public management, strategic and corporate planning, partnerships, participation and governance. Attention is paid to the role, location and external relationships which 'stakeholders' and 'policy communities' play in management and policy in organisations.

SLSP5013
Program Evaluation
School of Social Science and Policy
Staff Contact: R Hall
UOC8 HPW2 S2
Excluded: SLSP5003, SOCA5018

An analysis of theories and methods of evaluating human service programs. Examines the function and purpose of evaluation; approaches to conducting evaluations; the role of stakeholders in the evaluation process; concern for the use of the evaluation findings; the relevance of program logic and theories of program operation; measurement of program outcomes; the importance placed on program goals; the role of the evaluator and ethical considerations in conducting an evaluation. Examples will be drawn from evaluations over a range of human service programs in health, education and other areas. Students will gain experience in preparing an evaluation proposal and critically appraising reported evaluations.

SLSP5015
International Development Policy
School of Social Science and Policy
Staff Contact: M Johnson
UOC8 HPW2 S1
Excluded: SLSP5030, SLSP5031

Examines what is perhaps the most important question in economic and social development today, that is - why is there a rich world and a poor world and what policies can be identified and implemented to address this problem? Examines some of the most important explanations developed to explain the different rate and pattern of development within and between countries and regions such as the role of the nation state; particular social structures; patterns of capital accumulation and technological developments and the policy solutions developed from them. The local, national and international institutions through which policy is formulated, implemented, managed and monitored will also be examined. A variety of Latin American, Asian and other case studies will be used to illustrate the issues.

SLSP5016
Social Policy
School of Social Science and Policy
Staff Contact: School Office
UOC8 HPW2 S2
Excluded: SLSP5011

The course is concerned with the foundation and practice of social policy in Australia and internationally. Social policy includes any area of public intervention which involves redistribution of economic and social resources and may include an examination of public policy areas including health, housing, income support, taxation and economic policy. The theoretical foundations of the discipline of social policy are explored as well as important contemporary concerns. Seeks to draw out some of the implications of policy practice on certain groups of individuals in society.

SLSP5017
Policy and Advocacy
School of Social Science and Policy
Staff Contact: S Keen
UOC8 HPW2 S2

Examines policy advocacy in state/civil society relations. Studies how policy advocacy by civil society organisations contributes to democracy and considers the role of policy knowledge in advocacy. Examines the international context of policy advocacy. Considers the way in which civil society associations contribute to social capital and/or public policy.

SLSP5040
Contemporary Public/Private Sector Relationships
School of Social Science and Policy
Staff Contact: M Johnson
UOC8 HPW2 S2

Focuses on a major contemporary public policy issue, viz., the extent to which there has been and should be, a move to reduce the size of the public sector and re-orient its internal structure and role in the direction of commercialisation (ie. the private sector). Addresses the question of whether a smaller, more commercialised public sector is proving to be able to do 'more with less'. Topics include trends in regard to the level of public expenditure and revenue; relationship between public sector size and economic and social outcomes; deregulation and re-regulation; contracting-out and use of consultants; corporatisation; privatisation; user-pays and commercial sponsorship; community service obligations; managerialism and public sector productivity; staff down-sizing; and implications of globalisation for the public sector in Australia.

SLSP5041
Public Policy Process
School of Social Science and Policy
Staff Contact: School Office
UOC8 HPW2 S2

Empirical and conceptual questions analysing the public policy process in Australia are examined, including: the nature of Australian government, its implications for policy; select problems which emerge in the empirical application of this model; alternative models of the policy process; and recent attempts to change the policy process at different levels of government.

SLSP5050
Linkage Project
School of Social Science and Policy
Staff Contact: M Johnson
Enrolment requires School approval
UOC2 HPW1 S1 S2

This unit consists of a special program of study linking electives taken outside the faculty with the core content of the graduate programs in policy studies and housing studies. The program is designed to meet the particular needs of each individual student, who should discuss it in the first instance with the Director of Postgraduate Studies in the School of Social Science and Policy.

SLSP5092
Policy Project
School of Social Science and Policy
Staff Contact: M Johnson C Healy
UOC8 HPW2 S1 S2
Prerequisite/s: SLSP5001;
Excluded: SLSP5091.

Students undertake individual and/or group policy research in consultation with senior policy-makers from the public, union, private or community sectors. A Major Policy Paper is presented to the client and is assessed by both the client and academic staff. The process of preparing the report may involve writing of memoranda, briefing documents etc. The Major Policy Paper normally includes recommendations, including implementation strategies.

SLSP5501
Theory of Program Evaluation
School of Social Science and Policy
Staff Contact: R Hall
UOC8 HPW2 S1 S2
Excluded: SOCA5018

An outline of the nature, origins and theory of program evaluation. Debates over the nature and definition of evaluation, theories and methodologies, role of the evaluator and use of the findings of an evaluation will be analysed. A thorough understanding of these issues will equip students with an understanding of the role of evaluation and the problems encountered in conducting evaluations.

SLSP5502
The Practice of Program Evaluation
School of Social Science and Policy
Staff Contact: R Hall
UOC8 HPW2 S1 S2
Excluded: SOCA5018

Issues in the conduct of program evaluations including design, methodologies, consultation with stakeholders, ethical considerations, writing of evaluation briefs, proposals and reports and in the use of evaluation findings.

SOCA5003
Aboriginality and Gender in Australia
School of Sociology
Staff Contact: S Green
UOC8 HPW2 S2
Excluded: SOCA3209, SOCI3717

Considers the role of gender within Aboriginal communities in pre-colonial, colonial and contemporary times. Explores different theories regarding gender and the impact of imposed notions of gender upon Aboriginal people. A number of different issues are examined such as gender and the law, Aboriginal women and the feminist movement, The Stolen Generation, the gendered landscape and the effects of violence within Aboriginal communities.

SOCA5004
Colonisation, Neo-Colonialism and Indigenous Identity
School of Sociology
Staff Contact: S Green
UOC8 HPW2 S1
Excluded: SOCA3208, SOCA3701

Examines the role of colonisation and neo-colonialism in the development of the constructs of Aboriginality and Indigenous identities within the Australian context. Analyses the history and academic constructions of Indigenous identities and their contestation through the use of historical and contemporary media such as film, television, literature and art.

