UNSW

THE UNIVERSITY OF NEW SOUTH WALES

Postgraduate Handbook

2002

Courses, programs and any arrangements for programs including staff allocated as stated in this Handbook are an expression of intent only. The University reserves the right to discontinue or vary arrangements at any time without notice. Limitations on the number of students in a course may have to be imposed where the availability of equipment or studio or laboratory space is restricted. Information has been brought up to date as at 2 November 2001 but may be amended without notice by the University Council.

© The University of New South Wales

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

The address of the University of New South Wales is:

The University of New South Wales
UNSW SYDNEY 2052 AUSTRALIA

Telephone: (02) 93851000
Facsimile: (02) 9385 2000
Email: records.admin@unsw.edu.au
http://www.unsw.edu.au

Designed, published and printed by Publishing & Printing Services, The University of New South Wales

CRICOS Provider Code No. 00098G

ISSN 1445-663X

UNSW Postgraduate Handbook

Contents

General University Rules and Student Information 1

Faculties

Faculty of Arts and Social Sciences 31
- A Message from the Dean 31
- Faculty Information and Assistance 32
- Program and Course Information 32

Faculty of the Built Environment 50
- A Message from the Dean 50
- Faculty Information and Assistance 50
- Program and Course Information 51

College of Fine Arts 60
- A Message from the Dean 60
- Information and Assistance 61
- Program and Course Information 62

Faculty of Commerce and Economics 74
- A Message from the Dean 74
- Faculty Information and Assistance 75
- Information on Schools and Disciplines 76
- Program and Course Information 81

Faculty of Engineering 95
- A Message from the Dean 95
- Faculty Information and Assistance 97
- Program and Course Information 100

Faculty of Law 132
- A Message from the Dean 132
- Faculty Information and Assistance 133
- Program and Course Information 136

ATAX Australian Taxation Studies Program 141
- A Message from the Director of ATAX 141
- Information and Assistance 142
- Program and Course Information 144

Faculty of Medicine 150
- A Message from the Dean 150
- Faculty Information and Assistance 151
- Program and Course Information 155

Faculty of Science 173
- A Message from the Dean 173
- Faculty Information and Assistance 174
- Program and Course Information 174

Postgraduate Course Descriptions 202
- All 2002 UNSW courses by course code

Maps

- College of Fine Arts, Paddington 347
- University of New South Wales, Kensington Campus 348

General University Rules and Student Information

Contents

Handbook User Guide 1
Academic Calendar for 2002 2
Units of Credit 4
Identification of Courses 4
Course Prefixes 4
Schedule of UNSW Graduate Programs 6
Disclosure of Enrolment Information and Release of Information to Third Parties 16
Enrolment and Variations in Enrolment 16
Attendance at Classes 16
Discontinuation and Program Leave 16
Resumption of Programs 17
Assessment and Examinations 17
Postgraduate Research Students 17
Academic Standing 17
Admission to Degree or Diploma 18
Special Consideration – Illness and Misadventure 18
Academic Misconduct and student Misconduct 20
Computing at UNSW 22
Faculty Computing Information 22
Rules for the Use of Computing and Electronic Communications Facilities by Students 23
Prizes 24
Scholarships 24
Textbooks 24
Contact Details 24
Equity and Diversity Policy Statement 24
Other Equity and Diversity Policies and Procedures 25
Access to Assessment Information and Freedom of Information 25
Procedures for the Resolution of Student Grievances and Disputes 26
Student Discrimination and Harassment Grievance Policy and Procedures 26
Occupational Health and Safety on Campus 26
Copyright 27
Special Government Policies 27
Health-related programs 27
Education programs 27
Working with children 27
Student Representatives 27
Student Clubs and Societies 27
Library Facilities 28
Support for Students
The Learning Centre 29
Counselling Service and Compass 29
Careers and Employment 29
Disability Services 30
Charging fees for compulsory course materials 30

Handbook User Guide

From the 2002 academic year the University has consolidated the publication of information relating to Faculties, program and course offerings into an Undergraduate Handbook and a Postgraduate Handbook. The handbooks also provide information on some of the most important administrative rules and procedures and introduce students to many of the services available to them. It is hoped that these publications will provide students with a range of detailed information and will become an important reference source while they are studying at UNSW.

While this Handbook has been designed as a detailed source of reference in all matters related to Faculties, it should be used in conjunction with other University publications, especially the University's Student Guide which is issued annually to students as part of the Union Diary as well as being available on the web at www.student.unsw.edu.au/studentguide/

Within this Handbook program outlines are presented for each Faculty, providing a guide to degrees offered within specific organisational units. Descriptions of courses offered in 2002 detail course content, contacts and session/prerequisite details and are listed in the back of the Handbook.

As changes may be made to information provided in this Handbook, students should consult the University and Faculty web pages, Schools noticeboards and the official noticeboards of the University.

It is important that students read the General Information in the Handbook and the opening sections relating to the appropriate Faculty, together with the Summary of programs and courses. All Faculty sections contain specific information relating to undergraduate degrees, including Enrolment Procedures, Honours, Professional Practice, Program Transfers and a number of other matters with which students should be familiar.

Information Key

The following key provides a guide to abbreviations used in this book:

CCH	Class contact hours
F	Full-time
HPW	hours per week
L	lecture
UOC	unit of credit
P/T	part-time
Sa	Saturday
S1	Session 1
S2	Session 2
SS	single session, but which session taught is not known at time of publication
T	tutorial/laboratory
WKS	weeks of duration
X	external
X1	Summer session
X2	Winter session

Academic Calendar for 2002

Faculties other than Medicine, AGSM and University College, ADFA

	2002	2003
Session 1		
(14 teaching weeks)	4 Mar to 28 Mar 8 Apr to 14 Jun	3 Mar to 17 Apr 28 Apr to 13 Jun
Mid-session recess	29 Mar to 7 Apr	18 Apr to 27 Apr
Study period	15 Jun to 20 Jun	14 Jun to 19 Jun
Examinations	21 Jun to 9 Jul	20 Jun to 8 Jul
Mid-year recess	10 Jul to 28 Jul	9 Jul to 27 Jul
Session 2	29 Jul to 27 Sep	28 Jul to 26 Sep
(14 teaching weeks)	8 Oct to 8 Nov	7 Oct to 7 Nov
Mid-session recess	28 Sep to 7 Oct	27 Sept to 6 Oct
Study period	9 Nov to 14 Nov	8 Nov to 13 Nov
Examinations	15 Nov to 3 Dec	14 Nov to 2 Dec

Faculty of Medicine

	2002	2003
Medicine I, II, III	As for other faculties	As for other faculties
Medicine IV		
Term 1		
Campus Program 1	29 Jan to 1 Feb	28 Jan to 31 Jan
Hospital Program	4 Feb to 17 Mar	3 Feb to 16 Mar
Term 2	18 Mar to 28 Apr	17 Mar to 27 Apr
Recess	29 Apr to 5 May	28 Apr to 4 May
Term 3	6 May to 16 Jun	5 May to 15 Jun
Term 4		
Campus Program 2	17 Jun to 28 Jun	16 Jun to 27 Jun
Hospital Program	1 Jul to 11 Aug	30 Jun to 10 Aug
Recess	12 Aug to 18 Aug	11 Aug to 17 Aug
Term 5	19 Aug to 29 Sep	18 Aug to 28 Sep
Term 6	30 Sep to 10 Nov	29 Sept to 9 Nov
Medicine V		
Term 1		
Campus Program 1	17 Jan to 18 Jan	16 Jan to 17 Jan
Hospital Program	21 Jan to 24 Mar	20 Jan to 23 Mar
Recess	25 Mar to 1 Apr	24 Mar to 30 Mar
Term 2	2 Apr to 2 Jun	31 Mar to 1 Jun
Recess	3 Jun to 10 Jun	2 Jun to 9 Jun
Term 3	11 Jun to 11 Aug	10 Jun to 10 Aug
Recess	12 Aug to 18 Aug	11 Aug to 17 Aug
Term 4	19 Aug to 20 Oct	18 Aug to 19 Oct
Medicine VI		
Term 1	Elective – variable dates	Elective – variable dates
Term 2		
Hospital Program	25 Feb to 7 Apr	24 Feb to 6 Apr
Recess	8 Apr to 14 Apr	7 Apr to 13 Apr
Term 3	15 Apr to 26 May	14 Apr to 25 May
Term 4		
Hospital Program	27 May to 7 Jul	26 May to 6 Jul
Campus Program 2	8 Jul to 19 Jul	7 Jul to 18 Jul
Recess	20 Jul to 28 Jul	19 Jul to 27 Jul
Term 5	29 Jul to 8 Sep	28 Jul to 7 Sep
Term 6	9 Sep to 20 Oct	8 Sep to 19 Oct

Public Holidays	**2002**	**2003**
Australia Day	Monday, 28 January	Monday, 27 January
Good Friday	Friday, 29 March	Friday, 18 April
Easter Monday	Monday , 1 April	Monday, 21 April
Anzac Day	Thursday, 25 April	Friday, 25 April
Queen's Birthday	Monday, 10 June	Monday, 9 June **
Labour Day	Monday, 7 October	Monday, 6 October **

** Subject to proclamation

Important dates for 2002

March		
F	15	Last day applications are accepted from students to enrol in Session 1 courses
F	29	HECS Census Date for Session 1
		Last day for students to discontinue without failure Session 1 courses
April		
M	1	AVCC Common Vacation Dates (week beginning)
May		
T	14	Publication of the provisional timetable for the June examinations
W	22	Last day for students to advise of examination clashes
June		
T	4	Publication of the Final Timetable for the June examinations
F	21	Examinations begin for faculties other than Medicine, AGSM and University College, ADFA
July		
M	8	AVCC Common Vacation Dates (week beginning)
T	9	Examinations end for faculties other than Medicine, AGSM and University College, ADFA
August		
F	9	Last day applications are accepted from students to enrol in Session 2 courses
F	30	HECS Census Date for Session 2
		Last day for students to discontinue without failure Session 2 courses
September		
S	7	Courses and Careers Day
M	30	AVCC Common Vacation Dates (week beginning)
October		
T	8	Publication of the provisional timetable for the November examinations
W	16	Last day for students to advise of examination clashes
T	29	Publication of the Final Timetable for the November examinations
November		
F	15	Examinations begin for faculties other than Medicine, AGSM and University College, ADFA
December		
T	3	Examinations end for faculties other than Medicine, AGSM and University College, ADFA

General University Rules and Student Information

Units of Credit

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 semester). 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 semester 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.

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.

3. Course numbers which have previously been used are not used for new course titles.

Courses taught in 2002 are listed at the back of this Handbook. Please check Faculty and School websites and noticeboards for changes to courses to be offered.

The identifying alphabetical prefixes for each organisational unit are set out on the following pages.

Course Prefixes

Prefix	Organisational Unit	Faculty
ACCT	School of Accounting	Commerce & Economics
ACHM	School of Chemistry	University College
ACIV	School of Civil Engineering	University College
ACSC	School of Computer Science	University College
ACTL	Actuarial Studies Unit	Commerce & Economics
AECM	School of Economics and Management	University College
AELE	School of Electrical Engineering	University College
AENG	School of English	University College
AERO	School of Mechanical and Manufacturing Engineering	Engineering
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
ANAT	Department of Anatomy	Medicine
ANCE	Centre for Advanced Numerical Computationin Engineering and Science	Engineering
APHY	School of Physics	University College
APOL	School of Politics	University College
ARCH	School of the Built Environment (Architecture)	Built Environment
ARTS	Faculty of Arts & Social Sciences	
ASIA	Faculty of Arts & Social Sciences	
ATAX	School of Law (Taxation)	Law
AUST	Faculty of Arts & Social Sciences	
AVEN	School of Mechanical and Manufacturing Engineering	Engineering
AVIA	Department of Aviation	Science
BENV	School of the Built Environment	Built Environment
BINF	School of Computer Science and Engineering	Engineering
BIOC	School of Biotechnology and Biomolecular Science (formerly Biochemistry and Molecular Genetics)	Science
BIOM	Graduate School of Biomedical Engineering	Engineering
BIOS	School of Biological, Earth and Environmental Sciences (formerly Biological Science)	Science
BIOT	School of Biotechnology and Biomolecular Science (formerly Biotechnology)	Science
BLDG	School of the Built Environment (Building)	Built Environment
BSSM	Faculty of Science	
CEIC	School of Chemical Engineering and Industrial Chemistry	Engineering
CHEM	School of Chemical Sciences (formerly Chemistry)	Science
CHEN	School of Chemical Engineering and Industrial Chemistry	Engineering
CHIN	Department of Chinese and Indonesian Studies	Arts & Social Sciences
CMED	School of Community Medicine, Health Services Management and Medical Education	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
ECOH	School of Economics	Commerce & Economics
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	Faculty of Science	
EURO	Faculty of Arts and Social Sciences	
EXCH	Exchange Program	UNSW Administration
FIBR	School of Fibre Science and Technology	Science
FILM	School of Theatre, Film and Dance	Arts & Social Sciences
FINS	School of Banking and Finance	Commerce & Economics

FOOD	School of Chemical Sciences (formerly Food Science and Technology)	Science
FREN	Department of French	Arts & Social Sciences
FUEL	School of Chemical Engineering and Industrial Chemistry	Engineering
GBAT	Graduate Programs in Business and Technology	Engineering
GENB	Faculty of Science	
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
GENZ	University College (ADFA)	
GEOG	School of Biological, Earth and Environmental Sciences (formerly Geography)	Science
GEOL	School of Biological, Earth and Environmental Sciences (formerly Geology)	Science
GEOS	School of Geology	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
GSOE	Graduate Programs in Business and Technology	Commerce & Economics
HEAL	School of Community Medicine, Health Services Management and Medical Education	Medicine
HERI	School of the Built Environment	Built Environment
HIST	School of History	Arts & Social Sciences
HOSP	School of Marketing	Commerce & Economics
HPST/ SCTS	School of Science and Technology Studies	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	
ILAS	School of Information Systems, Technology and Management	Commerce & Economics
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
IROB	School of Industrial Relations and Organisational Behaviour	Commerce & Economics
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
LEGT	School of Business Law and Taxation	Commerce & Economics
LIBS	School of Information Systems, Technology and Management	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
MEED	School of Community Medicine, Health Services Management and Medical Education	Medicine
MFAC	Faculty of Medicine	
MGMT	Faculty of Commerce and Economics	
MICR	School of Biotechnology and Biomolecular Science (formerly Microbiology and Immunology)	Science
MINE	School of Mining Engineering	Engineering
MINP	School of Chemical Engineering and Industrial Chemistry	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
MUSI	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	School of Pathology	Medicine
PDCS	Higher Education	Medicine
PFST	School of Theatre, Film and Dance	Arts & Social Sciences

PHIL	School of Philosophy	Arts & Social Sciences
PHPH	Department of Physiology and Pharmacology	Medicine
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
PORT	School of Modern Language Studies	Arts & Social Sciences
PSCY	School of Psychiatry	Medicine
PSYC	School of Psychology	Science
PTRL	School of Petroleum Engineering	Engineering
REGS	Division of the Registrar and Deputy Principal	
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
SART	School of Media Arts	College of Fine Arts
SCOM	Faculty of Science	
SCTS\ HPST	School of Science and Technology Studies	Arts & Social Sciences
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	Arts & Social Sciences
SOCW	School of Social Work	Arts & Social Sciences
SOLA	School of Electrical Engineering and Telecommunications	Engineering
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	

Schedule of UNSW Graduate Programs

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 conditions for the various awards are administered by the Higher Degree Committee of the appropriate Faculty under the general supervision of that Faculty.

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 program 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 course work, as well as various programs leading to the award of a graduate diploma and graduate certificate.

Short intensive graduate and special programs are provided each year through IPACE (by updating and refresher courses for professional people), the Centre for Continuing Medical Education, and a number of Schools of the University. These courses cover a wide range of interests and details are advertised separately.

Type: R = Research C = Coursework

Tuition fees indicated represent the per annum charge for a full-time program (48 Units of Credit).

Program and Plan	Type	Code	Total UOC	$Aust pa (full-fee Australian students)	$Aust pa (full-fee I'national students)
Faculty of Arts and Social Sciences					
PhD					
Australian Studies	R	1190	–	$NA	$14,400
Chinese Studies	R	1225	–	$NA	$14,400
Education	R	1970	–	$NA	$14,400
English	R	1200	–	$NA	$14,400
European Studies	R	1235	–	$NA	$14,400
French	R	1210	–	$NA	$14,400
German Studies	R	1231	–	$NA	$14,400
Health, Sexuality and Culture	R	1215	–	$NA	$14,400
History	R	1240	–	$NA	$14,400
Indonesian Studies	R	1228	–	$NA	$14,400
Japanese Studies	R	1221	–	$NA	$14,400

Program and Plan	Type	Code	Total UOC	$Aust pa (full-fee Australian students)	$Aust pa (full-fee I'national students)
Korean Studies	R	1223	–	$NA	$14,400
Linguistics	R	1208	–	$NA	$14,400
Media and Communications	R	1245	–	$NA	$14,400
Modern Greek Studies	R	1238	–	$NA	$14,400
Music	R	1280	–	$NA	$14,400
Music Education	R	1281	–	$NA	$14,400
Philosophy	R	1260	–	$NA	$14,400
Politics and International Relations	R	1270	–	$NA	$14,400
Professional Ethics	R	1265	–	$NA	$14,400
Russian Studies	R	1291	–	$NA	$14,400
Science and Technology Studies	R	1251	–	$NA	$14,400
Social Science and Policy	R	1295	–	$NA	$14,400
Social Work	R	1980	–	$NA	$14,400
Sociology	R	1300	–	$NA	$14,400
Spanish and Latin American Studies	R	1310	–	$NA	$14,400
Theatre, Film and Dance	R	1181	–	$NA	$14,400
Women's Studies	R	1305	–	$NA	$14,400
EdD					
Education	R&C	1975	144	HECS only	$14,400
MA					
Arts	R	2393	–	$NA	$14,400
Arts	C	8225	48	$8,400	$13,440
Couple and Family Therapy	C	8228	48	$14,400	$NA
MC/FTherapy					
Couple and Family Therapy *	C	8934	48	$14,400	$NA
MEd					
Education	R	2394	–	$NA	$14,400
Education	C	8910	48	$8,400	$13,440
MEdAdmin					
Educational Administration	R	2395	–	$NA	$14,400
Educational Administration	C	8960	48	$8,400	$13,440
MHS					
Housing Studies	C	8238	48	$8,400	$13,440
MIntSocDev					
International Social Development	C	8938	48	$8,400	$13,440
MMus					
Music	R	2396	–	$NA	$14,400
Music	C	8226	48	$8,400	$13,440
MMusEd					
Music Education	R	2397	–	$NA	$14,400
MProfEthics					
Professional Ethics	C	8227	48	$9,600	$13,440
MPS					
Policy Studies	C	8248	48	$8,400	$13,440
MSocSc					
Social Science	R	2398	–	$NA	$14,400
MSW					
Social Work	R	2970	–	$NA	$14,400
Couple and Family Therapy	C	8930	48	$14,400	$NA
DipEd					
Education (Secondary)	C	5560	48	HECS only	$13,440
GradDip					
Professional Ethics	C	5295	32	$9,600	$13,440