SOCA5005
Creative Relationships
School of Sociology
Staff Contact: A Game
UOC8 HPW2 S1
Excluded: SOCA1004

Examines the logic of relation. Considers the differences between relational and identity-based ways of being in everyday life, and explores these by comparing experiences of time and space. Addresses the question of what makes relationship creative. Considers the character of creativity in art, in academic knowledge, and everyday life.

SOCA5006
Crime, Sexuality and Gender
School of Sociology
Staff Contact: F Lovejoy
UOC8 HPW2 X1
Excluded: SOCA3409, GENT1207

Examines social implications of the role of law in regulating the limits of sexuality and gender through such notions as public interest, privacy and consent. In particular, it examines the intersection of criminality with sexuality or gender through such examples as sex work, sexual discrimination, moral danger, rape, abortion, AIDS transmission, pornography, and domestic violence.

SOCA5009
Immigration and Australian Society
School of Sociology
Staff Contact: F Lovejoy
UOC8 HPW2 X1
Excluded: SOCA3407

An examination of racial, ethnic and social issues surrounding immigration 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; identity, ethnicity and community.

SOCA5010
Pacific Islands Fieldwork
School of Sociology
Staff Contact: G McCall
UOC8 HPW2 S2
Excluded: SOCA2204, SOCI3710, GENT1204, GENT1205

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.

SOCA5012
Social Change: Mechanisms and Traumas
School of Sociology
Staff Contact: M Markus
UOC8 HPW2 S2

Investigates the traumatic consequences of social change. Examines in detail the three basic sociological discourses of P. Sztompka about change: progress, crisis and trauma. Looks at examples of cultural traumas in contemporary societies.

SOCA5013
Social Research
School of Sociology
Staff Contact: F Lovejoy
UOC8 HPW2 S2

After a brief historical introduction to empirical sociology, students study various ways to collect social data, including bibliographic search, content analysis, action research, structured and unstructured observation, questionnaire design and administration, single and group interviews, and community study. Both qualitative and quantitative methods of analysis and interpretation are used. Some important ethical issues are studied. Students are expected to examine the research process reflexively.

SOCA5017
Project Report
School of Sociology
Staff Contact: F Lovejoy
Enrolment requires School approval
UOC8 HPW2 S1 S2

Students may with the permission of the course co-ordinator carry out a supervised program of research and write a project report of approximately 10,000 words.

SOCA5019
Reading Program
School of Sociology
Staff Contact: F Lovejoy
Enrolment requires School approval
UOC8 HPW2 S1 S2

Students may with the permission of the course co-ordinator pursue a directed reading program in an area of interest.

SOCA5020
Ageing and Australian Society
School of Sociology
Staff Contact: D Olsberg
UOC8 HPW2 S1
Excluded: SOCA3607

Examines within the context of an ageing Australian society, social and mass media attitudes to ageing; the wider economic and political processes affecting policies on health, pensions, and ageing; the implications for work, consumption, and intergenerational relationships. Of particular relevance for students with an interest in public policies and services for an ageing society. Addresses the professional interests of people who work in gerontology and public health, community services and aged care, superannuation and retirement services.

SOCA5123
Sociological Theory Past and Present
School of Sociology
Staff Contact: F Lovejoy
UOC8 HPW2 S1

Examines the work of classical and contemporary sociological theorists and the contribution of theory to current sociology. Theorists may include Bourdieu, Butler, Douglas, Durkheim, Foucault, Levinas, Marx, Mernissi, Millett, Simmel, and Weber.

SOCA5124
Sociology of the Professions
School of Sociology
Staff Contact: F Lovejoy
UOC8 HPW2 X2
Excluded: SOCA310

Considers how the key elements of discipline, knowledge and power have enabled professions to emerge as prestigious occupational monopolies which exert a significant and pervasive effect on the everyday life of persons, societies and nations. Draws on ideas and theories of classical and contemporary writers to analyse current practices (and malpractices) in professional environments.

SOCF5001
Theory of Couple & Family Therapy
School of Social Work
Staff Contact: School Office
UOC4 HPW2 S1
Corequisite/s: SOCF5002

Introduces the theory of systemic family therapy. Frameworks for understanding the evolution of relationship patterns will be presented, including intergenerational perspectives. An overview of the current theory of the Milan framework of therapy will be given, as this serves as a cohering basis for the Clinical Studies courses.

SOCF5002
Clinical Studies A
School of Social Work
Staff Contact: School Office
UOC8 HPW3 S1
Corequisite/s: SOCF5001

Introduces the clinical knowledge needed for the practice of couple and family therapy. There is a strong emphasis on the use of self in the therapeutic relationship. In preparation for Clinical Studies B, there is a small group program of simulated practice using supervised role-play and video analysis. Practice skills are developed for interviewing couples and families, and attention is paid to competencies in beginning, middle and ending stages of therapy. Both Clinical Studies A and Clinical Studies B use the theory and practice of the Milan framework of therapy as the main reference point, and other theory is drawn in as it relates to specific clinical situations.

SOCF5003
Clinical Studies B
School of Social Work
Staff Contact: School Office
UOC12 HPW6.5 S2
Prerequisite/s: SOCF5002

Provides clinical training as students work directly with families and/or couples using the 'live' supervision facilities of Relationships Australia (NSW). Develops theoretical and clinical understandings of systemic assessment, therapeutic mangement and systemic interviewing. Focuses on practice skills, the capacity to critically reflect on practice, and the capacity to analyse therapeutic situations.

SOCF5004
Contemporary Theory Issues
School of Social Work
Staff Contact: School Office
UOC8 HPW2 S1

Presents current controversies in the knowledge and practice of systemic therapy, in ethics and values, and in the application of systemic therapy to specific problems and client populations. Topics include the influence of postmodernist ideas and the different uses of the metaphor of narrative in therapy, the therapeutic relationship, work with domestic violence and child abuse, and cross-cultural practice.

SOCF5005
Research Issues
School of Social Work
Staff Contact: School Office
UOC4 HPW2 S1

Examines the research process and its role in the development of knowledge. Values and the political context of research activity will be explored, and examples of research in therapy will be critically reviewed. An overview will be given of quantitative and qualitative methodologies.

SOCF5006
Clinical Studies C
School of Social Work
Staff Contact: School Office
UOC12 HPW4 S2

Further develops the capacity to understand and analyse therapeutic process as students present their own practice in couple and family therapy for review and evaluation. Explores specific practice topics including cross - cultural practice, work with domestic violence and child abuse, ethics and therapeutic boundaries, and the therapeutic relationship and therapeutic impasse.