Program and Plan	Type	Code	Total UOC	$Aust pa (full-fee Australian students)	$Aust pa (full-fee I'national students)
GradDipArts					
Arts	R	5275	–	$8,400	$14,400
Arts	C	5225	32	$8,400	$13,440
GradDipHS					
Housing Studies	C	5238	32	$8,400	$NA
GradDipIntSocDev					
International Social Development	C	5556	32	$8,400	$13,440
GradDipMus					
Music	C	5226	32	$8,400	$NA
GradDipPolicy					
Policy Studies	C	5280	32	$8,400	$NA
GradCert					
Policy Studies	C	7348	16	$8,400	$NA
Program Evaluation	C	7347	16	$8,400	$NA
GradCertArts					
Arts	C	7325	16	$8,400	$NA
GradCertMus					
Music	C	7326	16	$8,400	$NA
Faculty of the Built Environment					
PhD					
Architecture *	R	1130	–	$NA	$NA
Building *	R	1140	–	$NA	$NA
Built Environment	R	1120	–	$NA	$16,560
Industrial Design *	R	1125	–	$NA	$NA
MArch					
Architecture	R	2200	–	$NA	$16,560
Architecture	C	8142	48	$13,920	$16,560
MBEnv					
Built Environment	R	2240	–	$NA	$16,560
Sustainable Development	C	8132	48	$13,920	$16,560
MBuild					
Building	R	2210	–	$NA	$16,560
MConstMgt					
Construction Management	C	8125	48	$13,920	$16,560
MID					
Industrial Design	C	8145	48	$13,920	$16,560
MLArch					
Landscape Architecture	R	2220	–	$NA	$16,560
MRE					
Real Estate	C	8128	48	$13,920	$16,560
MSc					
Architecture	R	2206	–	$NA	$16,560
Industrial Design	R	2242	–	$NA	$16,560
Town Planning	R	2235	–	$NA	$16,560
MSc(IndDes)					
Industrial Design	C	8146	48	$13,920	$16,560
MTP					
Town Planning	R	2230	–	$NA	$16,560
MUDD					
Urban Development and Design	C	8131	72	$9,264	$11,000
GradDip					
Town Planning	C	5205	36	$13,920	$16,560

Program and Plan	Type	Code	Total UOC	$Aust pa (full-fee Australian students)	$Aust pa (full-fee I'national students)
GradDipBEnv					
Sustainable Development	C	5132	36	$13,920	$16,560
GradCertBEnv					
Sustainable Development	C	7332	24	$13,920	$16,560
Faculty of the College of Fine Arts					
PhD					
Art Education	R	1285	–	$NA	$16,080
Art Theory	R	1286	–	$NA	$16,080
Design	R	1288	–	$NA	$16,080
Fine Arts	R	1287	–	$NA	$16,080
MArt					
Art	C	9301	48	$11,520	$16,080
MArtAdmin(Hons)					
Art Administration	R	2264	–	$NA	$16,080
MArtAdm					
Art Administration	C	9302	72	$12,000	$16,080
MArtDesEd					
Art and Design Education	C	9303	48	$12,480	$16,080
MArtEd(Hons)					
Art Education	R	2255	–	$NA	$16,080
MArtTh					
Art Theory	R	2265	–	$NA	$16,080
MDes(Hons)					
Design	R	2266	–	$NA	$16,080
MDes					
Design	C	9304	72	$13,200	$16,080
MFA					
Fine Arts	R	2245	–	$NA	$16,080
GradDipArtAdmin					
Art Administration	C	5302	48	$12,000	$16,080
GradDipDes					
Design	C	5724	48	$13,200	$16,080
GradCert					
Art and Design Education	C	7304	18	$12,480	$16,080
GradCertArtAdmin					
Art Administration	C	7302	24	$12,000	$16,080
GradCertDes					
Design	C	7303	24	$13,200	$16,080
Institute of Environmental Studies					
MEM					
Environmental Management	C	8619	72	$12,000	$19,200
GradDip					
Environmental Management	C	5499	48	$12,000	$19,200
GradCert					
Environmental Management	C	7339	24	$12,000	$19,200
Faculty of Commerce and Economics					
PhD					
Accounting	R	1521	–	$NA	$14,160
Actuarial Studies	R	1545	–	$NA	$14,160
Banking and Finance	R	1561	–	$NA	$14,160
Business Law and Taxation	R	1535	–	$NA	$14,160
Economics	R	1540	–	$NA	$14,160

Program and Plan	Type	Code	Total UOC	$Aust pa (full-fee Australian students)	$Aust pa (full-fee I'national students)
Industrial Relations and Organisational Behaviour	R	1601	–	$NA	$14,160
Information, Library and Archive Studies	R	1990	–	$NA	$14,160
Information Systems, Technology and Management	R	1525	–	$NA	$14,160
International Business	R	1603	–	$NA	$14,160
Marketing	R	1550	–	$NA	$14,160
MArchivAdmin					
Archives Administration	R	2985	–	$NA	$13,200
MBIT					
Business Information Technology	C	8407	48	$12,480	$19,200
MCom(Hons)					
Accounting	R&C	2570	96	$NA	$13,200
Actuarial Studies	R&C	2582	96	$NA	$13,200
Banking and Finance	R&C	2574	96	$NA	$13,200
Business Law and Taxation	R&C	2579	96	$NA	$13,200
Economic History	R&C	2573	96	$NA	$13,200
Econometrics	R&C	2572	96	$NA	$13,200
Economics	R&C	2571	96	$NA	$13,200
Employment Relations	R&C	2576	96	$NA	$13,200
Human Resource Management	R&C	2578	96	$NA	$13,200
Information Systems and Management	R&C	2575	96	$NA	$13,200
Marketing	R&C	2580	96	$NA	$13,200
Organisational Behaviour	R&C	2577	96	$NA	$13,200
MCom					
Commerce	C	8404	72	$12,480	$19,200
MFin					
Finance	C	8406	48	$18,000	$19,200
MIM					
Information Management	C	8923	72	$12,480	$19,200
MInfStud					
Information Studies	R	2980	–	$NA	$13,200
MTM					
Technology Management	C	8007	48	$12,480	$19,200
GradDip					
Business Information Technology	C	5394	36	$12,480	$19,200
Commerce	C	5391	36	$12,480	$19,200
GradCert					
Commerce	C	7355	24	$12,480	$NA
Faculty of Engineering					
PhD					
Biomedical Engineering	R	1710	–	$NA	$21,600
Chemical Engineering	R	1010	–	$NA	$21,600
Civil and Environmental Engineering	R	1630	–	$NA	$21,600
Computer Science and Engineering	R	1650	–	$NA	$21,600
Electrical Engineering	R	1640	–	$NA	$21,600
Surveying and Spatial Information Systems	R	1681	–	$NA	$21,600
Industrial Chemistry	R	1016	–	$NA	$21,600
Mechanical and Manufacturing Engineering	R	1662	–	$NA	$21,600
Mineral Processing and Extractive Metallurgy	R	1046	–	$NA	$21,600
Mining Engineering	R	1050	–	$NA	$21,600
Petroleum Engineering	R	1017	–	$NA	$21,600
MBiomedE					
Biomedical Engineering	C	8660	72	HECS only	$19,200
MBT					
Business and Technology	C	8616	60	$14,400	$19,200

Program and Plan	Type	Code	Total UOC	$Aust pa (full-fee Australian students)	$Aust pa (full-fee I'national students)
MCompSc					
Computer Science	C	8680	96	$12,000	$19,200
ME					
Biomedical Engineering	R	2675	–	$NA	$21,600
Chemical Engineering	R	2150	–	$NA	$21,600
Civil and Environmental Engineering	R	2650	–	$NA	$21,600
Computer Science and Engineering	R	2665	–	$NA	$21,600
Electrical Engineering	R	2660	–	$NA	$21,600
Surveying and Spatial Information Systems	R	2721	–	$NA	$21,600
Mechanical and Manufacturing Engineering	R	2692	–	$NA	$21,600
Mining Engineering	R	2180	–	$NA	$21,600
Petroleum Engineering	R	2156	–	$NA	$21,600
MEngSc					
Biomedical Engineering	C	8665	48	HECS only	$19,200
Civil Engineering	C	8612	48	$12,000	$19,200
Civil Engineering (external)	C	8617	48	$12,000	$NA
Computer Science and Engineering	C	8685	48	$12,000	$19,200
Electrical Engineering	C	8501	48	$12,000	$19,200
Surveying and Spatial Information Systems	C	8652	48	$12,000	$19,200
Land Administration	C	8653	48	$12,000	$19,200
Mechanical and Manufacturing Engineering	C	8710	48	$12,000	$19,200
Mining Engineering	C	8055	48	$12,000	$19,200
Petroleum Engineering	C	8655	48	$20,400	$19,200
Photovoltaics and Solar Energy	C	8512	48	$12,000	$19,200
Process Engineering	C	8016	48	$12,000	$19,200
Remote Sensing	C	8641	48	$12,000	$19,200
Telecommunicattions	C	8503	48	$12,000	$19,200
MEnvEngSc					
Environmental Engineering Science	C	8615	48	$12,000	$19,200
Environmental Engineering Science (external)	C	8618	48	$12,000	$NA
MInfSc					
Information Science	C	8508	72	$12,000	$19,200
MSc					
Biomedical Engineering	R	2795	–	$NA	$21,600
Chemical Engineering	R	2010	–	$NA	$21,600
Civil and Environmental Engineering	R	2750	–	$NA	$21,600
Computer Science and Engineering	R	2765	–	$NA	$21,600
Electrical Engineering	R	2760	–	$NA	$21,600
Industrial Chemistry	R	2016	–	$NA	$21,600
Mineral Processing and Extractive Metallurgy	R	2046	–	$NA	$21,600
Mining Engineering	R	2060	–	$NA	$21,600
GradDip					
Aluminium Smelting Technology	C	5034	36	$12,000	$19,200
Biomedical Engineering	C	5445	36	HECS only	$19,200
Business and Technology	C	5457	48	$14,400	$19,200
Civil Engineering	C	5459	36	$12,000	$19,200
Civil Engineering (external only)	C	5454	36	$12,000	$NA
Computer Science	C	5452	72	$12,000	$19,200
Electrical Engineering	C	5458	36	$12,000	$19,200
Surveying and Spatial Information Systems	C	5492	36	$12,000	$19,200
Information Science	C	5453	48	$12,000	$19,200
Mechanical and Manufacturing Engineering	C	5710	36	$12,000	$19,200
Mine Ventilation	C	5045	36	$20,400	$19,200
Mining Engineering	C	5040	36	$12,000	$19,200
Petroleum Engineering	C	5031	36	$20,400	$19,200

Program and Plan	Type	Code	Total UOC	$Aust pa (full-fee Australian students)	$Aust pa (full-fee I'national students)
Remote Sensing	C	5496	36	$12,000	$19,200
Telecommunications	C	5448	36	$12,000	$19,200
GradDipLandAdmin					
Land Administration	C	5493	36	$12,000	$19,200
GradCert					
Aluminium Smelting Technology	C	7334	24	$12,000	$19,200
Business and Technology	C	7333	24	$14,400	$19,200
Civil Engineering	C	7336	24	$12,000	$19,200
Environmental Engineering	C	7337	24	$12,000	$19,200
Mining Engineering	C	7335	24	$12,000	$19,200
Petroleum Engineering	C	7341	24	$20,400	$19,200
Faculty of Law					
PhD					
Law	R	1730	–	$NA	$14,640
SJD					
Juridical Science	R&C	1740	–	$NA	$14,640
LLM					
Laws	R	2440	–	$NA	$14,640
Laws	C	9200	48	$12,000	$14,160
MLM					
Law and Management (Law component)	C	9210	60	$15,600	$NA
MTax					
Taxation	C	9250	48	$12,000	$14,400
GradDip					
Law	C	5740	32	$12,000	$14,160
GradDipAdvTax					
Advanced Taxation	C	5540	36	$12,000	$14,400
GradDipTaxStud					
Taxation Studies	C	5541	60	$12,000	$14,400
Faculty of Medicine					
MD					
Anatomy	R	0420	–	$NA	$18,480
Community Medicine	R	0430	–	$NA	$18,480
Medicine	R	0350-0353	–	$NA	$18,480
Obstetrics and Gynaecology	R	0380	–	$NA	$18,480
Paediatrics	R	0410	–	$NA	$18,480
Pathology	R	0360	–	$NA	$18,480
Physiology and Pharmacology	R	0370	–	$NA	$18,480
Psychiatry	R	0390	–	$NA	$18,480
Surgery	R	0400-0403	–	$NA	$18,480
PhD					
Anatomy	R	1750	–	$NA	$18,480
Community Medicine	R	1760	–	$NA	$18,480
Health Administration	R	1950	–	$NA	$13,920
Medical Education	R	1841	–	$NA	$13,920
Medicine	R	1770-1773	–	$NA	$18,480
Obstetrics and Gynaecology	R	1820	–	$NA	$18,480
Paediatrics	R	1830	–	$NA	$18,480
Pathology	R	1780	–	$NA	$18,480
Physiology and Pharmacology	R	1790	–	$NA	$18,480
Psychiatry	R	1800	–	$NA	$18,480
Surgery	R	1810-1813	–	$NA	$18,480

Program and Plan	Type	Code	Total UOC	$Aust pa (full-fee Australian students)	$Aust pa (full-fee I'national students)
MClinEd					
Clinical Education (external only)	C	9050	72	$9,120	$11,600
MHA					
Health Administration	R	2960	–	$NA	$13,920
Health Administration *	C	8900	60	HECS only	$NA
MHEd					
Higher Education *	C	8911	48	HECS only	$NA
MHPEd					
Health Professions Education	R	2885	–	$NA	$13,920
MHSM					
Health Services Management	C	8941	48	HECS only	$12,720
MMed					
Geriatrics (external only)	C	9025	72	$10,560	$17,520
MMedSc					
Drug Development (external only)	C	9060	72	$12,480	$19,200
MPH					
Public Health	R	2845	–	$NA	$13,920
Public Health	C	9045	60	HECS only	$13,920
MS					
Surgery	R	2860-2863	–	$NA	$18,480
MSc					
Anatomy	R	2800	–	$NA	$18,480
Community Medicine	R	2810	–	$NA	$18,480
Medicine	R	2820-2823	–	$NA	$18,480
Obstetrics and Gynaecology	R	2830	–	$NA	$18,480
Paediatrics	R	2805	–	$NA	$18,480
Pathology	R	2840	–	$NA	$18,480
Physiology and Pharmacology	R	2850	–	$NA	$18,480
Psychiatry	R	2880	–	$NA	$18,480
Surgery	R	2875-2878	–	$NA	$18,480
MSpMed					
Sports Medicine	C	9055	60	$14,400	$14,880
DipPaed					
Paediatrics	C	5500	24	$9,840	$NA
GradDip					
Geriatric Medicine (external only)	C	5506	48	$10,560	$17,520
GradDipClinEd					
Clinical Education (external only)	C	5501	40	$10,944	$13,920
GradDipDD					
Drug Development (external only)	C	5504	48	$12,480	$19,200
GradDipHEd					
Higher Education	C	5561	32	HECS only	$NA
GradDipPH					
Public Health	C	5507	40	HECS only	$13,920
GradDipSpMed					
Sports Medicine	C	5503	48	$14,400	$14,880
GradCert					
Geriatric Medicine (external only)	C	7364	24	$10,560	$17,520
Clinical Education (external only)	C	7376	20	$10,944	$13,920
GradCertDD					
Drug Development (external only)	C	7370	24	$12,480	$19,200
GradCertHEd					
Higher Education	C	7300	16	HECS only	$NA

Program and Plan	Type	Code	Total UOC	$Aust pa (full-fee Australian students)	$Aust pa (full-fee I'national students)
GradCertHSM					
Health Services Management	C	7360	20	HECS only	$14,400
GradCertPH					
Public Health	C	7368	22	HECS only	$13,920
GradCertSpMed					
Sports Medicine	C	7378	24	$14,400	$14,880
Faculty of Science					
PhD					
Applied Geology	R	1000	–	$NA	$21,600
Aviation	R	1900	–	$NA	$21,600
Biochemistry and Molecular Genetics	R	1410	–	$NA	$21,600
Biological Science	R	1435	–	$NA	$21,600
Biotechnology	R	1036	–	$NA	$21,600
Botany	R	1430	–	$NA	$21,600
Chemistry	R	1870	–	$NA	$21,600
Food Science and Technology	R	1031	–	$NA	$21,600
Geography	R	1080	–	$NA	$21,600
Materials Science and Engineering	R	1045	–	$NA	$21,600
Mathematics	R	1880	–	$NA	$21,600
Microbiology and Immunology	R	1440	–	$NA	$21,600
Optometry	R	1860	–	$NA	$21,600
Physics	R	1890	–	$NA	$21,600
Psychology	R	1400	–	$NA	$21,600
Safety Science	R	1665	–	$NA	$21,600
Theoretical Physics	R	1891	–	$NA	$18,000
PhD MPsychol(Clin)					
Psychology (Clinical)	R&C	1404	–	$NA	$21,600
PhD MPsychol(For)					
Psychology (Forensic)	R&C	1405	–	$NA	$21,600
PhD MPsychol(Org)					
Psychology (Organisational)	R&C	1406	–	$NA	$21,600
ME					
Materials Science and Engineering	R	2175	–	$NA	$21,600
Safety Science	R	2695	–	$NA	$21,600
MEnvStudies					
Environmental Studies *	C	8045	48	$NA	$21,600
MMarSc					
Marine Science	C	8265	48	$12,960	$18,000
MOptom					
Optometry	C	8760	48	$13,920	$19,200
MPsychol(Clin)					
Psychology (Clinical)	C	8256	96	$11,280	$18,000
MPsychol(For)					
Psychology (Forensic)	C	8257	96	$11,280	$18,000
MPsychol(Org)					
Psychology (Organisational)	C	8258	96	$11,280	$18,000
MSafetySc					
Safety Science	C	8671	96	$11,760	$18,000
MSc					
Applied Geology	R	2000	–	$NA	$21,600
Biochemistry and Molecular Genetics	R	2460	–	$NA	$21,600
Biological Science	R	2485	–	$NA	$21,600
Biotechnology	R	2036	–	$NA	$21,600

Program and Plan	Type	Code	Total UOC	$Aust pa (full-fee Australian students)	$Aust pa (full-fee I'national students)
Chemistry	R	2910	–	$NA	$21,600
Food Science and Technology	R	2031	–	$NA	$21,600
Geography	R	2040	–	$NA	$21,600
Materials Science and Engineering	R	2055	–	$NA	$19,000
Mathematics	R	2920	–	$NA	$18,000
Microbiology and Immunology	R	2490	–	$NA	$21,600
Optometry	R	2900	–	$NA	$21,600
Physics	R	2930	–	$NA	$21,600
Psychology	R	2450	–	$NA	$21,600
Safety Science	R	2775	–	$NA	$21,600
Theoretical Physics	R	2932	–	$NA	$18,000
Biopharmaceuticals	C	8049	48	$12,960	$18,000
Biotechnology	C	8048	48	$12,960	$18,000
Food Science and Technology	C	8033	48	$12,960	$18,000
MScTech					
Aviation	C	8738	48	$14,400	$23,280
Chemical Analysis and Laboratory Management	C	8708	48	$12,960	$18,000
Computation	C	8705	48	$12,960	$18,000
Corrosion Engineering	C	8716	48	$12,960	$18,000
Engineering Materials	C	8715	48	$12,960	$19,200
Environmental Science	C	8735	48	$12,960	$18,000
Ergonomics	C	8729	72	$11,760	$18,000
Geographic Information Systems	C	8711	48	$12,960	$18,000
Geological Data Processing	C	8703	48	$12,960	$18,000
Groundwater Studies	C	8702	48	$12,960	$18,000
Industrial Safety	C	8727	48	$12,960	$18,000
Mathematics	C	8718	48	$12,960	$15,600
Occupational Health and Safety	C	8733	72	$11,760	$18,000
Occupational Medicine	C	8734	48	$12,960	$18,000
Remote Sensing	C	8713	48	$12,960	$18,000
Risk Management	C	8728	72	$12,960	$18,000
MStats					
Statistics	C	8750	72	$12,960	$15,600
GradDip					
Biochemistry and Molecular Genetics	R	5345	48	$12,960	$16,200
Physical Oceanography	R	5530	48	$12,960	$15,600
Physics	R	5533	48	$12,960	$18,000
Physics Research Techniques	R	5663	48	$12,960	$15,600
Aviation (Flying)	C	5538	36	$TBA	$TBA
Aviation Management	C	5678	36	$14,400	$23,280
Biological Science	C	5350	48	$12,960	$16,200
Biotechnology	C	5015	36	$12,960	$18,000
Chemical Analysis and Laboratory Management	C	5648	36	$12,960	$18,000
Computation	C	5645	36	$12,960	$18,000
Environmental Science	C	5675	36	$12,960	$18,000
Ergonomics	C	5669	48	$11,760	$18,000
Food Technology	C	5020	36	$12,960	$18,000
Microbiology and Immunology	C	5355	48	$12,960	$16,200
Occupational Medicine	C	5674	36	$12,960	$18,000
Optometry	C	5665	36	$14,440	$19,200
Psychology	C	5330	48	$11,280	$16,200
Remote Sensing	C	5653	48	$12,960	$18,000
Risk Management	C	5668	48	$12,960	$18,000
Safety Science	C	5672	48	$11,760	$18,000
Statistics	C	5659	48	$12,960	$15,600

Program and Plan	Type	Code	Total UOC	$Aust pa (full-fee Australian students)	$Aust pa (full-fee I'national students)
GradCert					
Aviation Management	C	7448	18	$14,400	$23,280
Chemical Analysis and Laboratory Techniques	C	7428	18	$12,960	$18,000
Ergonomics	C	7439	24	$11,760	$18,000
Industrial Safety	C	7437	18	$12,960	$18,000
Occupational Health and Safety Management	C	7443	24	$11,760	$18,000
Occupational Rehabilitation	C	7444	18	$12,960	$18,000
Optometry	C	7435	18	$13,920	$19,200
Optoelectronics and Photonics	C	7432	24	$TBA	$18,000
Risk Management	C	7438	24	$12,960	$18,000
Safety Science	C	7442	24	$11,760	$18,000
Australian Graduate School of Management*					
PhD					
Management	R&C	1350			
MBA					
Business Administration – Stage 1	C	8350			
Business Administration – Stage 2	C	8350			
Part-time - Stage 2	C	8350			
MBA(Exec)					
Business Administration (Executive)	C	8355			
GradDipMgmt					
Management	C	5950			
GradCert					
Change Management	C	7315			
Management	C	7316			

**Fee information for these programs is available from the AGSM*

* no longer offered to commencing students

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. 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.