SOCW7850
Issues and Policy in International Social Development
School of Social Work
Staff Contact: E Baldry
UOC8 HPW2 S1
Excluded: SOCW7854

Introduces conceptual, structural and pragmatic issues in social development and offers a knowledge base and analytical framework for working with a global perspective in Australia or overseas. Controversies in development theory are examined. Global problems are addressed via studying policies adopted to address them. A range of social theories and ideologies justifying these policies are also examined. Issues may include: the colonial legacy, poverty, population growth and movement, gender inequity, multi-national corporations, international loans and Third World debt, environmental degradation, war, refugees, indigenous peoples' rights. Relevant policy theory, including development and analysis, are introduced to help understand the various issue and policy case studies addressed. A social justice, human rights and community development paradigm is used to analyse policies and approaches to deal with these issues.

SOCW7851
Community Development
School of Social Work
Staff Contact: E Pittaway
UOC8 HPW2 S1

Covers a review of the history of community development; the changing nature of community work; the concept of culture in relation to community work in developing societies; different ideological approaches to community work; an analysis of the outcomes that these approaches might have on communities and the alternative models of planning and service delivery which would evolve. Using case studies, strategies for effective community development will be identified and skills in consultation and partnership building developed. Students undertake an individual analysis of a local community development project.

SOCW7852
Politics of International Aid
School of Social Work
Staff Contact: E Baldry
UOC8 HPW2 S1

An introduction to the international aid agencies, their respective structures, roles and relationships with one another. Also provides an introduction to the impact of international economics and international politics on matters relating to international aid. Examines the workings of government and non-government aid agencies at the national and international level. This information is related to case studies which demonstrate skills to negotiate within the international aid systems, secure funding, lobby and advocate to redefine development assistance.

SOCW7853
Community Education Strategies
School of Social Work
Staff Contact: S Regan
UOC8 HPW2 S2

Covers a range of community education strategies drawing on case studies of innovative models in Third World communities. Students consider appropriate objectives, methods, communication skills and assessment for adult learners taking into account adaptations required in different sociocultural contexts. In addition to examining the rationale, nature and scope of distance education, students are introduced to skills for developing curricula and written packages, and to the appropriate use of available technologies. Each student has the opportunity to apply educational strategies in the classroom.

SOCW7855
Program Design and Evaluation in Social Development
School of Social Work
Staff Contact: E Pittaway
UOC8 HPW2 S2

Reviews the values, knowledge and skills required to design and evaluate social development programs in the international/cross-cultural contexts. Major topics include cooperation in change, methods of needs assessment, defining outcome objectives, theories of decision making, models of scheduling and implementation, theory and practice of

evaluation including development of criteria, data collection and analysis, the ethics and uses of evaluation. Students engage in a program planning and evaluation exercise to apply theory covered in the course.

SOCW7856
Program Management in Social Development
School of Social Work
Staff Contact: School Office
UOC8 HPW2 S2

Current trends and theory in international organisational management are analysed critically for their applicability in the social development arena. Budgeting and accounting practices, staff recruitment and staff management, ethical public relations and marketing for social development settings are examined. Strategies for transferring these skills to local partner agencies, and methods of evaluating program management in funded programs are also elements studied.
Note/s: As this is an elective course, it will be offered only when the demand is deemed sufficient by the Head of School.

SOCW7857
Refugees and Forced Migration
School of Social Work
Staff Contact: School Office
UOC8 HPW2 S2

Explores the push factors that cause forced migration, the root causes of these factors, and the impacts of forced migration on the people affected. The international legal framework is examined as it applies to these groups, their needs and rights in the various stages of flight, first asylum, secondary movement, repatriation, and resettlement. The major impact of conflict as a push factor is also explored, and strategies for peace and conflict resolution are addressed.
Note/s: As this is an elective course it will be offered only when the demand is deemed sufficient by the Head of School.

SOCW7858
International Social Development Project
School of Social Work
Staff Contact: School Office
UOC8 HPW2 S1 S2
Prerequisite/s: SOCW7850 and SOCW7851

Project based on field or documentary data/information regarding an issue or problem immediately relevant to International Social Development theory or practice. Students may gather information in an international setting if that is feasible or in an international aid agency as a contribution to the work of the agency.
Note/s: As an elective this course will be offered only when the demand is deemed sufficient by the Head of School.

SOLA9001
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.

SOLA9004
Solar Energy
Centre for Photovoltaic Engineering
Staff Contact: J Cotter
UOC6 HPW4 S2

World and Australian energy resources. General energy conversion principles and their application. Characteristic of received solar radiation. Thermal conversion and selectively absorbing surfaces. Biological methods of conversion. Fundamentals of photovoltaic generation.

SOLA9006
Solar Cell Technology and Manufacturing
Centre for Photovoltaic Engineering
Staff Contact: S Wenham
UOC6 HPW4 S1

A basic introduction to solar cell operation is provided leading to a study of the types of industrial processes used in large scale manufacturing. Dominant commercial cell technologies are covered in detail including evaluation of the relative strengths and weaknesses of each. A "virtual" production line is used to give students direct control of and exposure to the manufacturing environment and techniques for optimizing performance of mass produced devices. Production issues such as yields and in-line quality control are considered. Assignment work includes having students take control of the virtual production line for the purposes of performance optimisation, fault diagnosis and maximizing of yields.

SOLA9008
Special Topics in Photovoltaics
Centre for Photovoltaic Engineering
Staff Contact: School Office
UOC6 HPW4 S2

This syllabus changes to allow presentation of a special topic of current interest particularly by visitors with recognised expertise in the topic.

SOLA9009
Photovoltaics in Buildings
Centre for Photovoltaic Engineering
Staff Contact: School Office
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 envelope performance requisites, active and passive solar design principles, planning requirements, coordination 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.

SOLA9011
Biomass Energy Sources
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.

SOLA9012
Renewable Energy Policy
Centre for Photovoltaic Engineering
Staff Contact: School Office
UOC6 HPW4 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.

SOMA9713
Photomedia 1
School of Media Arts
Staff Contact: School Office
UOC6 HPW3 S1 S2

To develop conceptual and practical abilities at a professional level in the production of imagery appropriate to a contemporary art practice.

SOMA9714
Photomedia 2
School of Media Arts
Staff Contact: School Office
UOC6 HPW3 S1 S2

To develop conceptual and practical abilities at a professional level in the production of imagery appropriate to a contemporary art practice.