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 fee penalty. By enrolling students incur Student Activity Fees, Tuition Fee charges or liability under the Higher Education Contribution Scheme. Refer to the Student Guide or NewSouth Student *Online* for full details of enrolment procedures and HECS or tuition fee rules.

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.

Discontinuation and Program Leave

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

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

Undergraduate Students

A new undergraduate student in Stage 1 of a program who discontinues that program without failure prior to 31 March must reapply through UAC and is guaranteed re-admission to the same program the following year. A student who does not resume study in the following year must compete for a place, if and when re-admission is sought.

A new undergraduate student in Stage 1 of a program who discontinues after 31 March may apply for leave for Session 2 prior to the Session 2 withdrawal date of 31 August. It should be noted that discontinuation after the census date for a session may result in failures being recorded.

All students

1. A request for leave should be made in writing to the Registrar either by letter or by using the Discontinuation/ Leave form available from program offices and the Student Centres at each campus.

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

3. A student who discontinues a program with or without failure after the census date for a session retains an enrolment record for that session and is subject to the rules on re-enrolment. A student who discontinues after the Session 1 census date may apply for leave for Session 2.

4. A student whose application for leave is rejected or who does not resume study at the end of the approved leave period must formally apply, in the usual manner, for re-admission to the program.

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

Resumption of Programs

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

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

Assessment and Examinations

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

Timetables

A provisional timetable indicating the dates and times of examinations is available in May and October. A final timetable indicating the dates, times, locations and authorised materials is available two weeks before the end of each session. Students must advise NewSouth Q of any clash in examinations as soon as the provisional timetable is released. Both the provisional and final timetable are posted on University noticeboards and on the World Wide 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 NewSouth Student *Online* for full details relating to assessment and the conduct of examinations.

Postgraduate Research Students

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

- supervision
- review of progress
- thesis 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 *Guidelines for the Supervision of Postgraduate Research*. The guidelines are available at http://www.student.unsw.edu.au/studentguide/guide.pdf

Academic Standing

Overview

In October 1999, the Academic Board adopted a new system called Academic Standing to replace Show Cause. Academic Standing, consisting of good standing and several other levels, will be assigned to students at the end of each main session. Movement between levels is based on progress, measured by proportion of load passed (undergraduate), or cumulative number of failures (postgraduate). Research and non-award students do not participate in the Academic Standing scheme. The Program Authority assigns an adviser to each student not in good standing. Continued poor progress can lead to suspension (one year with automatic re-admission) or exclusion (two years without automatic re-admission).

Academic Standing Rules for Undergraduate Students

Levels

Academic standing levels for undergraduate students are

Good: the student's current progress is deemed satisfactory. Undefined standing (as when a student is first admitted) is also assumed to be good standing.

Referral: it is recommended that the student consult their assigned adviser.

Probation 1, Probation 2: the student must consult their assigned adviser, who approves the next semester's enrolment.

Suspension: the student is not permitted to enrol for one year.

Probation 3: an additional probation level that applies after return from suspension.

Exclusion: the student is not permitted to enrol for two years, and must reapply for admission after that period.

Unsatisfactory Progress

Students are assigned a level of standing based on their previous standing and their progress in the current (main) semester. Progress is either satisfactory, unsatisfactory, nil, or undefined.

Satisfactory: the student has attempted more than 6 units of credit and passed at least 50% of the attempted load.

Nil: the student has attempted more than 6 units of credit and failed all courses.

Unsatisfactory: the student has attempted more than 6 units of credit and failed more than 50% of the attempted load (but not all attempted courses); or has attempted up to 6 units of credit and has failed all courses.

If insufficient load is attempted, the student retains the previous semester's standing. Standing for students with unresolved results cannot always be determined. Depending on the session's performance a student may move down or up the levels of academic standing.

Table 1 Progress Rules

Number of units attempted	Number of units passed	Progress
0		**Indeterminate**
6 units or fewer	Some	**Indeterminate**
6 units or fewer	None	**Poor**
More than 6	At least half	**Good**
More than 6	Some, but less than half	**Poor**
More than 6	None	**Nil**

Transitions

During the first phase (prior standing is Good, Referral, Probation 1 or Probation 2), if progress in the current semester is satisfactory, standing is set to Good. If progress is unsatisfactory, standing is set one step beyond the previous level, and if it is nil, two steps are applied. Suspension is the last point in this phase.

After return from suspension, (Phase 2) satisfactory progress returns the student to Probation 1, unsatisfactory progress moves the student to the final probation level (Probation 3), and nil progress leads to exclusion.

Levels are shown in the following table:

Table 2 Levels of Academic Standing

Phase	Academic Standing	Implications for student
1	Good Standing	None
	Referral	Recommended to consult assigned adviser
	Probation 1	Enrolment must be approved by adviser
	Probation 2	As for Probation 1; last chance to avoid suspension
	Suspension	Not permitted to enrol for 2 sessions
2	Probation 3	As for Probation 1 or 2; last chance to avoid exclusion
	Exclusion	Excluded from the University for two years

Academic Standing Rules for Postgraduate Students

Levels

Academic standing levels for coursework postgraduate students are

Good: the student's current progress is deemed satisfactory. Undefined standing (as when a student is first admitted) is also assumed to be good standing.

Probation: the student must consult their assigned adviser, who approves the next semester's enrolment.

Exclusion: the student is not permitted to enrol for two years, and must reapply for admission after that period.

Setting Standing Level by Rule

Students are assigned a level of standing based only on the number of units of credit failed throughout the program.

No failures: **Good**.

Up to 16uc failed, or 18uc for programs of at least 72uc in length: **Probation**.

More than 16uc failed (18uc for longer programs): **Exclusion**.

Academic Standing Processes - 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

(1) Excluded students may apply for re-admission after the period of exclusion has expired.

(2) Applications for re-admission to a program should be made to the Universities Admissions Centre before the closing date for normal applications in the year prior to that in which re-admission is sought. Such applications will be considered by the Admissions and Re-enrolment Committee of the relevant faculty.

(3) Applications should include evidence that the circumstances which were deemed to operate against satisfactory performance at the time of exclusion are no longer operative or are reduced in intensity and/or evidence of action taken (including enrolment in program/s) to improve capacity to resume studies.

(4) Students who apply during their second year of exclusion to be re-admitted the following year to a program or course, and are unsuccessful, will have the right to appeal against the decision to the Re-enrolment Appeal Committee.

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.

Graduation information is posted on the New South Student website for each graduation period. The website is located at http://www.student.unsw.edu.au. The website includes ceremony dates and information on current graduation procedures for potential graduands and graduands. Students expecting to graduate are advised to read the information posted on the website, and ensure that their graduation details are updated correctly. For further queries, please contact (02) 9385 3092/2435 or email graduations@unsw.edu.au.

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

Graduands who are indebted to the University will not be permitted to graduate until the debt has been cleared.

Information about graduation ceremonies

The University usually holds graduation ceremonies in the following periods:

April/May – All Degrees and Diplomas

June – Degrees and Diplomas conferred at ceremonies in Hong Kong and Singapore or Malaysia

October – All Degrees and Diplomas

December – University College, Australian Defence Force Academy

December – Undergraduate and Research Degrees within the Faculty of Medicine

A schedule of graduation ceremonies, published by the Registrar, may be obtained from the Student Centre at each campus.

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; eg. 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 adviser 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 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 semester 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 will not normally be 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 ie. 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.

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. The student's 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.

What outcomes you can expect

If an application for illness or misadventure is accepted, the following action 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 which regulate our daily lives. But in addition 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 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 which may be acceptable in other situation are considered to be misconduct according to current academic usage within a University.

The following are important examples of the actions which 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, eg. 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 (eg texts) which you have not read, without acknowledging the 'secondary' source from which knowledge of them has been obtained.

These principles apply to both 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 <http://www.infonet.unsw.edu.au/poldoc/stumis.htm>.

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 http://www.infonet.unsw.edu.au/poldoc/stumis.htm

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 indicated on the enrolment program notice issued at 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 Division of Information Services (DIS) encompasses information technology and the University Library at UNSW and more information can be found at http://www.dis.unsw.edu.au.

The UNSW central web site 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 the Library, Faculty and School sites, UNSW computing and more. Students should seek support from the DIS-Connect desk on 9385-1777 or http://www.disconnect.unsw.edu.au and its "navigation" link, or through the pages **http://www.ascu.unsw.edu.au** or **http://www.misu.unsw.edu .au.** using Mosaic or Netscape. In particular, the campus is served by an optical fibre network which supports TCP/IP and IPX

The UNSW web address is http://www.unsw.edu.au

Email facilities are available to all enrolled students. Enquiries are to be made at the DIS-Connect office on the ground floor of the Library building (near the southern entrance). For remote access the University provides a good value dial-up service to students. It is also against UNSW Policy to knowingly spread Viruses. Wireless applications are also supported for Laptops in some areas of the library – you have to first see DIS-Connect to get a wireless card installed. The preferred Email client (piece of software that DIS-Connect supports is Eudora.

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 University machines as its security cannot be guaranteed by the University. It should be noted that students who alter or delete another person's work may be committing a criminal offence.

Faculty Computing Information

The Faculty of Arts and Social Sciences maintains its own Web server at http://www.arts.edu.au which provides information to prospective students, course outlines and course materials for current students and has a number of computer laboratories containing Macintosh computers with a range of software.

College of Fine Arts: Computing Resources at the College include 3 main teaching labs, a general access lab, smaller specialist labs, 2 x sound studios with ProTools 24 mix cards and hardware mixes, specialist video studios, workstations and control room. In total COFA provides over 150 generalist and specialist workstations equipped with hardware and software complimentary to course requirements. All workstations are connected to the University Wide Network, which in turn are 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, modelling, animation, CAD, desktop publishing and high end scanning. The Digital Media Lab and Moving Image Lab provide access to digital audio and video production. Decks patched into these workstations include DAT,VHS, Mini DV, DVCAM. The Research Imaging Laboratory includes a number of computers with a range of 2D and 3D digital imaging applications.

Other services at the College include 'HiROF' 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. 'The Resource Centre' provides access to field and campus equipment such as DAT recorders, mini DV cameras, digital still cameras, and portable data projectors.

In addition to the college computing facilities, COFA also encourages students to consider the purchase of a personal computer as recommended by UNSW 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

The Faculty of the Built Environment's website http://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.

The Faculty has five major computing laboratories containing around 100 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. They are a mix of high-end Pentium and Pentium2 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 has a further 20 computers which provide net access and office applications to all students.

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 on-line 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.

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 from the Web Site, providing advice to students regarding the purchase of personal computers.

The **Faculty of Commerce** has a number of laboratories located in the Quadrangle and John Goodsell Buildings, all of which are equipped with Pentium machines running Windows NT. More detailed information is available in the the Faculty 'Student IT Resource Handbook' or on the website at http://www.fce.unsw.edu.au

The Faculty of Law manages a multimedia computer laboratory equipped with 26 PCs for instructional purposes. In addition law students have access to two multi-media computer workspaces which contain 15 networked computers and smart-card controlled laser printers. Research students have access to two dedicated computer workspaces equipped with 25 multi-media computers and printing facilities.

The faculty 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, on-line 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 web site at http://www.law.unsw.edu.au

The Faculty of Medicine's website address is http://www.med.unsw.edu.au

The website for the Faculty provides detailed information about programs, courses, research interests, current events and policies. The website also contains links to additional information resources. The Faculty maintains many PC and Macintosh computer laboratories for student access, both on campus and in the Faculty's teaching hospitals. Students can access the Web, email, MS Office and educational applications from these computers.

Within the **Faculty of Science**, each of the Schools manages or has access to undergraduate computing laboratories equipped with a combination of X-terminals, PCs and Macintoshes. These are connected through the Campus-Wide Network, and are used extensively in undergraduate teaching and in providing email access to all students.

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 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.

Rules for the Use of Computing and Electronic Communications Facilities by 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.

Rules

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:

i. 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;

ii. computing facilities maintained by other bodies but available for use through an agreement or agreements with UNSW; and

iii. 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:

a. the deliberate or negligent preparing, storing, displaying of racist, pornographic or other offensive material;

b. 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.

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 full-time study. Further details can be obtained from NewSouth Q or by phoning the Scholarships, Loans and Research Students Office. (9385 3100/3101/1462/1636/3807 fax: 9385 3732 scholarships@unsw.edu.au

New scholarships are advertised in the University publication 'Focus' and on noticeboards in Schools, and outside NewSouth Q. Information about scholarships can also be obtained from the UNSW Calendar and the web site www.infonet.unsw.edu.au/unsw/academic/schopriz/httoc.htm

Textbooks

Text and reference books are not listed in this Handbook. This information is available on the World Wide Web (WWW) at: www.bookshop.unsw.edu.au/textlist.html

Contact Details

It is essential that students maintain on NewSouth Student *Online* 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.

All communications from the University will be sent to either an email address or to the postal address except when arrangements are otherwise made.

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;
- the Code of Practice - Students with Disabilities; and
- Discrimination and Harassment Grievance Procedures for Students.

All of these can be found on the Equity and Diversity website http://www.equity.unsw.edu.au/policies.html or are available from the Equity and Diversity Unit, Tel: 9385 4734, email: equity-diversity@unsw.edu.au, location: Room 2008, 2nd floor, East Wing, Quadrangle Building.

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.

Services for Equity Group and Educationally Disadvantaged Students

The University 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.

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:

(i) 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.

ii) 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.

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

(iv) 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 may determine the conditions under which access may be granted.

(v) Where examination question papers or other forms of assessment need to be kept confidential (eg 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.

(vi) 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 9385 2860 or the web at http://www.infonet.unsw.edu.au/admin/pmu/foi.htm

Procedures for the Resolution of Student 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 for the re-enrolment rules for undergraduate students or for decisions on allegations of academic misconduct are not affected by these procedures. Information on these procedures is available in the *Calendar*, in the *Student Guide* or from NewSouth Q in the Chancellery.

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:

Grievance Procedure

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.

Step 4

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 5

If the student is still dissatisfied, an appeal may be lodged in writing with the Presiding Member of the Postgraduate or Undergraduate Studies Committee 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 Postgraduate or Undergraduate Studies Committee, this appeal will be heard by an Appeal Sub-Committee, empanelled for the purpose by the Presiding Member of the appropriate Studies 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 Postgraduate or Undergraduate Studies Committee, 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 Discrimination and Harassment Grievance Policy and Procedures can be found on the UNSW website at http://www.infonet.unsw.edu.au/poldoc/studegrv.htm

For further advice please contact the Equity and Diversity Unit on Tel: 9385 4734, email: **equity-diversity@unsw.edu.au**

Occupational Health and Safety on Campus

The University'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. Special requirements and training apply to students undertaking work with radioactive substances, ionising radiation apparatus, lasers or genetically manipulated material. Students need to read the AS/NZS2243 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 web page http://www.riskman.unsw.edu.au
- Students need to be aware of the OHS policy guidelines that relate to their area of work including policies on OHS accountability, hazardous substances, bio-safety carcinogens 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 http://www.riskman.unsw.edu.au/ohs/hsub.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 student representatives are nominated for the school 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.
- All students have obligations as 'persons' under 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 following website: http://www.austlii.edu.au under NSW Acts and Consolidated regulations.

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 http://www.copyright.unsw.edu.au for further information.

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 Health Department has a policy that all students undertaking clinical placements or 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. This check will be conducted by the NSW Police Service and will be co-ordinated by the Department of Health.

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 vaccination and infection control.

An information sheet is available from your program officer and 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 New South Wales Government school.

Contact your program co-ordinator 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 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

Student Clubs and Societies

Students have the opportunity of joining a wide range of clubs and societies. Many of these are affiliated with the Students' Union. There are numerous religious, social and cultural clubs and also many sporting clubs which are affiliated with the Sports Association.

Clubs and societies seeking to use the name of the University in their title, or seeking University recognition, must submit their constitutions to either the Students' Union or the Sports Association if they wish to be affiliated with either of these bodies, or to the Registrar for approval by the University Council.

List of Societies and Clubs by Faculty:

Faculty of Arts & Social Sciences

For information about the following societies, contact the individual schools/departments:

- The French Society
- The German Society
- The Hispania Society
- The History Students Association
- The Indonesia-Australia Forum

- Kino: The UNSW Film Society
- The Music Students Society
- The New South Wales University Theatrical Society
- The Politics and International Relations Students Association
- The Russian Student Society
- The Sociological Society

Faculty of the Built Environment

- BEAT (Built Environment Action Team)
- TAC (The Architecture Club)
- BUGS (Building Undergraduate Society)
- IDSOC (Industrial Design Society)
- SOLA (Society of Landscape Architects)
- OOPS (Organisation of Planning Students)

Faculty of Commerce and Economics

- Accounting Students' Register- CPA Australia: ph. (02) 9375 6200 or (02) 9385 5812, http:// www.cpaonline.com.au
- AIESEC: Tel: (02) 9385 5893 or fax: (02) 9385 5798
- The Advertising Federation of Australia: http://www.afa.org.au, email: afamail@afa.org.au
- Australian Marketing Institute (AMI): Tel: 1800 240 264 or fax: 1800 241 264, http://www.ami.org.au
- Banking Students' Register: Tel: (03) 9602 5811
- Commerce and Economics Society: email: com.eco.soc@unsws.edu.au
- Council of Australian Tourism Students (CATS): Contact the School of Marketing UNSW
- Economic Society of Australia: Tel/fax: 9988 0844, email: ecosoc@efs.mq.edu.au
- Hospitality Sales and Marketing Association (NSW): 02 96844820
- The Tourism and Hospitality (HOSPO) Society: Contact the School of Marketing
- Institute of Actuaries of Australia: Tel: 61 2 9233 3466, fax: 61 2 9233 3446, email: insact@actuaries.asn.au, or WWW http://www.actuaries.asn.au/
- Industrial Relations Society of New South Wales: Tel: (02) 9630 5211, fax: (02) 9630 5233,

  email: IRSNSW@bigpond.com
- Market Research Society of Australia NSW Division: Tel: (02) 9955 4830, fax: (02) 9955 5746, email:sydney@bigpond.com
- The Radio Marketing Bureau: Tel: (02) 9906-5944 fax: (02) 9906-5128, http://www.radiomarketing.com.au, email: rmb@radiomarketing.com.au
- Statistical Society of Australia: New South Wales Branch: Tel: (02) 4921 5518, fax: (02) 4921 7063, stalp@scriabin.newcastle.edu.au

Faculty of Engineering

The various Undergraduate Societies promote the interests of students within the Faculty of Engineering:

- Biomedical Engineering Society
- Chemical Engineering Undergraduate Society (CEUS)
- Civil and Environmental Engineering Society (CEVSOC)
- Computing Science Society (COMPSOC)
- Electrical Engineering Society (ELSOC)
- Geomatic Engineering Society (GSPOT)
- Industrial Chemistry Undergraduate Society (ICUS)
- Mechanical Engineering Society (MECHSOC)
- The Mining Engineering Society
- Petroleum Engineering Society

Students are encouraged to participate in the activities of their societies. Enquiries should be directed initially to the general offices of the respective Schools.

Faculty of Medicine

- Medical Students Society (MEDSOC) http://www.med.unsw.edu.au/medsoc
- Rural Allied Health and Medical Society (RAHMS) http://clinical.med.unsw.edu.au/rural

Faculty of Science

- Aviation Society
- Biotechnology and Bioprocess Engineering Society (BABESOC)
- Business Information Technology Student Association (BITSA)
- Environmental Science Student Society (ENVIROSOC)
- Food Science Association
- Industrial Chemistry Undergraduate Society (ICUS)
- Information Systems Student Society (ISSS)
- LIFESOC – Society for Advanced Life Science students
- Materials Science Society (MATSOC)
- Media and Communications Society
- Medical Science Society
- Optometry Students Society
- Physics Student Society (PHYSOC)
- Student Psychology Society (PSYCHSOC)
- The Geographical Society
- UNSW Geological Society (ROCKSOC)
- Zoology Students of UNSW Society (ZOOSOC)

Library Facilities

Library Information can be found on the UNSW web site http://www.library.unsw.edu.au During the academic year the Library is open from 8.00 am to 10.00 pm Monday to Thursday, 8.00 am to 6.00 pm on Friday and 12.00 pm to 5.00 pm Saturday and Sunday. During vacations, these hours will vary.

The Open Reserve Section houses books and other materials which are required reading. Lecture cassettes are also available. Study Kits, which are collections of required readings, are available for purchase from Unicopy, Level 2.

Photocopying facilities are available at Unicopy, the main photocopying area on Level 2; in each of the special subject libraries; and in Open Reserve. Change and assistance are available from Unicopy staff on Level 2. The multimedia resources service on Level 3 includes multimedia items, videos, cassette tapes and newspapers.

The Reader Education program provides orientation tours and introductory library research method lectures to students. Library tours are available at the beginning of Session 1 and self-guided tours are available throughout the year.

Staff assisted services are available after 10.00 am, including help with catalogues, CD Roms, inter-library loans, maps and online searching. An information skills program is in place with emphasis on developing basic information access and management skills for first year and advanced skills for final year and postgraduate students.

The Library's catalogue and selected CD-Rom databases are available over the Campus Wide Network.

Although any of the university libraries may meet specific needs, the staff and students of the various Faculties are best served by the following libraries:

Faculty of Arts and Social Sciences and Faculty of Commerce and Economics are best served by The Social Sciences and Humanities Library located on levels 3 and 4 of the library building. Librarian: Pam O'Brien. Materials required by students in the Department of Legal Studies and Taxation are held in the Open Reserve Section and an extensive collection on taxation is held in the Law Library.

The College of Fine Arts is best served by the Clement Semmler Library located at the College of Fine Arts, Paddington. The Library has a strong collection of books and serials on the visual arts, design, art and design education. It also has a substantial audiovisual collection which includes slides, video cassettes and interactive CD-ROMs. Access is via the UNSW Library's online catalogue and COFA online slide catalogue, Artscan.

Research is supported by a wide range of databases available online via the UNSW Library and by in-house indexes to Australian art material. Professional library staff are available to help students and staff make the best of these resources.

More information may be found on the Library's web page at http://www.cofa.unsw.edu.au/units/library/

Faculty of Law The Law Library is situated on the eighth and ninth levels of the Library Tower. During the first week of session, guided tours of the Library are conducted for all first year students as a component of Legal Research and Writing.

The librarians and the other staff members are always ready to assist readers to make the best use of the Library's collection. Further useful information may be found in the Library Guide, on Laws home page: http://www.library.unsw.edu.au/~law/law/html

The Faculty of Law acknowledges generous sponsorship of the Law Library by the law firm Freehill, Hollingdale & Page.

Faculties of Science, Engineering, and the Built Environment are best served by The Physical Sciences Library on Levels 5,6 and 7 of the Library Tower. Physical Sciences Librarian: Rhonda Langford.

Faculties of Science and Medicine are best served by the Biomedical Library located on Levels 2,3 and 4 of the Matthews Building Annexe. Professional staff are available at the Information Desk on Level 2 to provide reference services and to assist in the use of the catalogues. Instructional classes in the use of the library and specific subject material can be arranged through the Information Desk. Serials in the Biomedical Library are shelved in alphabetical order by title and carry the prefix MB or MBQ. Details about Biomedical Library books, serials and audiovisual material can be found in the Library Catalogue.

In addition, the Biomedical Library offers the following services: literature searches; on-site and remote access to a wide range of bibliographic databases; and a document supply service for external and remote students. Biomedical Librarian: Jill Denholm.

It is closely associated with the libraries of the teaching hospitals of the University and with the Curran Foundation Library at the Garvan Institute of Medical Research.

In addition, the Biomedical Library provides web access (see web address below) to a wide range of biomedical databases, full text electronic journals, and the best medical and life science web resources.

Two computer laboratories (a Pentium Lab and an Imac Lab) are available for the use of students from the Faculty of Science and the Faculty of Medicine (swipecard access needs to be arranged - ask at the Biomedical Library for more details). The labs provide access to the Internet, Word, Excel and to teaching programs provided by academic staff.

The Library provides special services for external students and remote users. Details of these services are listed on the Library's home page.

http://www.library.unsw.edu.au/~biomed/biomed.html

The Biomedical Library homepage facilities easy access from the desktop for staff and students, both on campus and off campus, to databases, electronic fulltext journals (click on electronic resources), and subject guides, developed to assist teaching and learning (click on subject links).

Support for Students

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.

Contact Details

The Learning Centre, level 2, Library
Tel: +61 2 9385 3890

The Independent Learning Centre
Hut F9A Lower Campus
Tel: +61 2 9385 4288
Website: http://www.lc.unsw.edu.au

Counselling Service and Compass

The Counselling Service and Compass focus on *helping students to help themselves* by enhancing their personal or academic development. The programs and services are available free of charge to students. The Counselling Service provides confidential and professional consultations for any student who experiences personal or academic difficulties during their university enrolment.

Counselling for individuals on personal and academic matters

Orientation to uni and UNIPREP programs

Motivational support

Personal skills development

Advice on university administrative procedures and other issues plus referrals to appropriate persons or organisations

Stress and anxiety management

Staff consultancy on student related issues also provides seminars and workshops for students covering topics such as procrastination, time management, management of various types of anxiety and depression.

Contact Us:

COFA - Tel: 9385 0733 or go to Room 05, Ground Floor, G Block.

Kensington campus - Tel: 9385 5418 or use the Drop-In service on Level 2, East Wing, Quadrangle Building.

Website resources and information: http://www.counselling.unsw.edu.au

Careers and Employment

Careers and Employment offers the following services:

- Careers and Employment Online for: job vacancies (graduate, vacation and part-time), an employer database, 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);
- 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 employers, work and study overseas, job search skills, further education and training, professional associations;
- Computer access for job searching on the net and emailing employers;
- Direct mail and email service for employers to forward information on opportunities to students (make sure your contact details are correct, and that you access your email);
- Careers Expo (March 26, 2002) where students can meet employers;
- Two Graduate Recruitment Programs (April and August) where final year students apply to organisations for employment.
- Graduate Careers Forum for Arts and Social Sciences, Science and College of Fine Arts final year students.

Contact Careers and Employment
Level 2, East Wing
Quadrangle Building
Tel: 9385 5429
Fax: 9385 6145
Email: careers@unsw.edu.au
URL: www.careers.unsw.edu.au
Opening hours
Monday to Friday: 9am - 5pm

Disability Services

Students with disabilities who require any services should contact Laurie Alsop, Equity Officer (Disability), at the Equity and Diversity Unit on tel: 9385 4734, email: l.alsop@unsw.edu.au

Services include the provision of notetakers, readers, sign-interpreters, examination provisions, assistive technology, texts in alternative formats, liaison with academic staff, an electronic mailing list, and access to the Disability Resource Centre.

Whenever possible, students requiring services should contact Laurie Alsop prior to the commencement of classes, to facilitate the organisation of those services.

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.

(i) 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 World Wide Web or disks; and graduation ceremonies provided that the student does not need to attend the ceremony to graduate.

(ii) 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 semesters which allow accelerated completion of programs or which are offered for remedial purposes, provided that such courses are also available within normal semester periods on a Higher Education Contribution Scheme (HECS) liable basis.

(iii) 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.

(iv) 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 extension 3154.

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, Housing Studies, and Media Education. Professionally oriented programs are offered in such fields as the Master of Social Work in Couple and Family Therapy, 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.

Neil Harpley
Acting Dean
Faculty of Arts and Social Sciences

Faculty of Arts and Social Sciences

Contents

Faculty Information and Assistance

Some people who can help you 32
Admission 32
Advanced Standing 32
Faculty Computing Facilities 32
Faculty Timetable 32
The Learning Centre 32
Program Leave 32
Progression 32
Reenrolment Procedures 32

Program and Course Information

Postgraduate Study 32
Doctor of Philosophy Degree 32
Masters by Research 33
Graduate Diploma in Arts by Research 33

Programs and Courses

Asian Studies 34
Chinese-English Translation and Interpreting 35
Chinese Studies 35
Cognitive Science 35
Couple and Family Therapy 35
English 36
Environmental Studies 37
History 38
International Relations 38
Japanese Applied Linguistics 38
Japanese Studies 39
Linguistics 39
Media Education 40
New Media 41
Theatre 41
Master of Education Degrees 41
Doctor of Education 42
Graduate Diploma in Education (Secondary) 42
Master of Housing Studies
Graduate Diploma in Housing Studies 43
Master of Music, Graduate Diploma in Music
and Graduate Certificate in Music 43
Master of Policy Studies
Graduate Diploma in Policy Studies
Graduate Certificate in Policy Studies
Graduate Certificate in Program Evaluation 44
Master of Professional Ethics
Graduate Diploma in Professional Ethics 44
Graduate Certificates, Graduate Diplomas
and Masters Programs in Social Work 45

Conditions for the Award of Degrees

Higher Degrees 45
Doctor of Philosophy (PhD) 46
Doctor of Education (EdD) 46
Master of Arts by Research 47
Master of Education by Research 47
Master of Educational Administration by Research 47
Master of Music by Research 47
Master of Music Education by Research 47
Master of Social Science by Research 47
Master of Social Work (MSW) by Research 48
Graduate Diploma in Arts by Research (GradDipArts) 49

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, e-mail 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 **http://www.arts.unsw.edu.au** which provides information to prospective students as well as course information for current students.Admission

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 10 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. Limited 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 able 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.

Reenrolment Procedures

All reenrolling postgraduate coursework students are expected to reenrol via the Web in 2002. Room G69 in the Morven Brown Building is available to students in the Faculty for reenrolment purposes.

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

Program and Course Information

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 Housing Studies, 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, Housing Studies, 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 Bachelor 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
1970	Education
1200	English
1235	European Studies
1210	French
1231	German Studies
1215	Health, Sexuality and Culture
1240	History
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
1251	Science and Technology 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 2393
Master of Education	Program 2394
Master of Educational Administration	Program 2395
Master of Music	Program 2396
Master of Music Education	Program 2397
Master of Social Science	Program 2398

These are Masters programs which are research degrees involving three courses and a research thesis or project. The degree is completed in three 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.

Contacts for 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	Dr Katherine Hoekman Email: k.hoekman@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	A/Professor Olaf Reinhardt Email: o.reinhardt@unsw.edu.au
Greek, Modern	Dr Eleni Amvrazi Email: e.amvrazi@unsw.edu.au
History	A/Professor John Gascoigne Email: history@unsw.edu.au
Indonesian Studies	Dr Rochayah Machali Email: r.machali@unsw.edu.au
Japanese & Korean Studies	Dr Chihiro Kinoshita Thomson Email: c.thomson@unsw.edu.au
Linguistics	Dr Rod Gardner Email: rod.gardner@unsw.edu.au
Media & Communications	Professor Philip Bell Email: mdcm@unsw.edu.au
Music and Music Education	A/Professor Robert Walker Email: music@unsw.edu.au
Philosophy	Dr Ros Diprose Email: r.diprose@unsw.edu.au
Politics & International Relations	Professor Marc Williams Email: marc.williams@unsw.edu.au
Professional Ethics	A/Professor Stephen Cohen Email: s.cohen@unsw.edu.au
Science & Technology Studies	Dr John Schuster E-mail STS@unsw.edu.au
Social Science & Policy	Dr Hal Colebatch Email: h.colebatch@unsw.edu.au
Social Work	Dr Richard Roberts Email: r.roberts@unsw.edu.au
Sociology	Ms Frances Lovejoy Email: sociology@unsw.edu.au
Spanish & Latin American Studies	Dr Diana Palaversich Email: d.palaversich@unsw.edu.au
Theatre, Film and Dance	A/Professor Jim Davis Email: thfida@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
Couple and Family Therapy
Creative Writing (School of English)
English
International Relations
Japanese Applied Linguistics
Japanese Studies
Linguistics, Applied
Linguistics, TESOL
Media Education
New Media
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
Creative Writing (School of English)
English
History, Applied
International Relations
Japanese Applied Linguistics
Japanese Studies
Linguistics, Applied
Linguistics, TESOL
Media Education
New Media
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
History, Applied
International Relations
Japanese Applied Linguistics
Japanese Studies
Linguistics, Applied
Linguistics, TESOL
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 Housing Studies by Coursework
Graduate Diploma in Housing Studies by Coursework

The Master of Housing Studies (MHS – program **8238**) and the Graduate Diploma in Housing Studies (GradDipHS – program **5238**) are offered jointly by the School of Social Science and Policy at the University of New South Wales and by the Department of Architecture at the University of Sydney. They are designed to provide housing professionals with an interdisciplinary program in housing studies to prepare them for high level policy and management roles in the housing sector.

The programs will cover a wide range of fields of housing studies and enable students to acquire a broad range of skills useful for working at a high level in the housing sector.

The MHS degree will involve core studies of policy analysis, history, politics, economics, elective courses and a major project. The degree is open to graduates in a relevant field or with extensive experience in the housing sector.

The Graduate Diploma will involve four core components.

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 two specialist areas: Couple and Family Therapy and International Social Development.

For information on Couple and Family Therapy and International Social Development refer to the Graduate Study Social Work section.

Programs and Courses

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 four sessions (part-time). The maximum period of enrolment is four sessions (full-time) and six sessions (part-time).

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 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. Progress will be reviewed at the 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 why they should be permitted to continue.

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
Co-ordinator: Associate Professor David Reeve (Department of Chinese and Indonesian Studies)

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 and **ASIA5100,** Research Project.

Core Courses

ASIA5001	Approaches to Asia	S1
ASIA5100	Research Project	S1 & S2

Optional Courses

ASIA5200	Reading Program (Asian Studies)	S1 & S2
CHIN5000	China's Provinces	S2
HIST5204	Politics and Society in Indonesia	S1
HIST5233	Modern China: History and Historiography	S2
JAPN5002	Trends & Issues in Teaching & Learning Japanese as a Foreign Language	S1
JAPN5005	The Social Construction of Japanese Identities	S2
LING5007	Translation: Theory and Practice	S2
POLS5108	Regional Orders in the Asia Pacific	S1
POLS5121	International Institutions	S2
POLS5127	China and Asia-Pacific Security	S1
POLS5129	Great Powers and World Orders	S2

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

Coordinators: Dr Jon von Kowallis, 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, CHIN5910 and LING5006. Students must complete all six courses to qualify for the MA, and four 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.

Chinese Studies

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

The Master of Arts in Chinese Studies (program **8225**, plan code **CHINAS8225**) aims to provide an applied interdisciplinary approach to the study of Contemporary China and advanced Chinese language usage. It is intended for students who wish to upgrade their practical knowledge of contemporary China and their vocationally relevant skills in Chinese language. Students enrolling in this program are required to have third year-level proficiency in Chinese.

Students must complete six courses to qualify for the MA and four courses to qualify for the Graduate Diploma (program **5225**, plan code **CHINAS5225),** including two of the Chinese Studies options. They may graduate with a Graduate Certificate (program **7325**, plan code **CHINAS7325**) after the successful completion of two courses, including one of the Chinese Studies options.

Chinese Studies Options

CHIN5000	China's Provinces	S2
CHIN5900	Chinese-English Translation Project	S1
CHIN5901	Chinese-English Professional Interpreting Program	S2
CHIN5902	Chinese In-Country Research Project I	S1
CHIN5903	Chinese In-Country Research Project II	S2
CHIN5905	Chinese Socio-Linguistics	S2
CHIN5906	Chinese Business and Management	S1
CHIN5908	Chinese-Language Management Case Studies	S1
CHIN5909	Chinese for Commercial Use	S2
CHIN5910	Chinese Poetry and Poetics: Theories of Translation	S1

Electives

HIST5233	Modern China: History and Historiography	S2
LING5006	Bilingualism	S1
POLS5127	China and Asia-Pacific Security	S1

Cognitive Science

Available: GradCertArts
Co-ordinator: Dr Peter Slezak, School of Science and Technology Studies
Email: p.slezak@unsw.edu.au

Graduate Certificate in Arts

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 Graduate Certificate (program **7325,** plan code **HPSTAS7325**) 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.

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

Courses

HPST5100
Dimensions of Cognitive Science S1

HPST5200
Current Research Issues in Cognitive Science S2

Couple and Family Therapy

Available: MA
Co-ordinator: Carmel Flaskas

Master of Arts

Students (available on a part-time basis only) complete the Masters degree (program **8228**) in 2 years. Students are required to complete 8 courses.

The program is taught jointly by the School of Social Work and the clinical training organisation Relationships Australia (NSW). The first year of the program is conducted off-campus using the training facilities of Relationships Australia (NSW); the second year of the program is on-campus.

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 **SOCW7860**, **7861**, **7862**, **7863** and **7864** must be successfully completed for a student to become eligible to exit with the Graduate Diploma award.

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

Students are required to take the following courses:

Year 1

Session 1		**UOC**
SOCW7860	Theory of Couple and Family Therapy A	4
SOCW7861	Clinical Studies A	8
Session 2		
SOCW7862	Theory of Couple and Family Therapy B	4
SOCW7863	Clinical Studies B	8

Year 2

Session 1		
SOCW7864	Contemporary Theory and Practice Issues	8
SOCW7865	Research Issues and Methodologies A	4
Session 2		
SOCW7866	Research Issues and Methodologies B	4
SOCW7868	Couple and Family Therapy Dissertation	8

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 BA(Pass) degree of good quality (i.e. with Credit grades or better or equivalent), and professional training and experience in counselling.

Courses

SOCW7860	Theory of Couple and Family Therapy A Session 1
SOCW7861	Clinical Studies A Session 1
SOCW7862	Theory of Couple and Family Therapy B Session 2
SOCW7863	Clinical Studies B Session 2
SOCW7864	Contemporary Theory and Practice Issues Session 1
SOCW7865	Research Issues and Methodologies A Session 1
SOCW7866	Research Issues and Methodologies B Session 2
SOCW7868	Couple and Family Dissertation Session 2

English

Available: MA; GradDipArts; GradCertArts in English; Creative Writing
Future Offerings: MA; GradDipArts; GradCertArts in Children's Literature; Language and Literacy; Shakespeare

Postgraduate Degrees available

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, and from 2002 the 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.

Detailed information

Detailed information about all our coursework postgraduate programs, including timetables and textbook lists, may be obtained from our website (www.arts.unsw.edu.au/english/), or by requesting a copy of the School's Postgraduate Handbook from the School Office (Room 145 Morven Brown Building, Tel: (02) 9385-2298; Fax: (02) 9385-1047; Email english@unsw.edu.au). The Head of School, Dr Suzanne Eggins, is also available to discuss your proposed program (Tel: (02) 9385-2298 to make an appointment).