SOMA9715
Photomedia 3
School of Media Arts
Staff Contact: School Office
UOC6 HPW3 S1 S2

To develop conceptual and practical abilities at a professional level in the production of imagery appropriate to a contemporary art practice.

SOMA9716
Photomedia 4
School of Media Arts
Staff Contact: School Office
UOC6 HPW3 S1 S2

To develop conceptual and practical abilities at a professional level in the production of imagery appropriate to a contemporary art practice.

SOMA9717
Time-Based Art 1
School of Media Arts
Staff Contact: School Office
UOC6 HPW3 S1 S2

To develop contemporary forms of art practice from the interdisciplinary areas of installation and performance and from the technologies available to the time based areas of film, video, sound and computing; to allow ideas to develop with these means which are critically acute and appropriately informed.

SOMA9718
Time-Based Art 2
School of Media Arts
Staff Contact: School Office
UOC6 HPW3 S1 S2

To develop contemporary forms of art practice from the interdisciplinary areas of installation and performance and from the technologies available to the time based areas of film, video, sound and computing; to allow ideas to develop with these means which are critically acute and appropriately informed.

SOMA9719
Time-Based Art 3
School of Media Arts
Staff Contact: School Office
UOC6 HPW3 S1 S2

To develop contemporary forms of art practice from the interdisciplinary areas of installation and performance and from the technologies available to the time based areas of film, video, sound and computing; to allow ideas to develop with these means which are critically acute and appropriately informed.

SOMA9720
Time-Based Art 4
School of Media Arts
Staff Contact: School Office
UOC6 HPW3 S1 S2

To develop contemporary forms of art practice from the interdisciplinary areas of installation and performance and from the technologies available to the time based areas of film, video, sound and computing; to allow ideas to develop with these means which are critically acute and appropriately informed.

SOMA9725
Introduction to Multimedia Computing
School of Media Arts
Staff Contact: School Office
UOC6 HPW3 S2

This course will develop knowledge and awareness of concepts and techniques involved in multimedia computing within a visual arts context. The focus of the course will be on utilising multimedia authoring tools to acquire the knowledge and skills to produce individual or collaborative projects. Emphasis is on self-development and progress by constant exploration and practice. This course is intended to provide creative opportunities and support for the interested non-specialist. The goal is to support the student in an experimental artistic practice.

SOMA9726
Introduction to Animation
School of Media Arts
Staff Contact: School Office
UOC6 HPW3 S1

Introduction to Animation represents an overview of animation production in both film and computer for MATS. A strong emphasis will be placed on the methods of pixilation, cell animation, smug animation, cut out techniques and other in camera techniques that can be used in series. These techniques will be developed with rigour as appropriate to the project. Visual concepts and composition in a screen environment, the concept of the frame, applications and innovations in time and movement based media are investigated. This course is intended to provide creative opportunities and support for the interested non-specialist. The goal is to support the student in an experimental artistic practice.

SOMA9730
Introduction to Analogue Photomedia
School of Media Arts
Staff Contact: School Office
UOC6 HPW3 S1 S2

This course will provide an introduction to and overview of black and white analogue photographic processes. The emphasis is on the investigation of analogue photographic techniques as utilised by contemporary visual arts practitioners. The following basics are covered: overview of 35 mm camera operation; B/W film types and exposure; film processing and printing; darkroom procedures; and print finishes and presentation. Practical workshops in camera use and darkroom practice are conducted to enhance the acquisition of technical skills towards the production of photomedia based works of an increasingly professional standard

SOMA9731
Introduction to Digital Imaging
School of Media Arts
Staff Contact: School Office
UOC6 HPW3 S1 S2

In this studio workshop the student is introduced to the basic concepts and potential of digital imaging processes. The emphasis is on the integration of digital imaging technologies as utilised in visual arts practices. The course explores how the application of digital processes can be used for extending image visualisation, production and presentation. The student is introduced to examples of artworks by contemporary artists who have applied, or integrated, digital technologies within their work.

SOMA9736
Analogue Photomedia Elective
School of Media Arts
Staff Contact: School Office
UOC6 HPW3 S1 S2

Assumed knowledge of basic photographic processes and techniques is necessary for this course. Assumes student has knowledge from Undergraduate studies or Professional practice in photomedia (Completion of SOMA9730 meets this requirement) . The course provides an introduction to and overview of colour analogue photographic processes and medium format camera operation for graduate students. The emphasis is on the investigation of analogue photographic techniques

as utilised by contemporary visual arts practitioners. The following basics are covered in Graduate Analogue Photomedia: overview of medium format camera operation; colour film types and exposure; colour (type C) printing techniques; colour darkroom procedures; and colour print finishing and presentation. A demonstration of medium format camera use and workshops in colour darkroom practice are conducted to enhance the acquisition of technical skills towards the production of photomedia based works of an increasingly professional standard.

SOMA9737
Digital Ilustration and Text Elective
School of Media Arts
Staff Contact: School Office
UOC6 HPW3 S1 S2

Assumed knowledge of photographic processes and digital imaging software is necessary for this course; the equivalant of SART1312. 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 and graphic based images, and artist's publications. Students will also be introduced to advanced scanning equipment and their requirements.The emphasis is on the integration of digital technologies as utilised in visual art practices. The course advances the student's skills for image production, visualisation and presentation.

SOMA9739
Multimedia Computing Elective
School of Media Arts
Staff Contact: School Office
UOC6 HPW3 S1

This course will enable students to further develop their conceptual and technical skills in multimedia production. It will cover a variety of approaches and software for producing online work utilising the web to develop the knowledge and techniques to produce individual projects. Emphasis is on the completion of fully operational interactive projects.

SUSD0001
Sustainable Development and the Urban Environment
Faculty of the Built Environment
Staff Contact: J Weirick
UOC6 HPW3 S1

A review of innovative approaches to the planning, design and management of the 'sustainable city', with an emphasis on techniques which seek to maintain and/or improve air quality, water quality and biodiversity. Topics include principles of urban ecology and sustainable development, the ecological 'footprint' of the metropolis, water cycle management, urban design and transportation issues, urban forestry, parks systems and greenways, use of tools for assessment/evaluation. The course will be based on lectures, seminars and case studies.