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. From 2002 the program includes new 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

ENGL5001	Critical Theory A	S1
ENGL5013	Shakespeare on His Stage	S1
ENGL5024	Dickens and the City	S1
ENGL5031	Post-colonial Representations	S2
ENGL5032	Precocious Writing: A Study of Literary Juvenilia	S1
ENGL5033	Restoration Epic: Miton's Paradise Lost	S1
ENGL5517	Australian Children's Literature and Literacy	S2
ENGL5600	Introduction to Cultural Studies	S1
ENGL5000	Individual Reading Program	S1 & S2

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	S2
ENGL5301	Innovative Fiction	S2
ENGL5302	Intergeneric Writing	S1 & S2

Further Details

Further details may be obtained from the School handbook available from the School Office (Room 145 Morven Brown Building), from our website (www.arts.unsw.edu.au/english/), or by contacting Dr Suzanne Eggins (Head of School) at the School of English.

Tel: (02) 9385-2298; Fax: (02) 9385-1047; Email english@unsw.edu.au.

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. The diploma is offered both full time (4 hours per week over 2 sessions) or part time (2 hours per week over 4 sessions). 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

ENGL5001	Critical Theory A	S1
ENGL5013	Shakespeare on His Stage	S1
ENGL5024	Dickens and the City	S1
ENGL5031	Post-colonial Representations	S2
ENGL5032	Precocious Writing: A Study of Literary Juvenilia	S1
ENGL5033	Restoration Epic: Milton's Paradise Lost	S1
ENGL5517	Australian Children's Literature and Literacy	S2
ENGL5600	Introduction to Cultural Studies	S1

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

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

ENGL5001	Critical Theory A	S1
ENGL5013	Shakespeare on His Stage	S1
ENGL5024	Dickens and the City	S1
ENGL5031	Post-colonial Representations	S2
ENGL5032	Precocious Writing: A Study of Literary Juvenilia	S1
ENGL5033	Restoration Epic: Milton's Paradise Lost	S1
ENGL5517	Australian Children's Literature and Literacy	S2
ENGL5600	Introduction to Cultural Studies	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 3 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 four academic sessions; for part-time students it is eight academic sessions. Each course is taught in a two-hour seminar per week.

The 48 units of credit are as follows:

The 3 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	S2
ENGL5301	Innovative Fiction	S2
ENGL5302	Intergeneric Writing	S1 & S2
ENGL5303	Writing Workshop	S1

Elective Courses

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

ENGL5001	Critical Theory A	S1
ENGL5013	Shakespeare on His Stage	S1
ENGL5024	Dickens and the City	S1
ENGL5031	Post-colonial Representations	S2
ENGL5032	Precocious Writing: A Study of Literary Juvenilia	S1
ENGL5033	Restoration Epic: Milton's Paradise Lost	S1
ENGL5517	Australian Children's Literature and Literacy	S2
ENGL5600	Introduction to Cultural Studies	S1

Further Details

Further details may be obtained from the School handbook available from the School Office (Room 145 Morven Brown Building), from our website (www.arts.unsw.edu.au/english/), or by contacting Dr Suzanne Eggins (Head of School) at the School of English. Tel: (02) 9385-2298; Fax: (02) 9385-1047; Email english@unsw.edu.au.

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.

Each course is worth 8 units of credit and is one session in duration. Class contact hours are 2 per week per course.

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	S2
ENGL5301	Innovative Fiction	S2
ENGL5302	Intergeneric Writing	S1 & 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.

Each course is worth 8 units of credit and is one session in duration. Class contact hours are 2 per week per course.

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

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

Planned Future Offerings

Subject to student interest, the School intends to offer two additional coursework programs in future years: a Masters/GradDip/GradCert in Children's Literature, Language & Literacy; and a Masters/GradDip/GradCert in Shakespeare. Although enrolment in these full programs is not available in 2002, interested students should note that one core course from each program is available in 2002 to students enrolled in either the general English MA or the Creative Writing MA. The two relevant courses are:

ENGL5013	Shakespeare on His Stage	S1
ENGL5517	Australian Children's Literature and Literacy	S2

Current or intending students are invited to register their interest in either the Children's Literature, Language & Literacy or the Shakespeare programs. If and when these programs are offered, it is likely that students would be able to count courses already taken in the School towards the programs, provided core and elective course requirements for each program are met.

Environmental Studies

Available: GradCertArts
Co-ordinator: Dr Paul Brown, School of Science and Technology Studies, Rm MB LG16
Tel: (02) 9385 1497
Email: paul.brown@unsw.edu.au

This Graduate Certificate (program **7325,** plan code **SCTSBS7325**) 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 recently introduced Master of Environmental Management coordinated by the Institute of Environmental Studies (Contact: Ronnie Harding Ph: (02) 9385 5687, Email: r.harding@unsw.edu.au). You should enquire about this as you proceed through the Graduate Certificate in Environmental Policy since you may want to articulate your current courses with the new 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: SCTS5315 Society, Environmental Policy and Sustainability, and SCTS5316 Environmental and Technological Risk Controversies.

Duration

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

Courses

SCTS5315	Society, Environmental Policy and Sustainability	S1
SCTS5316	Environmental and Technological Risk Controversies	S2

History

Available: GradDipArts; GradCertArts in Applied History
Co-ordinator: Associate Professor John Gascoigne

Graduate Diploma in Arts in Applied History

The Graduate Diploma in Applied History (program **5225**, plan code **HISTBS5225**) has a focus on research methods, and in the application of these methods of historical research to public policy. It amplifies opportunities for research training in and with the use of historical data; allows for application of research techniques and analysis in areas where knowledge of historical records can be useful vocationally, and includes an introduction to practical and theoretical aspects of the use of historical research for archives and record keeping.

Prerequisites

The normal requirement for entry to the Graduate Diploma in Applied History is a BA with a major in History, preferably at credit level or above. Applications from other appropriately qualified people will be considered on an individual basis. Entry to individual courses may be permitted at the discretion of the Head of School.

Program requirements

Students are required to undertake 4 courses (32 units of credit), comprising three core courses plus one elective. Each course is worth 8 units of credit and is one session's duration. Class contact hours are 2 per week per course.

Core Courses

HIST5310	Recording Voices: Oral History and the Interview	S2
HIST5311	Historical Research and Public Policy	S2
HIST5312	Archival Research Strategies	S1

Elective Courses

HIST5301 Reading Program in History S1 & S2

or one applied history related course from the MA programs in the School of Social Science and Policy; School of Politics and International Relations; or the MA in Asian Studies as approved by the Head of School.

Graduate Certificate in Arts in Applied History

The Graduate Certificate in Applied History (program **7325**, plan code **HISTBS7325**) enables students to do a variety of courses to amplify research techniques and training for a variety of public purposes through public policy analysis; oral history; and historical archives and record keeping.

Prerequisites

See prerequisites for the Graduate Diploma in Applied History.

Program requirements

In the Graduate Certificate in Applied History students are required to undertake 2 courses (16 units of credit) from the list below. Each course is worth 8 units of credit and is one session's duration. Class contact hours are 2 per week per course.

Courses

HIST5310	Recording Voices: Oral History and the Interview	S2
HIST5311	Historical Research and Public Policy	S2
HIST5312	Archival Research Strategies	S1

International Relations

Available: MA; GradDipArts; GradCertArts
Co-ordinator: Professor Marc Williams (Politics and International Relations)
Email: marc.williams@unsw.edu.au
Administration: Pat Hall-Ingrey
Tel: 93853786
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 Co-ordinator, 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 S	2

Elective Courses

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

POLS5100	Issues in Australian Public Policy: Internship Program	S2
POLS5103	Law, War and Justice	S2
POLS5106	Crisis Diplomacy: Origin and Termination of War	S2
POLS5108	Regional Orders in the Asia Pacific	S1
POLS5121	International Institutions	S2
POLS5125	The Politics of International Law	S2
POLS5127	China and Asia-Pacific Security	S1
POLS5128	Australia and the Global Political Economy	S1
POLS5129	Great Powers and World Orders	S2
POLS5113	Research Project	S1 or S2

Graduate Diploma in Arts

Co-ordinator: Professor Marc Williams

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

Co-ordinator: Professor Marc Williams

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
Co-ordinator: Dr Chihiro Kinoshita Thomson

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 successfully complete six courses (48 units of credit): two JAPN courses from List A and two LING courses from List B plus two courses from either List A, List B or 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 2 courses from List A:

List A

JAPN5002	Trends and Issues in Teaching and Learning Japanese as a Foreign Language	S2
JAPN5006	Japanese Sociolinguistics	S1
JAPN5011	Japanese Teaching Practicum	S1 & S2

plus 2 courses from List B:

List B

LING5002	Language Teaching Methodology	S1
LING5003	Testing and Evaluation	S1
LING5004	Syllabus Design	S2
LING5019	Language Acquisition	S2

plus 2 additional courses from either List A, List B or List C:

List C

JAPN5000	Special Project	S1 & S2
JAPN5003	Japanese In-Country Research Project I	S1 & S2
JAPN5004	Japanese In-Country Research Project II	S1 & S2
JAPN5005	The Social Construction Of Japanese Identities	S1
JAPN5007	Creative Reading and Writing A	S1
JAPN5008	Creative Reading and Writing B	S2
LING5006	Bilingualism	S1
LING5007	Translation: Theory and Practice	S2
LING5011	Functional Grammar	S2
LING5015	Discourse Analysis	S2

Graduate Diploma in Arts

The Graduate Diploma in Japanese Applied Linguistics (program **5225**, plan code **JAPNCS5225**) 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 successfully 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 **JAPNCS7325**) 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 successfully complete two courses from the MA in Japanese Applied Linguistics program - 1 JAPN course from List A and 1 LING course from List B.

Japanese Studies

Available: MA; GradDipArts; GradCertArts
Co-ordinator: Dr Kazuhiro Teruya

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 Japan and upgrade their vocationally relevant language skills in Japanese. Areas of specialisation include intercultural communication, linguistics, applied linguistics and cultural studies. 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 successfully complete six courses (48 units of credit). The program may be taken full-time or part-time.

Courses

JAPN5000	Special Project	S1 & S2
JAPN5002	Trends and Issues in Teaching and Learning Japanese as a Foreign Language	S2
JAPN5003	Japanese In-Country Research Project I	S1 & S2
JAPN5004	Japanese In-Country Research Project II	S1 & S2
JAPN5005	The Social Construction of Japanese Identities	S1
JAPN5006	Japanese Sociolinguistics	S1
JAPN5007	Creative Reading and Writing A	S1
JAPN5008	Creative Reading and Writing B	S2
JAPN5010	Japanese Business and Management	S2

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 Japan and advanced Japanese language in a communicative context.

Students will enhance their practical and theoretical knowledge of an area of specialisation of contemporary Japan and upgrade their vocationally relevant language skills in Japanese. Areas of specialisation include intercultural communication, linguistics, applied linguistics and cultural studies. 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 **JAPN5001**, **JAPN5002**, **JAPN5005** and **JAPN5006**.

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 Japan and advanced Japanese language in a communicative context.

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

Students are required to complete two courses chosen from the following - **JAPN5001**, **JAPN5002**, **JAPN5005** and **JAPN5006**.

Linguistics

Available: MA; GradDipArts; GradCertArts in Applied Linguistics and TESOL

Co-ordinator: Dr Roderick Gardner

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
LING5002	Language Teaching Methodology	S1
LING5003	Testing and Evaluation	S1
LING5004	Syllabus Design	S2
LING5005	The Structure of English	S1
LING5006	Bilingualism	S1
LING5007	Translation: Theory and Practice	S2
LING5011	Functional Grammar	S2
LING5015	Discourse Analysis	S2
LING5019	Language Acquisition	S2

Approved elective courses from outside the program

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

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

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
LING5002	Language Teaching Methodology	S1
LING5003	Testing and Evaluation	S1
LING5004	Syllabus Design	S2
LING5005	The Structure of English	S1
LING5006	Bilingualism	S1
LING5007	Translation: Theory and Practice	S2
LING5011	Functional Grammar	S2
LING5015	Discourse Analysis	S2
LING5019	Language Acquisition	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 six courses: LING5002, LING5003, LING5004; plus three from LING5005, LING5011, LING5015, LING5019 and LING5050. Applicants who require a recognised teaching qualification for ELICOS in Australia may need to take the Certificate in TESOL from the Institute of Languages at UNSW. Students who have completed this certificate will be granted exemptions for two of the required six courses for the MA in TESOL.

Core Courses

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

Elective Courses

LING5005	The Structure of English	S1
LING5011	Functional Grammar	S2
LING5015	Discourse Analysis	S2
LING5019	Language Acquisition	S2
LING5050	Special Project in TESOL	S1 & S2

Approved elective courses from outside the Program

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

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

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 four courses.

Courses

LING5002	Language Teaching Methodology	S1
LING5003	Testing Evaluation	S1
LING5004	Syllabus Design	S2
LING5005	The Structure of English	S1
LING5011	Functional Grammar	S2
LING5015	Discourse Analysis	S2
LING5019	Language Acquisition	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 program may be taken full-time (four hours per week over one semester) or part-time (two hours per week over two semesters). Students are required to complete two 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 School of Modern Language Studies Reception Office (Level 2, Morven Brown Building) or by contacting Dr Roderick Gardner (02) 9385 1454 (rod.gardner@unsw.edu.au) or Dr Barbara Mullock (02) 9385 1617 (b.mullock@unsw.edu.au), or the Administrative Assistant Ms Maria Oujo (02) 9385 2421 (m.oujo@unsw.edu.au).

Media Education

Available: MA; GradDipArts
Co-ordinator: Professor Philip Bell
Administrative Assistant: Julie Miller
Tel: (02) 9385 6811
Facsimile: (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 multimedia 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

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.

MDCM5001	New Media, Technology and Education	S2
MDCM5002	Teaching Television	S2
MDCM5003	Teaching Cinema	S1
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
Co-ordinator: Professor Philip Bell
Administrative Assistant: Julie Miller
Tel: (02) 9385 6811
Facsimile: (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 2003.

Graduate Diploma in Arts

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

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
MDCM5010	Media Production	S2
MDCM5013	New Media Criticism	S2
MDCM5014	Professional Writing – New Media	S1

Theatre

Available: MA; GradDipArts; GradCertArts
Co-ordinator: Associate Professor Jim Davis

Master of Arts

Full-time students complete the Masters degree (program **8225,** plan code **THFIDS8225**) in 1 year. Part-time students normally complete the program in between 2 and 3 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	S2
THST5107	Reading Program	S1 or S2
THST5108	Dramaturgy	S1
THST5109	Theatre and Society	S1
THST5113	Period Theatre Styles	S2
THST5122	Research Project	S1 or S2
THST5125	Theatre Historiography: Analysing and Interpreting the Theatrical Past	S1
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 1 year. Part-time students normally complete the program in between 2 and 3 years. Students in this program are required to complete four (4) 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 1 session. Part-time students complete the program in 1 year. Students in this program are required to complete two (2) of the courses listed above, with the exception of THST5122.

Master of Education Degrees

Master of Education by Research

Co-ordinator: Katherine Hoekman (Tel: 9385 1942, e-mail k.hoekman@unsw.edu.au)

The Master of Education by Research (program **2394**) 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 one-and-a-half years of full-time study (or the part-time equivalent).

Master of Education by Research in Applied Linguistics

Coordinators: Maria Varvaressos (Tel: 9385 1956, e-mail m.varvaressos@unsw.edu.au), Rod Gardner (Tel: 9385 1454, e-mail rod.gardner@unsw.edu.au)

This is a cross-disciplinary program (program **2394**, plan code **EDSTNR2394**) 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
or	
EDST5120	Qualitative Research Methodology

Elective Courses in Linguistics

LING5000	Special Project in Applied Linguistics	S1 & S2
LING5002	Language Teaching Methodology	S1
LING5003	Testing and Evaluation	S1
LING5004	Syllabus Design	S2
LING5005	The Structure of English	S1
LING5006	Bilingualism	S1
LING5011	Functional Grammar	S2
LING5015	Discourse Analysis	S2
LING5019	Language Acquisition	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

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.

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 (Tel: 9385 1956, e-mail m.varvaressos@unsw.edu.au), Rod Gardner (Tel: 9385 1454, e-mail 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	S2

Elective Courses in Linguistics

LING5000	Special Project in Applied Linguistics	S1 & S2
LING5002	Language Teaching Methodology	S1
LING5003	Testing and Evaluation	S1
LING5004	Syllabus Design	S2
LING5005	The Structure of English	S1
LING5006	Bilingualism	S1
LING5011	Functional Grammar	S2
LING5015	Discourse Analysis	S2
LING5019	Language Acquisition	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

Master of Educational Administration by Research

The degree of Master of Educational Administration by Research (program **2395**) 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 one-and-a-half 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 **EDSTBS8960**) 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 the University of New South Wales, or may receive credit for a maximum of 12 units for courses of a comparable standard successfully completed within the University of New South Wales or another recognised institution.

Master of Education Courses

EDST5101	Introduction to Design and Analysis	S1
EDST5103	Multivariate Design and Analysis	S2
EDST5104	Educational Assessment and Measurement	S1
EDST5108	Introduction to Modern Test Theory	S2
EDST5120	Qualitative Research Methodology	S2
EDST5201	Philosophical Issues in Education	S2
EDST5204	History and Philosophy in Science Education	S2
EDST5206	Professional Ethics	X1
EDST5306	Child Growth and Development	S1
EDST5308	Learning: Theory and Practice	S2
EDST5311	Principles of Industry, Commercial and Vocational Training	S1
EDST5320	Individual Differences and Education	S1
EDST5321	Motivation in Educational Settings	S2
EDST5403	Organisational Analysis and Diagnosis	S2
EDST5607	Research on the Learning and Teaching of Mathematics	S2
EDST5608	Effective Teaching and Effective Schools	S2
EDST5704	Contemporary Issues in Education	S1, S2
EDST5800	Current Issues in the Education of Intellectually Gifted Children	S1, S2
EDST5802	Introduction to the Identification of Intellectually Gifted Children	S2
EDST5803	Development and Evaluation of Programs for Intellectually Gifted Children	S1
EDST5888	Project	X1, S1, X2, S2

Master of Educational Administration Courses

Core Compulsory Course

EDST5433	Organisation Theory in Education	S1

Elective Courses

EDST5403	Organisational Analysis and Diagnosis	S2
EDST5439	Legal Aspects of Educational Administration	S1
EDST5444	Social Issues and Educational Policy	S2
EDST5445	Supervised Fieldwork in Educational Administration	S1
EDST5608	Effective Teaching and Effective Schools	S2
EDST5888	Project	X1, S1, X2, S2

Doctor of Education

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

EDST5011	Issues in Educational Management	S1
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, S2
EDST5020	Education of Intellectually Gifted Students	S1, S2
EDST5025	Organisational Learning and Research	S1, S2
EDST5027	Advanced Educational Measurement in the Social Sciences	S2
EDST5029	Philosophy, Politics & Ethics in Education	S2
EDST5031	Research Methods 1	S1, S2
EDST5032	Research Methods 2	S1, S2
EDST5801	EdD Project	S1, S2

Graduate Diploma in Education (Secondary)

Program Co-ordinator: Dr Paul Ayres (School of Education)

The program (DipEd **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 The University of New South Wales or other approved universities where their previous studies meet entry prerequisites for the selected specalisation/s.

Teaching Specialisations

The course 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

English	Mathematics
History	Science

Single Method Courses

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

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.

EDST4080	Special Education
EDST4081	Professional Issues in Teaching
EDST4090	Teaching Experience
EDST4091	Microteaching
EDST4092	Computer Skills for Teachers
EDSTXXX	Education Elective course

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 Housing Studies
Graduate Diploma in Housing Studies

School of Social Science and Policy

The graduate program in housing studies is designed to provide housing industry professionals with an opportunity to broaden their areas of specialisation to achieve a wider perspective on the housing industry and to acquire a range of new skills to enable them to contribute more effectively to the industry. The program is offered jointly with the University of Sydney and students enrolled at this University will take some of their core courses there, as well as being able to choose from a range of elective courses offered by both institutions.

The program includes a study of the policy making and implementation process with particular reference to housing, the social and economic context of housing provision in Australia and the role of governments at all levels. Elective studies include asset management, program evaluation in housing, aspects of urban design and a range of related subjects. Students complete a major project on housing in a workplace which provides an opportunity to bring the skills acquired in the course to bear on a practical problem.

Duration

The MHS (program **8238**, plan code **SLSPCS8238**) is a coursework program offered over one year full-time or two years of part-time study. The Graduate Diploma in Housing Studies (program **5238**, plan code **SLSPCS5238**) can be completed by undertaking the four core courses.

Eligibility for Admission

Applicants should hold a first degree in any field and have significant work experience in housing or a related area.

In exceptional circumstances applicants may be admitted without a first degree but with general and professional attainments acceptable to the Faculty. Satisfactory completion of the Graduate Certificate in Housing from Swinburne University of Technology could be considered to satisfy these entry requirements.

Program of Study

Four foundation units are completed in both the Master of Housing Studies and in the Graduate Diploma of Housing Studies. These foundation units are:

SLSP7001	Policy Analysis
SLSP7006	Management and Policy in Organisations

which are undertaken at this University, together with the courses

SLSP7003	Housing Culture Studies
SLSP7004	Housing Development Studies

taken at the University of Sydney.

Master of Housing Studies students also take:

- two elective studies each of six units of credit and the course SLSP7091 Housing Studies Project.

Electives currently include the following:

SLSP7011	Program Evaluation in Housing
SLSP7012	Housing Policy
SLSP7022	Housing Asset Management
SLSP7023	Housing Development and the Market
SLSP7042	Urban and Regional Policy and Governance

Courses

SLSP7001	Policy Analysis	S1
SLSP7003	Housing Culture Studies	S1
SLSP7004	Housing Development Studies	S2
SLSP7006	Management and Policy in Organisations	S2
SLSP7011	Program Evaluation in Housing	S2
SLSP7012	Housing Policy	S2
SLSP7022	Housing Asset Management	S1
SLSP7023	Housing Development and the Market	S2
SLSP7091	Housing Studies Project	S1 & S2

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

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**), you need to take MUSI5402 Suzuki Pedagogy and one other option. For the Graduate Diploma in Music (program **5226**), you take four options, and for the Master of Music (program **8226**), you take six options.

Master of Music by Coursework

MMus (program **8226**, plan code **MUSIAS8226**)

The MMus coursework program involves the successful completion of six session-length courses. Courses can be taken in any combination of options. Within these 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 **MUSIAS5226**)

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

For **Suzuki Pedagogy** (plan code **MUSICS5226)**, the student must undertake the special Suzuki core course MUSI5402 (Suzuki Pedagogy) and three electives. Options available for Suzuki Pedagogy students must be chosen in consultation with Mr Colin Watts.

Graduate Certificate in Music

GradCertMus (program **7326**, plan code **MUSIAS7326**)

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

For **Suzuki Pedagogy** (plan code **MUSICS7326**), the student must undertake the special Suzuki core course MUSI5402 (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.

Full-time students will complete the Graduate Certificate in one session. Part-time students complete this course in one year. Full-time students in the Graduate Diploma will complete the course in one year, while part-time students will complete it in two years. Students who complete a Graduate Certificate will be able to credit completed courses towards a Graduate Diploma or a Master's degree.

Music Courses

MUSI5402	Suzuki Pedagogy	S2
MUSI5107	Australian Aboriginal Music	S2
MUSI5122	Research in Music Education	S1
MUSI5123	Curriculum in Music Education	S2

MUSI5126	Musical Performance: Learning Theory and Pedagogy	S2
MUSI5131	Research in Performance Studies	S1

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

School of Social Science and Policy

The Graduate Program

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, proceeding to specialise in a field of applied policy studies, and completing 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 MPS 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.

Students who complete the three core units of the MPS program (**SLSP5001**, **SLSP5002**, **SLSP5004**), and one approved elective qualify for the Graduate Diploma in Policy Studies (program **5280**, plan code **SLSPBS5280**).

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 attainment acceptable to the School.

MPS Degree Requirements

Core Units

1. SLSP5001 Policy Analysis
2. SLSP5002 Information and Research for Policy
3. SLSP5004 Management & Policy in Organisations
4. SLSP5092 Policy Project

Electives

At least two electives approved by the School and Committee of the Faculty of Arts and Social Sciences.

The electives currently approved are:

SLSP5012	Disability Studies: Theory and Practice*
SLSP5013	Program Evaluation
SLSP5015	International Development Policy
SLSP5016	Social Policy
SLSP5020	Principles of Economic Policy*
SLSP5040	Contemporary Public/Private Sector Relationships
SLSP5041	The Public Policy Process*

* Not offered in 2002

Courses

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

Electives

In addition to the 4 MPS Common Core courses, candidates must complete two courses from one of the following electives. The School may approve other courses being substituted for the approved courses listed here.

SLSP5013	Program Evaluation	S2
SLSP5015	International Development Policy	S1
SLSP5016	Social Policy	S2
SLSP5040	Contemporary Public/Private Sector Relationships	S2
SLSP5050	Linkage Project	S1 & S2

Graduate Certificate in Program Evaluation

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 with skills 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 attainment 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

Co-ordinator: Stephen Cohen (Philosophy)

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 standardly 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 midyear 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
SLSP5002	Information and Research for Policy

Graduate Certificates, Graduate Diplomas and Masters Programs in Social Work

The School offers articulated Graduate Diploma and Masters programs in two specialist areas: Couple and Family Therapy and International Social Development.

The Graduate Diploma in Couple and Family Therapy is an 'exit-only' qualification available if circumstances prevent the completion of either the Master of Arts in Couple and Family Therapy or the Master of Social Work in Couple and Family Therapy. See these program descriptions for further information.

The Graduate Diploma in International Social Development is offered full-time in one year, or over two years part-time with strictly limited part-time places. To extend to the Masters qualification an additional two courses need to be completed.

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 **SOCWCS5556**) offers a graduate qualification in social development practice with an international focus. It articulates with the Master of International Social Development (program **8938**, plan code **SOCWCS8938**). 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. 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.

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**) 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 aid, refugee and immigrant resettlement. The program articulates with the Graduate Diploma in International Social Development. Credit for courses completed as part of the Graduate Diploma may be transferred to the Masters program leading then to the award of masters degree only.

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 and professional experience.

Year 1

Session 1		**UOC**
SOCW7850	Issues in International Social Development	8
SOCW7851	Community Development	8
SOCW7853	Community Education Strategies	8
Session 2		
SOCW7854	Social Development, Policy and Planning	8
SOCW7855	Program Design and Evaluation	8
SOCW7852	The Politics of International Aid	8

Master of Social Work
MSW

Master of Social Work in Couple and Family Therapy MSW

Two years part-time (available on a part-time basis only)

This program (**8930**, plan code **SOCWBS8930**) prepares social workers for specialist social work practice in the field of couple and family therapy. The program is taught jointly by the School of Social Work and the clinical training organisation Relationships Australia (NSW). The first year of the program is conducted off-campus using the training facilities of Relationships Australia (NSW); the second year of the program is on-campus.

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 SOCW7860, 7861, 7862, 7863 and 7864 must be successfully completed for a student to become eligible to exit with the Graduate Diploma award.

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, a social work qualification, and professional experience in counselling.

Year 1

Session 1		**UOC**
SOCW7860	Theory of Couple and Family Therapy A	4
SOCW7861	Clinical Studies A	8
Session 2		
SOCW7862	Theory of Couple and Family Therapy B	4
SOCW7863	Clinical Studies B	8

Year 2

Session 1		
SOCW7864	Contemporary Theory and Practice Issues	8
SOCW7865	Research Issues and Methodologies A	4
Session 2		
SOCW7866	Research Issues and Methodologies B	4
SOCW7867	Social Work Dissertation	8

Course List

SOCW7850	Issues in International Social Development	S1 & S2
SOCW7851	Community Development	S1 & S2
SOCW7852	Politics of International Aid	S1 & S2
SOCW7853	Community Education Strategies	S1 & S2
SOCW7854	Social Development Policy and Planning	S1 & S2
SOCW7855	Program Design and Evaluation in Social Development	S1 & S2
SOCW7860	Theory of Couple and Family Therapy A	S1
SOCW7861	Clinical Studies A	S1
SOCW7862	Theory of Couple and Family Therapy B	S2
SOCW7863	Clinical Studies B	S2
SOCW7864	Contemporary Theory and Practice Issues	S1
SOCW7865	Research Issues and Methodologies A	S1
SOCW7866	Research Issues and Methodologies B	S2
SOCW7867	Social Work Dissertation (Couple and Family Therapy)	S2

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 cosupervisor 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) 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.

(d) the 48 units of credit for the research thesis or project report shall be completed in no more than three sessions for a full-time candidate, five sessions for a part-time candidate.

(3) 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 five 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 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.

(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 six 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 ten 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 will find the information in this handbook helpful in understanding the programs offered in our Faculty. The structure of FBE is unique in Australia in the range of disciplines it offers including Architecture, Building, Industrial Design, Interior Architecture, Landscape Architecture and Planning & Urban Development.

Recently, FBE has implemented 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 the Faculty offers. Students have the opportunity to gain both expertise in their chosen disciplines as well as being offered the opportunity to become familiar with the concepts and ideas of the other disciplines in the Faculty. In reading this handbook, you will find the wide range of courses that we offer in the Faculty.

The undergraduate and postgraduate programs offered by the Faculty are well established and internationally renowned. 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.

About twenty percent of our students are international students. FBE has a reputation for academic excellence and is recognised professionally, nationally and internationally. The Faculty receives strong industry support and extensive international academic links providing extensive opportunities for exchange and collaboration in research.

If you have further questions after reading through the FBE section of 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 **http://www.fbe.unsw.edu.au/.**

Chung-Tong Wu
Dean
Faculty of the Built Environment

Faculty of the Built Environment

Contents

Faculty Information and Assistance

Some people who can help you 50
Course Descriptions 50
Enrolment Procedures 50
Rules for Progression 51
Faculty of the Built Environment Resource Centre 51
Faculty Research Laboratories 51

Program and Course Information

Postgraduate Study

Higher Degrees – Research 51
Higher Degrees – Coursework 51

Research Degrees 51

1120 Doctor of Philosophy 51
2200 Master of Architecture 52
2206 Master of Science 52
2210 Master of Building 52
2220 Master of Landscape Architecture 52
2230 Master of Town Planning 52
2240 Master of the Built Environment 52

Coursework Degrees 52

8125 Master of Construction Management 52
8126 Master of Construction Management (Singapore) 52
8129 Master of Real Estate 52
8131 Master of Urban Development and Design MUDD 53
8132 Master of the Built Environment (Sustainable Development) 54
8142 Master of Architecture 55
8145 Master of Industrial Design 57
8146 Master of Science (Industrial Design) 57
5205 Town Planning Graduate Diploma 58

Conditions for the Award of Degrees 58

Doctor of Philosophy (PhD) 58
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) 58

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), Associate Dean (Research) and 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.

Course Descriptions

Course descriptions offered in 2002 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 contact NewSouth Student or www.student.unsw.edu.au.

Enrolment Procedures

New Students

New students enrolling in graduate programs should obtain a copy of the free booklet Enrolment Procedures 2002 available from the University Admissions Office. This booklet provides detailed information on enrolment procedures and fees, enrolment timetables by faculty and program, enrolment in miscellaneous courses, locations and hours of cashiers and late enrolment.

Re-enrolling Students

All students re-enrolling in the Faculty will enrol via the NewSouthStudent website. Instructions can be found on the FBE website.

Rules for Progression

Progression in programs offered in the Faculty of the Built Environment is generally dependent on the successful completion of prerequisites and/or co-requisites 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.

Faculty of the Built Environment Resource Centre

The Resource Centre is located on the ground floor of the Red Centre Building and serves the day to day needs of the staff and students in the Faculty. It provides information services based on both print and electronic resources. The reference collection which has no lending facilities consist of textbooks and recommended reading, background information to programs, serials and standards, (these being duplicated in the Physical Sciences Library). Unique materials held consist of donations, undergraduate thesis, trade catalogues and an open reserve collection of specific materials left by lecturers to supplement program work.

The Resource Centre also provides 20 computers with access to library catalogues and other on-line databases, e-mail facilities and the Internet. Six computers have word processing facilities. Photocopying facilities are provided.

Assistance is provided by the librarian in using the Centre's resources and development of information retrieval skills. In addition a printed guide on how to use the Resource Centre is issued to each student. During Session 1 & 2, the Resource Centre is open from 8.30am to 6.00pm Monday to Thursday, 8.30am to 4.00pm on Friday. Out of session, the Resource Centre is open from 8.30am to 4.00pm Monday to Friday, closed all January, weekends and public holidays.

Faculty Research Laboratories

The Faculty controls research laboratories located on Kensington campus, at the University of New South Wales 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.

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 from the Web Site, providing advice to students regarding the purchase of personal computers.

Program and Course Information

Postgraduate Study

Higher Degrees – Research

Following the award of a first degree in Architecture, Building, Industrial Design, Landscape Architecture or Town Planning 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 Building
4. Master of the Built Environment
5. Master of Landscape Architecture
6. Master of Town Planning
7. Master of Science

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 Industrial Design
5. Master of Real Estate
6. Master of Science (Industrial Design)
7. Master of Urban Development and Design
8. Graduate Diploma in Built Environment (Sustainable Development)
9. Graduate Certificate in Built Environment (Sustainable Development)

Duration

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

Research Degrees

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

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

- Australian Centre for Construction Innovation (ACCI) formerly (BRC)
- Centre for a Sustainable Built Environment (formally SOLARCH)
- Australian Housing and Urban Research Institute (AHURI)

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

Associate Dean - Research: Professor Peter Murphy

1120 Doctor of Philosophy

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, 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

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

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

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

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

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

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 School 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.

Associate Dean – Postgraduate Studies: Associate Professor Martin Loosemore

8125 Master of Construction Management

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.

8126 Master of Construction Management (Singapore)

This program is also offered in Singapore using a distance learning mode of delivery.

Admission Requirements and Fees

1. Applicants must hold degrees acceptable to the University of New South Wales 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 six (6) compulsory and two (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		
CONS0004	Economics in Construction	6
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
BENV7710	Planning Law and Administration	6

Note: Not all elective courses are available in any one year. Some elective courses may be selected from the School of Civil and Environmental Engineering subject to approval.

8129 Master of Real Estate

Master of Real Estate MRE

Program Director: Associate Professor Richard Cardew

About the Program

Each year the nation commits more than half 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 the University of New South Wales 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 the Faculty of the Built Environment, peak industry associations and other Faculties, the University of New South Wales 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.

Master of Real Estate in Facilities Management

In response to the rapid changes in the field of real estate, a specialisation in facilities management is offered within this real estate program. 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. Our program responds to these trends in the expectation that graduates will seek senior positions in this field.

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 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:

- Follow a lecture delivered in English in Australia. (English language tests apply).
- 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 and document delivery from 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 bachelor degree.

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 UOC that may be granted as advanced standing is 24.

Program structure

To qualify for the Master of Real Estate degree students will be required to complete a program of study totalling 72 units of credit as adjusted by advanced standing provisions. Since most courses are of 6 units of credit, 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.

The program requires students to complete courses that have been allocated to subject groups plus two electives. The subject groups are given in the schedule below. The requirements for the Master of Real Estate are:

- 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.

Specialisation in Facilities Management

The specialisation in Facilities Management requires students to complete courses that have been allocated to subject groups plus two electives as follows:

- All five courses from the core subject group
- Three courses from the Facilities Management and Corporate Real Estate group
- One 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		
BENV7614	The Economy of Cities and Regions	6
BENV7617	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.

Sequence

The sequence of courses is governed by pre-requisites.

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.

Transition Arrangements

The Master of Real Estate program has been revised for 2002 and the description above refers to this new structure. Students who enrolled in previous years may elect to stay in the old program or transfer to the new program, whichever they prefer. Those remaining in the old program may also be allowed more flexibility than offered in the previous program, consistent with the principle underlying the new program, provided that the set of courses reflects the subject composition of the previous program

8131 Master of Urban Development and Design MUDD

Program Director: Professor Alexander Cuthbert

A one year full-time or two year part-time multi-disciplinary 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 Royal Australian Planning Institute (RAPI). Students from a non-planning-related background may elect to take an additional 24 units of credit of approved planning courses to become eligible for RAPI 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 S E 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. Students will be allocated to one of two streams in (a) Design or (b) Development depending upon their background discipline and interest. The nature of contribution to studio-based design projects will be determined accordingly.

The program comprises nine core and two elective courses. 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, ie a total of 24 hours per session. The remaining two weeks per session will normally be reserved for visiting lectures and other special activities.

Students are encouraged to select electives from those recommended hereunder which have been specifically selected for the program. However students may be permitted, with the approval of the Associate Dean – Postgraduate Studies, 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 South East Asian field project, and the preparation of an exhibition and publication of the years work.

Students from a non-planning-related background may elect to take an additional 24 units of credit of approved planning courses or UDES 0010 Planning Project to become eligible for RAPI 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	12
	Elective Course	3
	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 S.E. Asian field project)	18
	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	12
	Elective Course	3
	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 S.E. Asian field project)	18
	Total	**24**
Total Units of Credit for Program		**72**

Recommended Elective Courses

BENV2229	Spectacles, Mardi Gras and Fascist Rallies - The use of Public Space	3
BENV7142	CAD and Visualization	
BENV7190	People and Urban Space	6
BENV7704	Principles of Political Economy	3
BENV7711	City Planning Today	3
BENV7721	Planning and Land Policy	3
BENV7717	Metropolitan Policy	3
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
PLAN2051	Environmental Economics and Resource Management	3

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

8132 Master of the Built Environment (Sustainable Development)

MBEnv(SustDev)

5132 Graduate Diploma in Built Environment (Sustainable Development)

GradDipBEnv

7332 Graduate Certificate in Built Environment (Sustainable Development)

Summer SessionGradCertBEnv

Program Director: Associate Professor Deo Prasad

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, etc.) 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.

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, course to satisfactory performance.

GradDipBEnv and GradCertBEnv: 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 units of credit required to complete the program. The Graduate Diploma is comprised of four core courses and two electives for a minimum of 36 units of credit. The Graduate Certificate is comprised of four core courses for a total of 24 units of credit.

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	•		
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*		•	
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	6
LAND9213	Land Systems and Management	6
SCTS5312	Technology and Power in the Asia-Pacific	12*
SCTS5316	Environmental and Technological Risk Controversies	12*
GEOG9011	Environmental Impact Assessment	6
GEOG9016	Principles of Geographical Information Systems	6
GEOG1701	Environmental Systems and Analysis	6
GEOG9015	Population, Health and the Environment	6
CVEN9402	Transport, Environment, Community	12*
CVEN9405	Urban Transport Planning Practice	6
CVEN9855	Water and Wastewater Analysis and Quality Requirements	6
CVEN9881	Hazardous Waste Management	6
CVEN9889	Environmental Economics and Law	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 to GradDipBEnv or MBEnv(SustDev), or from GradDipBEnv 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

with programs of study in:

Architectural Design

Architectural Computing

History and Theory of Architecture

Master of Architecture
MArch

Program Director: Dr Paul-Alan Johnson

This Program provides for graduate study and research in one of several specialised aspects of the discipline of architecture. At the present time, three programs of study are offered to prospective candidates: Architectural Design; the History and Theory of Architecture; 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.

The Programs 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 multi-disciplinary teams in industry or architectural practice.

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

The conditions governing registration as a candidate for the degree of Master of Architecture are described later in this handbook, but the attention of applicants is drawn to the following admission requirements.

Registration is offered to candidates who have been awarded an appropriate degree of Bachelor of minimum 4 years duration 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 the Built Environment (hereinafter referred to as the Committee). Candidates may, where considered

appropriate (including insufficient background in the proposed area of specialisation) be required to undertake a qualifying programme as determined by the Committee.

Applicants to the MArch (Architectural Design) program are required to have a Bachelor of Architecture or equivalent degree in architecture at Honours level, or to have achieved a grade average across all courses equal to UNSW Honours level. Performance in design studio and design-related undergraduate course is expected to match or to surpass this Honours or overall grade average level. Prior to their final acceptance into the Program, applicants must submit a design portfolio demonstrating the range and quality of their design experience as well as a declaration as to their role in the work they present. Applicants are also to have a minimum of one year of professional architectural practice experience after graduation. Certain of these requirements may be varied at the discretion of the Committee.