SUSD0002
Resources, Materials and Sustainability
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW3 S1

The life cycle of building materials from the availability and acquisition of the raw materials, through processing and manufacture to on-site construction and use, maintenance and refurbishment, and eventual demolition and reuse/recycling or disposal. Consideration of environmental impacts at each stage of the life cycle, such as embodied energy, wastes generated and their disposal, and ways in which design may minimise or eliminate such impacts. Economics and management of sustainable buildings.

SUSD0003
Energy and the Built Environment
Faculty of the Built Environment
Staff Contact: D Prasad
UOC6 HPW3 S2

Energy - definitions and terminology. Energy flows, balance, options, demand and supply solutions in the context of the Built Environment. Urban energy infrastructure impact, energy in transportation, global warming and environmental impact assessment. Use of tools for assessment/evaluation (performance simulation and benchmarking). Future technologies, architectural impact and regional development implications.

SUSD0004
Human Factors, Sustainability and Habitability
Faculty of the Built Environment
Staff Contact: R Samuels
UOC6 HPW3 S2

The impact of buildings and urban environments on quality of life or habitability, and of values and preferences on sustainability or quality of the environment, concentrating on five fundamental human factors: environmental responsibility, health and wellbeing, comfort and amenity, security, and equity. Responsibility focuses on practitioner and community environmental ethics. Health evaluations include sick building syndromes, light quality and performance, indoor air quality, and urban thermal- and air-pollution. Comfort and amenity concentrate on the influence of user knowledge and preference on energy use and environmental impact. Security evaluates the role of environmental design and territoriality in the experience of security in buildings and urban domains. Equity aspects include affordability, accessibility, and community participation in environmental design and management.

SUSD0005
Graduate Project
Faculty of the Built Environment
Staff Contact: School Office
UOC12 HPW6 S1 S2

A supervised research or design project from a selected field of interest will be identified in consultation with the Program Head. A research topic may exted to areas of interest in closely related disciplines if suitable arrangements can be made for supervision. In case of a research project, its design and methodology should be well resolved prior to proceeding with the other aspects of the research. In case of a design project, a suitable design brief should have been agreed to with the supervisor prior to entering the design phase. The outcomes in either case should demonstrate high level skills and communication. The research report should not exceed 20,000 word.

TAHM5001
Tourism Demand and Industry Structure
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Corequisite/s: MARK5900

This is a 'macro' tourism course that examines the structure of global tourism demand and the structure of the industries that supply tourism products and services. Topics include: tourism models and tourism statistics; tourism segments; private and public sectors; the distribution chain; transport; accommodation and food services; legal aspects of tourism; the tourism workforce and sustainable development principles. A feature of the course is a field trip to the Rocks in Sydney to meet tourism planners and operators and view their products and operations.

TAHM5002
Strategic Tourism and Hospitality Management.
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Corequisite/s: MARK5900

This is a 'micro' tourism course that examines tourism marketing channels as commercial linkages between demand and supply forces, with an emphasis on e-business connections, and how channel management is applied in the marketplace. Topics include: the influence of marketing on tourism demand; segmenting and positioning strategies; communication strategies; distribution strategies; e-marketing; tourism information technology; marketing strategies for lodging, destinations and events; and workshops of current marketing issues.

TAHM5003
Tourism Development and Delivery
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2

This is a 'macro' tourism course that examines the global impacts of tourism, the role of government in tourism planning, and the strategic characteristics of major segments of the tourism industry. Topics include: economic, social and environmental impacts of tourism; tourism policy and the role of state, federal and local government; the tourism planning process and the roles of stakeholders; urban tourism; ecotourism; destination planning; meetings, incentives, conventions and exhibitions; events tourism and the future of the tourism industry.

TAHM5004
Hospitality Strategy and Asset Management
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2
Corequisite/s: MARK5900

This is a 'micro' tourism course that examines the strategic governance of hospitality organisations, with an emphasis on international operations; and the strategic development of tourism facilities as investment vehicles. Topics include: organisational competencies as competitive differentiators; strategic change and implementation in hospitality; managing hospitality service quality; globalisation, multinationals and corporate hospitality strategy; strategic hospitality leadership and challenges; hospitality project management; hospitality real estate strategy and valuation; hospitality business plan synthesis, analysis and risk management; design differentiation of hotels, resorts, restaurants, and tourism landscaping. A feature of the course is a field trip to Darling Harbour to examine hotel, restaurant and casino facilities and operations.

TELE9301
Switching System Design
School of Electrical Eng and Telecommunications
Staff Contact: T Moors
UOC6 HPW3 S1
Excluded: TELE4363

To provide an introduction into principles, structures and methods for constructing switching systems capable of supporting data, voice, image and video transport. The focus is on the design principles as well as the methods for constructing networks which provide quality of service guarantees. A student who successfully completes this course will get an understanding of the trends, and the key switching technologies, and develop the understanding necessary to design, analyse and implement traffic and congestion control in data communication networks.

TELE9302
Computer Networks
School of Electrical Eng and Telecommunications
Staff Contact: R Malaney
UOC6 HPW3 S1 S2
Excluded: TELE4352

An overview of computer networks. 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 Protocal (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.

TELE9303
Network Management
School of Electrical Eng and Telecommunications
Staff Contact: A Seneviratne
UOC6 HPW3 S2
Excluded: TELE4354

This course complements courses in Switching Systems, and Computer Networks and gives students an understanding of the concepts of network and content management. It introduces concepts that are used in the management modern communication networks by examining SNMP in detail. Then it introduces the concepts that are used for management of mobility in these networks. Finally, it examines the concepts of content management by examining the fundamental concepts of caching, and the emerging technologies associated with content distribution networks.

TELE9337
Advanced Networking
School of Electrical Eng and Telecommunications
Staff Contact: P Senac
UOC6 HPW3 S2

Data transmission on telephone networks. Local area network interconnection. Analysis of protocols for data link, network and transport layers. TCP/IP protocols. Operating system views of communications; network protocol drivers, network servers. Case studies: Asynchronous Transfer Mode (ATM), MPLS, Wavelength Division Multipleting (WDM) and Multimedia Communications.