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 Program are required to select their program before commencement. They must then complete a set of prescribed core courses in that area of specialisation, supplemented by elective courses to bring their total units of credit to 48 for the degree. As part of the core component, the MArch (Architectural Computing) and the MArch (History and Theory of Architecture) each require the completion of a directed and supervised Graduate Research Project to the value of 12 units of credit. The MArch (Architectural Design) Program requires the completion of two studio-based Architectural Design Projects totalling 24 units of credit. Note that, except for these higher value Project courses all other core courses are of 6 units of credit and elective course are either of 3 or 6 units of credit.

The degree may be commenced in either Session of the academic year subject to the availability of places in the Programs 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.

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

For each area of MArch specialisation, candidates are required to take each of the prescribed core courses as listed in the programs given below. These generally make up the bulk of the requirements for the degree. The remaining units of credit are then earned by taking electives, generally selected from the recommended list provided for each Program. Notwithstanding, candidates may, with the approval of the Associate Dean - Postgraduate, undertake electives chosen from among other graduate courses offered by the Faculty or University.

Notwithstanding any of the above, the courses offered in any one academic session will depend on student numbers and interests. Students must therefore plan their programs in consultation with Program Co-ordinators. As a guide, the following table shows the number of units of credit that would normally be taken in each Session for a full-time or part-time program, depending on the selected Program.

Fees

This is a fee paying program for both local and international students. Contact School for details.

Typical Patterns of Study

Architectural Design

Full-time	**UOC**	
	S1	**S2**
Architectural Design Project 1	12	
Architectural Design Project 2		12
Elective Courses	12	12
Total	**24**	**24**

Part-time	**UOC**	
	S1	**S2**
Year 1		
Architectural Design Project 1	12	
Elective Courses		12
Year 2		
Architectural Design Project 2		12
Elective Courses	12	
Total	**24**	**24**

Architectural Computing AND History and Theory of Architecture

Full-time	**UOC**	
	S1	**S2**
Graduate Research Project		12
Research Design and Methodology	6	
Core course	18	
Elective course	12	
Total	**24**	**24**

Part-time	**UOC**	
	S1	**S2**
Year 1		
Research Design and Methodology	6	
Core courses	6	12
Total	12	12
Year 2		
Graduate Research Project	12	
Elective courses		12
Total	**12**	**12**

The following sections detail the required academic program for each of the specialisation strands available at the present time.

Master of Architecture
Architectural Design

Required Academic Program		**UOC**
ARCH7103	Architectural Design Project 1	12
ARCH7104	Architectural Design Project 2	12
	Elective courses	24
	Total	**48**

Recommended Electives

ARCH7304	Architecture and the City	6
ARCH7305	Theories in History	6
ARCH7306	Theory and Architectural Practice	6
BENV7140	Multimedia on the Web	6
BENV7141	Multimedia in Design Presentation	6
BENV7142	CAD and Visualisation	6
BENV7143	Advanced Visualisation	6
BENV7190	People and Urban Space	6
UDES0004	History of Urban Development	3
UDES0005	Critical Urban Theory	3
UDES0009	Urban Landscape	3
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 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.

Master of Architecture
Architectural Computing

Required Academic Program		**UOC**
ARCH7003	Graduate Research Project	12
BENV7001	Postgraduate Research Design and Methodology	6
ARCH7204	Design Computing Theory	6
ARCH7205	Computer Graphics Programming	6
ARCH7206	CAD Management and Information Technology	6
	Elective courses	12
	Total	**48**

Recommended Electives

BENV7140	Multimedia on the Web	6
BENV7141	Multimedia in Design Presentation	6
BENV7143	Advanced Visualisation	6
BENV7144	Building Virtual Precincts	6
BENV7145	Advanced Multimedia	6
BENV7146	Advanced Webpage Design	6

CONS0005	Computers in Construction Management	6
GEOG9014	Computer Mapping and Data Display	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.

Master of Architecture
History and Theory of Architecture

Required Academic Program		**UOC**
ARCH7003	Graduate Research Project	12
BENV7001	Postgraduate Research Design and Methodology	6
ARCH7304	Architecture and the City	6
ARCH7305	Theories in History	6
ARCH7306	Theory and Architectural Practice	6
	Elective courses	12
	Total	**48**

Recommended Electives		**UOC**
ARCH7204	Design Computing Theory	6
BENV7190	People and Urban Space	6
COFA8591	Postgraduate Seminars	6
UDES0004	History of Urban Development	3
UDES0005	Critical Urban Theory	3
UDES0009	Urban Landscape	3
SUSD0001	Sustainable Development and the Urban 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 Program Director prior to enrolment for information about the availability of courses in a particular session.

8145 Master of Industrial Design

Master of Industrial Design MID

Program Director: Mr Lance Green

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.

8146 Master of Science (Industrial Design)

Master of Science (Industrial Design) MSc(IndDes)

Program Director: Mr Lance Green

The Master of Science (Industrial Design) program introduces design thinking and knowledge to graduates of engineering, architecture and commerce. 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 appreciate the 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.

These programs of graduate study have a similar common core of courses in the major areas of industrial design. They are designed for graduates in industrial and environmental design, architecture, engineering, and marketing and business studies who wish to make careers in industrial design or to be involved in industrial design as a part of their career activity, eg, mechanical engineering with industrial design.

The **MID** degree 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 degree 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.

The **MSc(IndDes)** degree program is intended for graduates from design fields related to industrial design, such as architecture or engineering, or for graduates from non-design areas, such as marketing, who have satisfactorily completed preparatory studies. The program is designed to adapt and apply the 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. The 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

The conditions governing registration as a candidate for the MSc(IndDes) degree program are given later in this handbook: see below under Conditions for the Award of Higher Degrees. In summary, admission is open to applicants who have been admitted to an appropriate degree of at least four years' full-time duration, or its equivalent. For the MID degree program, admission is restricted to applicants who have been admitted to a degree with a major in industrial design of at least four years' full-time duration, or its equivalent. Candidates who have completed part or all of the requirements for the award of the degree of the MSc(IndDes) program may elect to apply for admission to the MID degree program, subject to the recommendation of the Associate Dean – Postgraduate Studies and the approval of the Research Committee of the Faculty of the Built Environment.

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.

Course 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 degree and the MSc(IndDes) degree 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 degree programs, part and full-time, is run simultaneously and is staffed according to the requirements of each project.

Most of the work is undertaken within the School, but industrial visits and experience forms an important component of the program. The program is so arranged 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.

The requirements for the program include an equivalent period of at least four weeks of approved professional or industrial experience. Part-time students with approved employment are exempt from this requirement.

Program Outlines

MID

Core Courses		**UOC**
IDES5131	Industrial Design	6
IDES4371	Design Management	3
IDES1121	History of Industrial Design	3
BENV7001	Research Design and Methodology	6
IDES6081	Graduate Project (MID)	12
	Total	**30**

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 Associate Dean – Postgraduate Studies.

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 University 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 the Faculty of the Built Environment and the Associate Dean – Postgraduate Studies. 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 Town Planning Graduate Diploma

Graduate Diploma 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

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 the Faculty of the Built Environment

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 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 under 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 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.

(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 program director 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 thesis.

(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 is one of the nine 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, printmedia, 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 1700, 190 are international students who come from more than 25 countries across Asia and the Pacific, Europe and the Americas. The College has cooperative agreements with specialist art and design institutions throughout the world. For example, the International Drawing Research Institute (located at the College) places COFA staff and students in key learning roles alongside colleagues in Beijing and Glasgow.

COFA has the expertise, resources and experience to offer specialised yet flexible cross-disciplinary degree programs in visual art and design. The extensive holdings of The Clement Semmler Library, the vibrant and challenging exhibition programs of the COFA student gallery and internationally renowned Ivan Dougherty Gallery, the excellent materials handling and fabrication workshops, A/V support and computer facilities that are essential learning and research tools within art and design make a major contribution to the student experience at COFA. The research activities of students and staff are supported by individual staff and student initiatives, specialist conferences, centres and institutes.

It gives me great pleasure to welcome you into the community of artists, designers, theorists and educators that make up the Faculty of the College of Fine Arts, UNSW.

Professor Ian Howard
Dean

College of Fine Arts

Contents

Information and Assistance **61**
- Schools of the College of Fine Arts 61
- Academic Assistance 61
- Course Descriptions 61
- Units of Credit 61
- Advanced Standing 61
- Attendance 61
- Computing Requirements 61
- Technical Resources Centre 61
- The Clement Semmler Library 61
- Ivan Dougherty Gallery 61
- Support for Students 61
- Indebtedness to the University 62
- Building Rules 62
- Traffic and Parking Rules 62

Program and Course Information
- **9301 Master of Art (by Coursework)** **62**
- Program Structure 62
- Studio Courses 63
- Conditions for the Award of Master of Art 63
- **9302 Master of Art Administration (by Coursework)** **63**
- Program Structure 63
- Courses 63
- 7302 Graduate Certificate in Art Administration 63
- 5302 Graduate Diploma in Art Administration 64
- Conditions for the Award of Master of Art Administration 64
- **9303 Master of Art and Design Education (by Coursework)** **64**
- Program Structure 64
- Courses 64
- Conditions for the Award of Master of Art and Design Education 64
- **9304 Master of Design (by Coursework)** **65**
- Program Structure 65
- Courses 65
- Conditions for the Award of Master of Design (by Coursework) 65

Elective Courses for Postgraduate Programs **65**
- Art Administration 67
- Art and Design History and Theory 67

Art and Design Education 67
Visual Arts 67
Masters Courses (by Research) 67
2245 Master of Fine Arts 67
2255 Master of Art Education (Hons) 67
2264 Master of Arts Administration (Hons) 67
2265 Master of Art Theory 67
2266 Master of Design (Hons) 67
2245 Master of Fine Arts 67
2255 Master of Art Education (Honours) 68
2264 Master of Arts Administration (Honours) 69
2265 Master of Art Theory 70
2266 Master of Design (Honours) 71
Doctor of Philosophy 72

Information and Assistance

The location of the College of Fine Arts is:
Greens Road
Paddington NSW 2021 Australia
Telephone: (02) 9385 0888
Facsimile: (02) 9385 0706
Email: administration@cofa.unsw.edu.au
web address: www.cofa.unsw.edu.au

All enquiries should be addressed to:
The Dean,
College of Fine Arts,
The University of New South Wales
PO Box 259
Paddington NSW 2021
Telephone (02) 9385 0888

Schools of the College of Fine Arts

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 and COFA Exhibition Space and two research centres, the International Drawing Research Institute and the iiCinema Centre.

The School of Art
Web address: www.art.cofa.unsw.edu.au

The School of Art Education
Web address: www.arted.cofa.unsw.edu.au

The School of Art History and Theory
Web address: www.artht.cofa.unsw.edu.au

The School of Design Studies
Web address: www.design.cofa.unsw.edu.au

The School of Media Arts
Web address: www.media-arts.cofa.unsw.edu.au

Academic Assistance

Enquiries about degree requirements, enrolment and progression within programs and any other general Faculty matters should be made to the staff in the Student Centre, ground floor B Block, phone 9385 0684. Faculty timetables and official University forms are also available from the Student Centre.

Course Descriptions

Course descriptions for 2002 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 through New South Student or at www.student.unsw.edu.au.

Units of Credit

The University has introduced a university wide units of credit 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 of courses in which they are enrolled; and
- where absences in excess of 3 classes occur, students may be given a fail grade (UF).

Computing Requirements

For general details of computing services at the College of Fine Arts, see Student Information at the front of this handbook. 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 the College cannot guarantee its security. It should be noted that students who alter or delete another person's work may be committing a criminal offence.

Technical Resources Centre

The TRC provides computing and audio visual services to the Faculty in the form of equipment and expertise. The Centre has a number of computer and language laboratories, audio and video editing equipment, a recording studio and a wide range of audio and video equipment. The TRC also has satellite receiving equipment capable of receiving video and radio transmissions directly from China, France, Germany, Indonesia and Spain.

The Clement Semmler Library

See UNSW Library Facilities, under Student Information at the front of this handbook.

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 and 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-Fri 10 – 5; Sat 1– 5 (closed public holidays).

Web address: www.cofa.unsw.edu.au/units/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 weeklong exhibitions featuring the work of COFA students, students from international art institutions, recurrent events such as ARTEXPRESS and various student award exhibitions.

COFA Gallery hours: Monday to Friday 10-5

Support for Students

The Counselling Service and compass PROGRAMS focus on helping students to help themselves by enhancing their personal or academic development. The programs and services are available free of charge to students. The Counselling Service provides confidential and professional consultations for any student who experiences personal or academic difficulties during their university enrolment. Students are offered:

counselling for individuals on personal and academic matters;

orientation to Uni and UNIPREP programs;

motivational support;

personal skills development;

advice on University administrative procedures and other issues plus referrals to appropriate persons or organisations;

stress and anxiety management;

staff consultancy on student related issues.

compass PROGRAMS also provides seminars and workshops for students covering topics such as procrastination, time management, management of various types of anxiety and depression.

COFA - telephone 9385 0733 or go to Room 05, Ground Floor, G Block.

Kensington campus - telephone: 9385 5418 or use the drop-in service on Level 2, East Wing, Quadrangle Building.

Website resources and information: http://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, issue a "second parking warning notice" and attach a wheel clamp to the vehicle. 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

The Program

The 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	12
Studio Classes	12
Total credits per session	24

(Minimum unsupervised studio practice 16 hours *per week*)

Part-Time Study – four sessions – two years	
Electives	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 Studio 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.

Studio Courses

SART9701/9704	Painting 1/Painting 4
SART9705/9708	Drawing 1/Drawing 4
SART9709/9712	Printmedia 1/Printmedia 4
SART9713/9716	Photomedia 1/Photomedia 4
SART9717/9720	Time-Based Art 1/Time-Based Art 4
SART9721/9724	Sculpture, Performance, Installation/Sculpture, Performance, installation 4

Conditions for the Award of Master of Art

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.

9302 Master of Art Administration (by Coursework)

MArtAdmin

The Program

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 course 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. The research paper draws on the experiences of the internship but is an independent, supervised project that involves a time commitment at least equivalent to other core subjects.

Program Structure

The Master of Art Administration comprises core courses, core options, open electives and an internship:

Core Courses

Students take five core courses, including a research paper, totalling 30 units of credit.

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 72unit of credit. Students would normally undertake 24unit of credit per session, with core courses completed before the commencement of the third session.

Part-time study

Six sessions, totalling 72unit of credit. Students would normally undertake 12unit of credit per session, with core courses completed before the commencement of the fifth session.

Courses

Core Courses

		UOC	HPW
SAHT9111	Management and Organisation: System, Service and Survival	6	3
SAHT9112	Writing for Different Cultures and Audiences	6	3
SAHT9113	Cultural Property, Ethics and the Law	6	3
SAHT9114	Exhibition Management and Curatorial Studies	6	3
SAHT9115	Research Paper	6	

Core Options

SAHT9121	Exhibition and Gallery Design Development	6	3
SAHT9122	Education and Public Programs	6	3
SAHT9123	Marketing and Promotion	6	3
SAHT9124	Ars and Cultural Policy	6	3
SAHT9125	The Australian Art Market	6	3
SAHT9126	Human Resources Management	6	3
SAHT9127	Conservation and Collections Management	6	3
SAHT9128	History of Exhibitions of Australian Art	6	3
SAHT9129	The Development of Art Criticism In Australia	6	3
SAHT9130	Art Galleries and Collections in Australia	6	3
SAHT9131	Visual and Museum Cultures of the Asia-Pacific Region	6	3
SAHT9132	Festivals and Biennales	6	3
SAHT9132	Museum Development: Fundraising And Philanthropy	6	3

Open Electives

Courses and course descriptions for all postgraduate electives: refer to the back of this Handbook.

Internship

SAHT9115	Internship	6

7302 Graduate Certificate in Art Administration

This Program allows students to exit the Master of Art Administration after one session full-time or two sessions part-time and the completion of four core course [24 units of credit): namely:

SAHT9111	Management and Organisation: System, Service and Survival
SAHT9112	Writing for Different Cultures and Audiences

SAHT9113 Cultural Property, Ethics and the Law
SAHT9114 Exhibition Management and Curatorial Studies

5302 Graduate Diploma in Art Administration

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 four core course [courses listed above] and four core options [total of 48 units of credit].

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.

9303 Master of Art and Design Education (by Coursework)

MArtDesEd

The Program

The program provides professional development courses in art and design eduction. 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 data bases.

Faculty who teach in this program include art and design educators who are the architects of recent syllabus change, along with practising artists, designers and art historians and theorists. Courses emphasise individual contact with faculty, 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 in the Scholarships section of this handbook.

On completing the program students achieve a recognised postgraduate credential and increased confidence to practically manage change and implement the new syllabus.

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 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 Program

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 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.

Courses

Core Courses

The core courses in the Master of Design include Design Seminar, Research Methodologies in Art, Design and Education, and Design Workshop.

SDES9201	Design Seminar 1
SDES9202	Design Seminar 2
SDES9203	Design Seminar 3
SDES9204	Design Production Workshop
SAED9002	Research Practice 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
- History 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
SDES 9744	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 the School 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 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 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 2002 will be found at the back of this handbook.

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	6	SDES 9216	Design Management and Practice 1 2HPW	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

- 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)

Art Administration

		UOC	HPW
SAHT9111	Management and Organistaion: Systems, Service and Survival	6	3
SAHT9112	Writing for Different Cultures and Audiences	6	3
SAHT9113	Cultural Property, Ethics and the Law	6	3
SAHT9114	Exhibition Management and Curatorial Studies	6	3
SAHT9121	Exhibition and Gallery Design Development	6	3
SAHT9122	Education and Public Programs	6	3
SAHT9123	Marketing and Promotion	6	3
SAHT9124	Arts and Cultural Policy	6	3
SAHT9125	The Australian Art Market	6	2
SAHT9126	Human Resources Management	6	3
SAHT9127	Conservation and Collections Management	6	3
SAHT9128	History of Exhibitions of Australian Art	6	3
SAHT9129	The Development of Art Criticism in Australia	6	3
SAHT9130	Art Galleries and Collections in Australia	6	3
SAHT9131	Visual and Museum Cultures of the Asia-Pacific Region	6	3
SAHT9132	Festivals and Biennales	6	3
SAHT9693	Museum Development: Fundraising and Philanthropy		

Art and Design History and Theory

SAHT9133	Pornography, Art and Politics	6	2
SAHT9134	Memory and Self	6	2
SAHT9135	Theories of Subjectivity and the Body	6	3
SAHT9136	The Art and Culture of Everyday Life	6	3
SAHT9137	Art and Cultural Difference	6	3
SAHT9138	Art After Postmodernism	6	3
SAHT9139	Art, Technology and New Media	6	2
SAHT9141	Current Issues in Art	6	2
SAHT9143	Design History and Theory 1	6	2
SAHT9144	Design History and Theory 2	6	2
SAHT9145	Design History and Theory Project	6	

Special Project

SAHT9690	Special Project	6

Art and Design Education

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

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

SART9725	Introduction to Multimedia Computing
SART9726	Introduction to Animation
SART9727	Introduction to Drawing
SART9728	Introduction to Painting
SART9729	Introduction to Etching
SART9730	Introduction to Analogue Photomedia
SART9731	Introduction to Digital Imaging
SART9732	Introduction to Sculpture
SART9733	Drawing Elective
SART9734	Painting Elective
SART9735	Etching Elective
SART9736	Analogue Photomedia Elective
SART9737	Digital Illustration & Text Elective
SART9738	Sculpture Elective
SART9739	Multimedia Computing Elective

Masters Courses (by Research)

The Programs

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.

They may be studio based, 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)

2245 Master of Fine Arts

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, Printmedia, 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 School of Art'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 Manger 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 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 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) 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 the Handbook: see section on coursework Masters degrees. Students will discuss the courses to be taken with the course co-ordinator 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) 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 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, and 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 co-ordinator, 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 focussing on Graphics/Media Design, Environments/Spatial Design, Applied/Object Design, or 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 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 Programs

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. One of the primary aims of the Faculty is to offer both graduate and undergraduate programs which are relevant to a wide range of careers and professional interests in the commercial and industrial world, in the public service, and in teaching at both the secondary and tertiary level. Graduates of the Faculty are held in high regard and are eagerly sought by the business community. The Faculty has produced outstanding leaders in industry, government, politics, the trade union movement and academia. The Faculty is concerned to combine the strong development of fundamental conceptual issues with an emphasis upon the application of knowledge in the disciplines of commerce and economics.