TELE9343
Principles of Digital Communication
School of Electrical Eng and Telecommunications
Staff Contact: J Choi
UOC6 HPW3 S1
Excluded: TELE4333

Principles of signal time discretisation, amplitude quantisation, A/D and D/A conversion. Matched filter receiver, principles of single symbol digital signal detection and probability of bit/symbol error. Intersymbol interference (ISI), Nyquist criteria for ISI free transmission. Equalization, linear equalizar, decision feedback equalizer. Adaptive equalization, LMS algorithm (RLS adaptive algorithm - optional). Khinchin's geometrical representation of digital signals. Communication system as a signal vector space. Application of Gram-Schmidt ortogonalization procedure in telecommunications. Modulation schemes BPSK, FSK, QPSK, MSK. Probability of bit error and spectral properties of mentioned modulations. (CDMA and spread spectrum principle - optional). Principles of Information Theory. Entropy, source coding, Shannon channel capacity for discrete and continuous channels. Channel coding theory; Block, cyclic and convolutional codes; Viterbi decoding; Trellis coded modulation. Principles of soft-input soft-output decoding algorithms, turbo codes.

TELE9344
Cellular Mobile Communications
School of Electrical Eng and Telecommunications
Staff Contact: P Rapajic
UOC6 HPW3 S1
Excluded: TELE4353.

Modern communication systems from a systems point of view. Cellular mobile communication systems. Radio Propagation-loss model. The mobile fading channel. Multiple access techniques TDMA, CDMA. Modulation and coding in mobile communication systems, Equalization and channel diversity, Wireless Standards - GSM and CDMA IS-95. The concept of Spread Spectrum (SS) Communications - historical background; Major Characteristics of SS-CDMA; Direct Sequence Spread Spectrum; Basic Features of DS-CDMA Systems, PN Sequences; CDMA System Processing Gain; Synchronization in CDMA; The BER Performance of DS-CDMA System; Interference Limited Capacity of a Single Cell CDMA System; Adaptive Mutiuser Detection on Multipath Fading Channel; Diversity and Smart Antennas ;Antenna Beam-Forming, and Space Division Multiple Access ; Overview of Fundamental Concepts Used in IS-95 CDMA; Channel Coding (Convolutional Codes); Maximum Likelihood Decoding (Viterbi Algorithm); Hadamard-Walsh Orthogonal Coding (orthogonal modulation); Concatenated Coding and Block Interleaving ; IS -95 CDMA Link Capacity; CDMA 2000; Evolution of IS-95 to CDMA 2000; Conceptual Similarities and Differences Between IS-95 and CDMA 2000

TELE9345
Adaptive Signal Processing in Telecommunications
School of Electrical Eng and Telecommunications
Staff Contact: P Rapajic
UOC6 HPW3 S2

The course is roughly in two halves. The first half covers adaptive signal processing and the second half concentrates on telecommunication applications. The adaptive signal processing material will cover a selection of topics from: algorithm construction (for both finite impulse response and infinite impulse response filters) such as LMS, EWLS, Kalman filter based algorithms and their derivatives; algorithm stability (including tracking analysis) and algorithm performance (including misadjustment). Background stochastic process material such as autocorrelations, autoregressive processes, spectra will also be included. The telecommunications component will focus in depth on applications such as equalization and mobile channel estimation, signal carrier and timing synchronization, adaptive multiuser detection in 3G mobile communication systems, adaptive CDMA RAKE receivers, adaptive or smart antennas in mobile communications. There will be a significant computational component to the course involving computer based simulation.

TELE9912
Project Report A
School of Electrical Eng and Telecommunications
Staff Contact: C Kwok
Enrolment requires School approval
UOC6 HPW6 S1 S2

The project is done in a major area, in which it is offered under the supervision of an academic member of staff. Where the work is carried out externally, a suitable co-supervisor may be required. Projects can take many forms such as the design and construction of experimental equipment or a theoretical investigation. Work is to be carried out over two sessions. At the end of the work a comprehansive project report giving an account of the student's own research must be submitted.

TELE9913
Project Report B
School of Electrical Eng and Telecommunications
Staff Contact: School Office
Enrolment requires School approval
UOC6 HPW6 S1 S2

The project is done in a major area, in which it is offered under the supervision of an academic member of staff. Where the work is carried out externally, a suitable co-supervisor may be required. Projects can take many forms such as the design and construction of experimental equipment or a theoretical investigation. Work is to be carried out over two sessions. At the end of the work a comprehansive project report giving an account of the student's own research must be submitted.

THST5103
Performance Arts in Australia since 1950
School of Theatre, Film and Dance
Staff Contact: J McCallum
UOC8 HPW2 S1

A contextual study of theatre and drama, film and television in Australia since 1950, with emphasis on developments since 1970 and current theatrical and popular trends.

THST5107
Reading Program
School of Theatre, Film and Dance
Staff Contact: J McCallum
Enrolment requires School approval
UOC8 S1 S2

Designed to accommodate students whose particular interests are not adequately served elsewhere. A reading program is designed in consultation with the Postgraduate Coordinator and a staff member, who acts as supervisor.
Note/s: Only available when suitably qualified supervision is available.

THST5108
Dramaturgy
School of Theatre, Film and Dance
Staff Contact: K Healey
UOC8 HPW2 S1

Examines the analytical and research skills required by the dramaturg, with particular reference to Europe and Australia. Includes a practical secondment to a professional theatre production.

THST5109
Theatre and Society
School of Theatre, Film and Dance
Staff Contact: E Scheer
UOC8 HPW2 S1

A study of theatre and para-theatrical forms that are closely identified with particular social groupings and experiences. Examples to be studied will be drawn from the twentieth-century, though earlier theoreticians may be introduced in passing. Topics may include national theatres, imperialism and theatre, orientalism, theatre in the Third Reich, holocaust drama, theatre and terrorism, carnival and theatre, shamanism, mardi gras, hegemonic and counter-hegemonic theatre, millennial anxieties and theories of affect.

THST5119
Writing for the Theatre
School of Theatre, Film and Dance
Staff Contact: School Office
UOC8 HPW2 S2

Entails analysis of various strategies for developing and writing scripts for the theatre and includes a workshop element in which students develop their own individual scripts.

THST5122
Research Project
School of Theatre, Film and Dance
Staff Contact: J McCallum
Enrolment requires School approval
UOC8 S1 S2

Involves the preparation of an extensive research project under the supervision of a staff member. The topic is negotiable, but may take the form of either an analytic report on a practical theatre- or film-making project or a wholly written paper of a more traditional kind.
Note/s: Only available when suitably qualified supervision is available.

THST5126
Performance Theory and Cultural Studies
School of Theatre, Film and Dance
Staff Contact: M Meyer
UOC8 HPW2 S2

Expands the concept of "performance" for use in/as cultural critique. Involves a shift from thinking of performance as a product of culture (ie as an object that "reflects" or is "expressive" of a culture) to the idea of performance as the agency/production of culture (ie culture as a process existing only in/as its performances).

UDES0001
Urban Design Studio
Faculty of the Built Environment
Staff Contact: J Lang
UOC9 HPW6 S1

In the first session, the lecture quota is higher in relation to studio projects. The object of this studio is to kick start the program by establishing a knowledge base upon which skills can be developed. Therefore studio projects will be limited to a series of smaller projects which investigate the concept of typologies - of streets, arcades, squares, religious precincts, parks and other elements in the urban landscape. On this basis a vocabulary will be generated, a language of urban space, upon which the larger projects in Session 2 and the summer term can be built.

UDES0002
Urban Design Studio
Faculty of the Built Environment
Staff Contact: B Judd
UOC12 HPW9 S2

Here we adopt the philosophy that to isolate housing from other aspects of life is to undermine the actual organisation of the life process and to degrade the quality of life in cities. While the project focuses on housing, it begins with a study of the historically changing relationship between the trilogy of work, home life and recreation. This will form the brief for a major housing project in one of Sydney's major development areas. It will involve the integration of a variety of housing types at medium to high density, along with their integration into the urban fabric by means of other urban functions - commercial and community facilities, open space, transport, etc. The emphasis will be on creating a socially responsible, environmentally sustainable and commercially feasible residential environment with reference to current urban design priorities such as urban consolidation and ecologically sound principles.

UDES0003
Urban Design Studio
Faculty of the Built Environment
Staff Contact: B Judd
UOC12 HPW12 X1

This studio will be devoted to the study of the central urban area. It will contrast a project in a major South East Asia city with a similar project in a major city in Australia. This may include developments for financial and commercial centres, tourism and recreation development, inner area housing and their implications for transport, services,

communications, and environmental management. Because of the complexity of the inner city, projects will invariably contain aspects of all of these functions. The South East Asian field trip will be incorporated into this studio.

UDES0004
History of Urban Development
Faculty of the Built Environment
Staff Contact: A Cuthbert
UOC3 HPW2 S1

The History of Urban Development is designed to give the student an overview of the entire process of urbanisation from prehistory until today, in both Western and Asian contexts. It adopts the position that while a history of urban development and design is ideological - ie., there is no coherent development of urban development products in relation to each other - there is a coherent history of development in terms of economy and society. Urban design originates primarily in these conditions, although there is an arbitrary aesthetic continuity to some of the chosen details. The course therefore theorises the economic forces and social conditions driving development as a method of explaining how urban form comes about. It seeks to explain some of the fundamental differences between the forces - economic, physical, socio-cultural and environmental - that influence urban societies of Asian and European origin.

UDES0005
Critical Urban Theory
Faculty of the Built Environment
Staff Contact: B Judd
UOC3 HPW2 S2

Critical urban theory has undergone a revolution in the last twenty years, where one dominant characteristic has been the abandonment of certainty implied in structuralist modes of thought congruent with the analysis of capital. Fundamental to this change has been the acceptance of space and its creation. As Isard has noted, social processes do not occur "in a wonderland of no dimension". Post structuralist theory, in deconstructing modernist concepts of place now look to the fragmented disprograms of gender, culture, ethnicity, community, language, and other phenomena. These interpretations take place within an increasing consciousness of the environment and environmental management, which must be considered in order to derive satisfactory explanations of the organisation of space in contemporary urban society.

UDES0006
Case Studies in Urban Development and Design
Faculty of the Built Environment
Staff Contact: B Judd
UOC6 HPW4 X1

Generic examples of urban development and design assembled from both Australia and the SE Asian region are presented and analysed in order to assess the validity of the objectives, the effectiveness of the process, and the costs and benefits of the results in improving the city and the welfare of its citizens. The major object is to demonstrate through practical examples how major developments are conceived, financed, designed and built.

UDES0007
Urban and Environmental Law
Faculty of the Built Environment
Staff Contact: P Williams
UOC3 HPW2 S1

The course comprises three parts: Planning Law, Planning Administration and Land Valuation. It deals with the theory and practice of techniques and administrative procedures needed to transform policies and details of urban development and design proposals into documents which have legal effect. While the concentration is upon the implementation of projects, these are set within a concern for the conceptual and theoretical nature of the law, and its relation to justice, equity and environmental concerns within the social formation.

UDES0008
Real Estate Development
Faculty of the Built Environment
Staff Contact: J Kim
UOC3 HPW2 S1
Excluded: REST0006.

This course provides a graduate level introduction to urban land economics with emphasis on property development. The course focuses on a total approach to the development process; evaluation, preparation, implementation, and disposal. The course also emphasises projects and cases to give students skills in organising and solving feasibility analysis problems. This course examines the process of real estate development, in the context of pluralistic market economies and underpins the analysis with economic theory. It investigates the meaning and scope of real estate, as well as the mechanics of doing it.

UDES0009
Urban Landscape
Faculty of the Built Environment
Staff Contact: J Weirick
UOC3 HPW2 S2

This course attempts to integrate the concept of landscape within the built environment. While it distinguishes between nature and artifice (something created from human labour) it recognises that the earth is now both commodified and urbanised, and that concepts of landscape must accept this fact. Therefore a fundamental knowledge of the relationship between development impacts and environmental sustainability is critical to an understanding of contemporary urbanisation. The course therefore explores the urban landscape in terms of historical, modernist and post modernist ideas, showing how theoretical constructs within the discipline have changed with the changing landscapes of production and consumption which now characterise the modern city.

UDES0010
Communication in Urban Design
Faculty of the Built Environment
Staff Contact: A Cuthbert
UOC6 X1

Focuses on two of the main communication modes of urban design - publication and exhibition. Skills in writing, editing, graphic design, photography, publishing, exhibition design and management are developed through the preparation of the annual MUDD publication and exhibition.

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

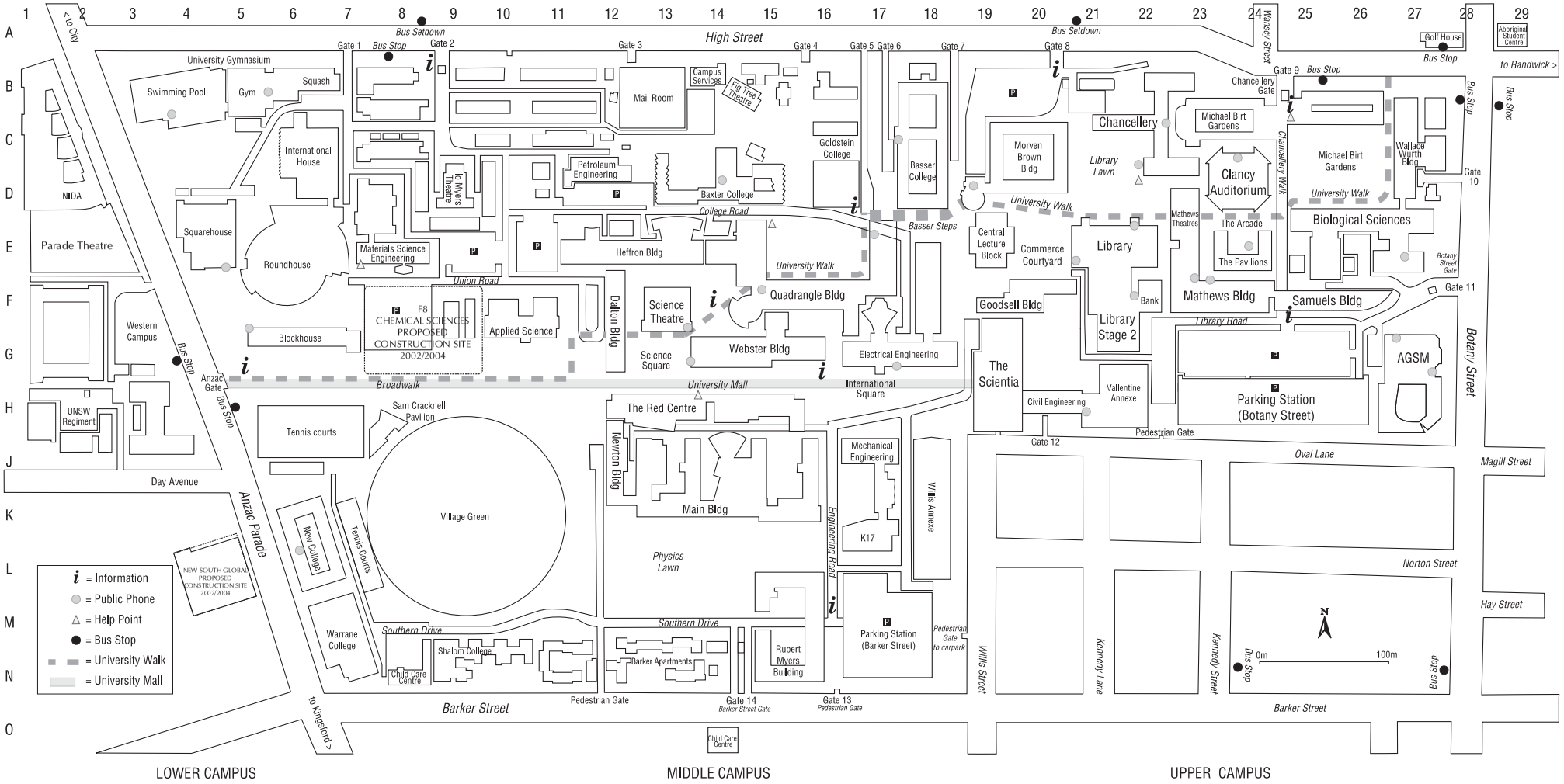
Accounting **E15**
Anatomy **B27**
Applied Bioscience **D26**
Architecture Program **H13**
Banking and Finance **E15**
Biochemistry and Molecular Genetics **D26**
Biological Science **D26**
Building Construction Management Program **H13**
Business Law and Taxation **E15**
Chemical Engineering and Industrial 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.

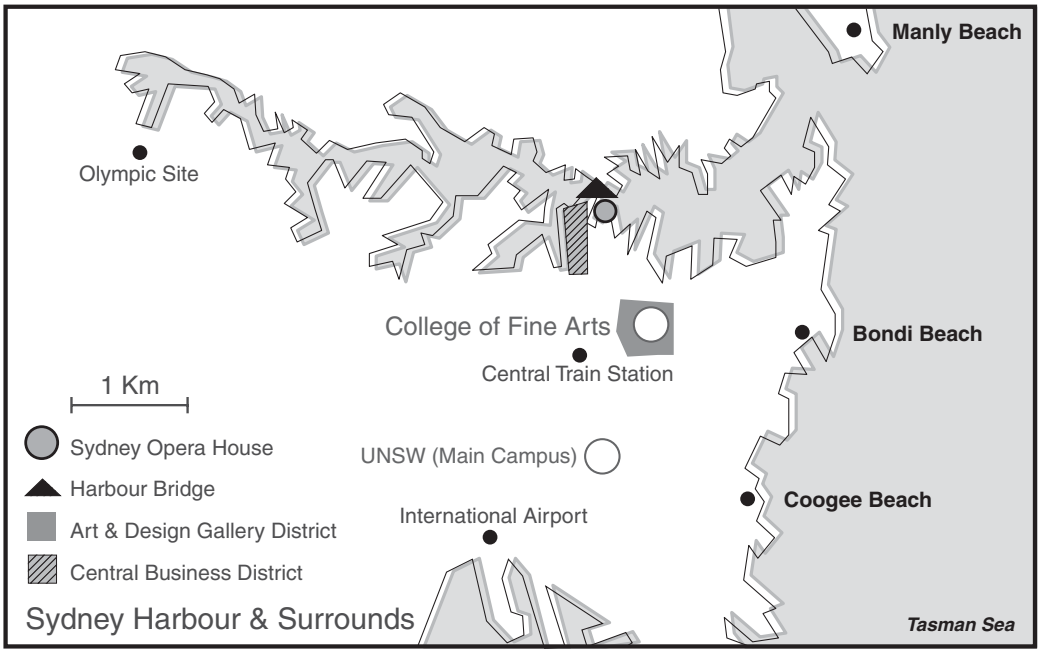
Co-op program **M15**
CONTACT **E15**
Counselling Service **E15**
Equity and Diversity Unit **E15**
Facilities Department **C22**
Graduate Programs in Business Technology **J12**
Health Service **E15**
Housing Office **E15**
Human Resources **C22**
Law Library **F21**
NewSouthQ Student Centre **C22**
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**



The University of New South Wales • Kensington Campus

COFA Campus Location



Paddington