A feature of our postgraduate courses in the Faculty is a range of core courses that provide a foundation for subsequent specialisation.

At the graduate level, the Faculty offers the Master of Commerce, the Master of Information Management, a Graduate Diploma in Commerce and a Graduate Certificate in Commerce, all of which are directed towards the development of professional and management skills through study of the major disciplines of the Faculty. From 2002 we will be offering a Master of Finance and a Master of Business Information Technology. Both of these programs are designed to provide advanced study to students who have worked in relevant areas during their professional careers. In addition, the Faculty has strong research training programs leading to either the Master of Commerce (Honours), Master of Information Studies or the Doctor of Philosophy. Recent initiatives by the Faculty are providing new opportunities for corporate sponsored groups to study professional accounting through a customised program; and the Faculty is proud of its initiatives to offer a Master of Commerce in International Accounting in Guangzhou and Beijing, China.

The Faculty continues to review and redesign programs and courses in the light of research, teaching experience, the practical needs of employers, and student feedback. This ensures that the education provided remains closely focused on meeting the needs of both students and employers. This aim is assisted by the substantial interaction between the community and the Faculty through its research centres: the Australian Centre for Management Accounting Development, the Australian Centre for International Business, the Asia-Pacific Financial Research Centre, the Centre for Franchise Studies, the Centre for Applied Economic Research, the Industrial Relations Research Centre, the Centre for Advanced Empirical Software Research, the Centre for Tourism Policy Studies, the Centre for Accounting and Assurance Services Research and the Centre for Applied Marketing, and its consulting and continuing education activities in both the public and private sectors.

I encourage you to contact program advisors in the Faculty if you have any questions about our programs, or need support as a student of the Faculty. I sincerely hope your experience with the Faculty is memorable, challenging, and ultimately rewarding.

Again, I warmly welcome you to the Faculty of Commerce and Economics.

RA Layton
Dean
Commerce and Economics

Faculty of Commerce and Economics

Contents

Faculty Information and Assistance **75**
Some People Who Can Help You 75
Academic Advisor 75
Education Development Unit 75
Course Timetables 76
Course Descriptions 76
Enrolment Procedures 76
Examinations 76
Use of Calculators 76
Library/ Reading Room 76

Information on Schools and Disciplines

School of Accounting 76
Actuarial Studies 76
School of Banking and Finance 77
School of Business Law and Taxation 77
School of Economics 78
School of Industrial Relations and Organisational Behaviour 78
School of Information Systems, Technology and Management 78
School of International Business 79
School of Marketing 79
Professional Recognition of Programs Offered by the Faculty of Commerce and Economics 79

Program and Course Information

Program Outlines **81**
Postgraduate Programs Available in 2002 **81**
Doctor of Philosophy (PhD) 81
Master of Commerce (Honours) 81
Qualifying Program 81
Master of Commerce 81
Master of Finance 82
Master of Business Information Technology 82
Master of Technology Management 82
Master of Information Management 82
Graduate Diploma in Commerce 82
Graduate Diploma in Business Information Technology 82
Graduate Certificate in Commerce 82
Program Objectives and Requirements for the Degree of Doctor of Philosophy (PhD) 82
Program Objectives and Requirements for the Degree of Master of Commerce (Honours) 82
Accounting – Program Code 2570 82
Actuarial Studies – Program Code 2582 82

Banking and Finance – Program Code 2574 82
Business Law and Taxation – Program Code 2579 82
Econometrics – Program Code 2572 83
Economics – Program Code 2571 83
Human Resource Management – Program Code 2578 83
Employment Relations – Program Code 2576 83
Organisational Behaviour – Program Code 2577 83
Information Systems and Management – Program Code 2575 83
Marketing – Program Code 2580 83
Master of Information Studies - Program Code 2980 83
Program Objectives and Requirements for the Degree of Master of Commerce (by Coursework) 83
Program Objectives and Requirements for the Degree of Master of Finance (by Coursework) 84
Program Objectives and Requirements for the Degree of Master of Business Information Technology (by Coursework) 84
Program Objectives and Requirements for the Graduate Diploma in Commerce 84
Program Objectives and Requirements for the Graduate Certificate in Commerce 85
Programs in each Disciplinary Stream for Master of Commerce (by Coursework) and Graduate Diploma Programs 85
Accounting 85
Actuarial Studies 86
Business Economics and Statistics 86
Business Law 86
Finance 86
Human Resource Management 86
Employment Relations 86
Information Systems and Management 87
International Business 87
Organisation and Management Studies 87
Marketing 87
Strategic Value Management 87
Taxation 88
Special Programs 88
Professional Accounting 88
Banking 88
E-Business Management 88
Environmental Economics 88
Funds Management 88
Health Informatics 89
Information Management 89
International Finance 89
Knowledge Management (Not offered in 2002) 89
Public Sector Financial Administration 89
Risk Management and Insurance 90
Advanced Taxation (customised) 90
Tourism, Hospitality Management and Marketing 90
Master of Information Management – Program Code 8923 90
Master of Technology Management 90
Graduate Diploma in Commerce 90
Professional Accounting (Customised) 90
Public Sector Financial Administration 91
E-Business Management 91
Environmental Economics 91
Information Management 91
Professional Marketing (Customised) 91
Taxation (Customised) 91
Graduate Diploma in Business Information Technology 91
Tourism and Hospitality Management 91
Graduate Certificate in Commerce 92
Special Programs 91
Media Sales (Customised) 91
Professional Marketing (Customised) 92
Tourism and Hospitality Management 92
Special Program (Open Learning/Distance Delivery) 92

Conditions for the Award of Degrees

Higher Degrees 92
Doctor of Philosophy (PhD) 92
Master of Commerce (Honours) (MCom (Hons)) 92
Master of Information Studies (MInfStuds) by Research 93

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.

For information and advice about course content and requirements, contact the appropriate schools/teaching units.

Academic Advisor

The Academic Advisor for the Faculty is Dr. Judith Watson, G17, John Goodsell Building, ph 9385 3285, fax 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

Education Development Unit

The Faculty of Commerce and Economics has established the Education Development Unit (EDU) to support all students in the development and enhancement of their academic skills. The EDU provides a range of strategies including:

- postgraduate orientation programs (offered in Orientation Week in both sessions 1 and 2)
- discipline-specific workshops (designed to assist students in developing the oral and written communication and study skills required in particular subject areas)
- academic skills workshops (eg. time management, critical thinking, critical reading, listening and note-taking, exam preparation)
- language and communication workshops (eg. essay writing, report writing, case analysis, presentation skills)
- individual and small group consultations (with a learning advisor or peer assistant)
- a wide range of resources and handouts
- a website

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. Students are also encouraged to arrange small group consultations to address needs in specific subject areas.

For further information and a current list of programs being offered, you are welcome to visit the EDU, located in Room 3054, level 3, South Wing, Quadrangle Building or contact a Learning advisor in the EDU on 9385 6163/6087.

Course Timetables

Postgraduate course timetables are available to re-enrolling students via the Faculty website before the end of the current year of study.

Course Descriptions

Course descriptions offered in 2002 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 contact New South Solutions or www.student.unsw.edu.au.

Enrolment Procedures

Interested applicants to the Faculty of Commerce and Economics should contact the Faculty of Commerce and Economics Student Centre or the Admissions Office.

New students are informed of enrolment procedures after they have received an offer.

All re-enrolling students are e-mailed information with regards to Enrolment Appointments to enable them to enrol on-line using NSS Student.

Examinations

Additional information on examinations and assessment, rules and restrictions, is included in the University Calendar.

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 early 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.

Library/ Reading Room

The library/reading room for undergraduate honours and graduate students in the Faculty of Commerce and Economics is located on the first floor of the John Goodsell Building. The reading room contains books and periodicals covering a wide range of subjects, and provides photocopying facilities and CD Rom access.

During session the reading room is open from 9 am to 9 pm Mondays to Thursdays and 9 am to 5 pm on Fridays.

Out of session the hours are 9 am to 5 pm. The reading room is closed each day between 12.00 - 1.00 pm.

Students wishing to use these library facilities, should register at the Enquiry Desk located in Room 127 on the first floor of the building.

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 W F Chua
Administrative Officer: Colin Withers

Students may enrol in a Master of Commerce Program or Graduate Diploma in Commerce Program or a Graduate Certificate in Commerce Program by course work. In the Master of Commerce by course work, students may undertake the following programs: Accounting, Professional Accounting, Strategic Value Management or Public Sector Financial Administration.

The range of courses available caters for students who have had no prior exposure to accounting, limited exposure, or extensive exposure to accounting. 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.

The Public Sector Financial Accounting disciplinary stream provides students with a wide appreciation of financial management in the public sector. It offers courses that deal with public sector management, public finance and accounting issues that are specific to the public sector.

Actuarial Studies

Head: Professor M 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 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 discipline 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 requires the completion of, or exemption from, subjects in Parts I, II and III of the professional syllabus of the Institute of Actuaries of Australia.

Part II is made up of the Actuarial Control Cycle subjects. Part III consists of two subjects completed by distance education through The Institute of Actuaries of Australia usually on a part-time basis after completing the Part I and Part II subjects. Students select these two Part III subjects from the five practice areas of Investment Management, Life Insurance, General Insurance, Superannuation and Finance.

Student who enrol in the MCom without any professional recognition from The Institute of Actuaries of Australia (IAAust) 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.

The following courses at UNSW correspond to the Part I and Part II subjects of The Institute of Actuaries of Australia professional examinations:

UNSW Subjects	**Professional Subject**
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

School of Banking and Finance

Acting Head of School: Associate Professor Toan Pham
Administrative Officers: Shirley Webster and Clarissa Zappia

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 concerned with investment decisions (for example portfolio selection), financing decisions of a firm (dividend policy, debt and equity structures, and lease purchase decisions), and the development of risk-hedging strategies so as to minimise the damaging effects of adverse movements in share prices, interest rates, exchange rates, and other uncertainties.

Global financial market integration has led to the emergence of multinational corporations. Financial Management of multinational corporations and the study of these corporations' financial and investment strategies in the international market, particularly in the Asia-Pacific region are the focus of the program in finance. Furthermore, the increasing expansion of insurance services and funds management in Australia and this region are other important issues in finance.

The growth of interest towards the financial sector has been accredited to greater public awareness of the financial market as an investment opportunity. The public at large have taken to purchasing stocks and bonds as a means of securing higher returns, and with it a greater degree of consumer awareness towards financial matters. One major growth area in the world of finance is the advent and expansion of funds management. Funds managers, pool investor money together to form specific portfolios to suit different investor needs. For example, some investors prefer high capital gains over short time horizons, whilst others prefer not to take as much risk and hope for a steady stream of income over a longer period of time. Funds managers must understand the needs of the customer, design portfolios consisting of different assets to suit those needs, and ensure the returns from the funds are what is expected of them. *The postgraduate programs offered by the School will provide the necessary skills and knowledge to those who wish to enter this growing and complex market, with the prospect of advancing rapidly within the industry.*

Depending on the program selected, this School provides postgraduate training for a wide range of vocations including: multinational financial managers, multinational bank and insurance managers, multinational funds managers, investment analysts in stock exchange markets; 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; and 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

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 J Piggott
Associate Head of School: Dr Hazel Bateman

The School of Economics comprises approximately 40 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 three postgraduate course work degrees – the Master of Commerce (MCom), the Graduate Diploma in Commerce and the Graduate Certificate in Commerce – and two postgraduate research degrees – the Master of Commerce (Honours) and 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 Business Economics and Statistics within that degree. This discipline provides students with a broad understanding of the broader commercial environment, business decision making and practical ability to analyse business and economic data.

As well, 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: Professor Philip Bohle
Administrative Assistant: 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 three disciplinary streams: Human Resource Management, Organisation and Management Studies and Employment Relations.

The specialisation in Human Resource Management provides a strong applied and theoretical grounding in all aspects of the management of people in paid employment. The School's programs are designed to provide both the breadth required for successful career mobility in the 'HR' field and the opportunity to acquire advanced, applied knowledge in specialised human resource functions, including staff planning, recruitment, selection and development, training, gender equity, employee motivation and performance management, remuneration management, superannuation, employment law, workplace negotiation, international and cross-cultural human resource management, and occupational health and safety. These areas are increasingly being influenced by wider corporate strategy and business plans and are often seen as the key to enhancing organisational performance. Accordingly, the School's programs place a strong emphasis on the strategic aspects and importance of human resource planning, policy and practice. The program in Human Resource Management provides a solid career basis for those involved in, or contemplating becoming involved in managing people in paid employment.

The program in Employment Relations focuses on the processes, relationships, institutions and public policies associated with paid employment in contemporary society. As well as equipping students with a solid working knowledge of all key institutional players, namely trade unions, management, employer organisations and industrial tribunals and government, the programs are designed to furnish a detailed and practical understanding of current employment relations issues, developments and practices. The specialisation in employment relations provides knowledge and skills suitable for a wide range of careers in employment relations areas, such as industrial advocacy or research with trade unions and employer organisations, as well as careers as industrial relations or labour policy specialists with government bodies and international labour organisations. Recent changes to industrial relations policies, including a growing focus on the 'micro' or workplace issues have increased the demand for employment relations expertise at all levels of corporate management.

The postgraduate program in Organisation and Management Studies focuses on how best to co-ordinate 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.

The Management specialisation examines the processes, conceptual expertise and work functions involved in managing people and organisations effectively. Broadly, management is concerned with building and developing relationships between people and organisations, formulating goals, designing organisational structures, fostering innovation, controlling resources and facilitating productive activities. Rather than focusing purely on the tasks, roles or functions of managers, this specialisation examines the complex relations between power, people and resources that are the key challenges to effective management. Theories and predictions concerning new organisational forms, future business trends, international strategy, and more effective management practices are studied in addition to established knowledge in the discipline. The overall objective is to equip future managers to apply knowledge and skill effectively to the complex problems facing organisations in today's dynamic global environment.

School of Information Systems, Technology and Management

Head of School: Professor G Low
Administrative Officer: Toni Benton

Information Systems is concerned with planning, analysis, design and operation of computerised systems used to process information in commerce, industry, government and research organisations. The data processing needs of the organisation are studied by systems analysts. Solutions to these needs, generally involving computerised equipment, are determined, and systems of processing information are designed and implemented.

Graduates often follow careers as programmers, systems analysts, business analysts, information technology specialists, data administrators, EDP auditors and database administrators. Major employers of Information Systems graduates include government departments, banks, oil companies, insurance companies, large manufacturing enterprises, retail companies, service industries, universities and other research organisations, and computer marketing organisations.

Information Management is concerned with the intriguing and 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, archives 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 Graduate

Diploma and Master of Commerce programs or through Special Programs of Study in the GradDip, MCom or Master of Information Management. The area of specialisation is Information and Library Management. The School has a vigorous research program with opportunities for study at the Masters and Doctoral level in the three areas specified as well as in interdisciplinary areas. Professional accreditation has been given to graduates of our programs by the Australian Library and Information Association. Our graduates are employed both in Australia and in the region in the rapidly developing information environment that includes libraries, archives and the wider information industry.

School of International Business

Head of School: Professor Sid Gray
Administrative Assistant: Sue Richardson

International Business is a rapidly growing field of study dealing with the development, strategy, and management of multinational enterprises in the global context of complex and dynamic business environments. Besides the study of multinational enterprises, the field necessarily includes business context studies and culture and communications, including language studies. Business is becoming increasingly international and the most effective business leaders and professionals of the future will be those who know how to deal with the problems of doing business and managing organisations in a complex and uncertain global business environment.

Doing business and making decisions internationally involves greater complexity and is much more challenging compared to decision making restricted to the domestic context. Special knowledge and skills are required to be successful at international business.

Strategic decisions have to be made about which countries to operate in and whether or not to export or license, whether to set up a new facility, establish a joint venture or acquire an existing business and how to sustain competitiveness internationally.

Critical issues requiring analysis and judgement at the international level include global strategy, country risk, business negotiations, cultural difference, and performance measurement and evaluation

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. Professional accreditation has been given to graduates of our programs by the Market Research Society of Australia. 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 acheive 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 two customised programs in conjunction with industry. The Professional Marketing program is a joint initiative with the AMI and leads to a graduate certificate or diploma in the MCom degree. A 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 web-site: http://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 tourism policy. Strong links exist with Federal and State Government organisations, and with tourism authorities. The Centre is in the CRC for Tourism with a special focus on tourism economics, forecasting and marketing.

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 it's 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.

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 (Institute subjects in brackets):

ACTL5101	Probability and Statistics for Actuaries (Subject 101 Statistical Modelling)
ACTL5102	Financial Mathematics for Actuaries (Subject 102 Financial Mathematics)
ACTL5103	Stochastic Models for Actuarial Applications (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)
ECON5103	Business Economics
or	
ECON5154	Microeconomics Analysis 1
and	
ECON5174	Macroeconomics Analysis 1 (Subject 107 Economics)

ACCT5930	Financial Accounting
and	
FINS5511	Corporate Finance (Subject 108 Finance and Financial Reporting)
ACTL5109	Financial Economics for Insurance and Superannuation (Subject 109 Financial Economics)
ACTL5100	Actuarial Theory and Practice A
and	
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 (F.I.A.A.) 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 (A.I.A.A.) 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 (F.I.A.A.) 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.

Recognition of PY and CPA Program

The successful completion of:

(a) the Professional Year Program (PY) 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.

Chartered Institute of Company Secretaries in Australia Ltd.

This CICSA 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 CICSA members also belong.

The CICSA 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 CICSA Student Members.

For details of accredited subjects and student membership contact Dr John Nelson, National Education Manager, CICSA, 70 Castlereagh Street, Sydney (telephone: 9223 5744).

The Australian Computer Society

The Australian Computer Society recognises that students who have completed the Master of Commerce degree program are recognised as having achieved the standard of knowledge required for Level 1 entry if they have successfully completed any five courses from:

INFS3605	Implementation Workshop
INFS3608	Advanced Database Systems
INFS3611	Design Workshop
INFS5905	Information Systems Auditing
INFS5953	Information Systems Management
INFS5983	Business Data Communications
INFS5986	Research Topics in Information Systems 1
INFS5987	Research Topics in Information Systems 2
INFS5988	Business Information Systems
INFS5989	Information Systems Design
INFS5991	Decision Support Systems

and for Level 2 if they have included in their program any three or four of the courses listed.

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.

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.

The Australian Library and Information Association

The Graduate Diploma in Information Management-Librarianship and the Master of Information Management-Librarianship programs are presently accredited by the Australian Library and Information Association (ALIA). It is proposed that students who complete either the Master of Commerce or the Master of Information Management-Information and Library Management or the Graduate Diploma, 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

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 to qualify for the Diploma:

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 Analysis

Students who have successfully completed the required courses at UNSW must complete the application form which is available from the School of Marketing Office, UNSW, Sydney NSW 2052 or by contacting The Market Research Society of Australia Ltd, P.O Box 697 North Sydney NSW 2059 (Tel. 02-9955 4830, Fax 02-9955 5746,

email sydney@bigpond.com). Further information is available from the Professional Associations section in the Marketing web site: www.marketing.unsw.edu.au

Program and Course Information

Program Outlines

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.

Suitably qualified candidates may enrol to study for the degree of Doctor of Philosophy. In addition, programs are available leading to the award of the degrees of Master of Commerce (Honours), Master of Commerce, Graduate Diploma and Graduate Certificate in Commerce. Courses are offered in Accounting, Economics, Business Statistics, E-Business Management, Economic History, Finance, Industrial Employment Relations, International Business, Knowledge Management, Organisational and Management Studies, Human Resource Management, Information Systems and Management, Marketing, Tourism and Hospitality Management, Business Law, Taxation, and Strategic Value Management. Normally all applicants for registration for the degree of Doctor of Philosophy and Master of Commerce (Honours) should be graduates in Commerce or Economics seeking advanced specialisation in their previously studied discipline, although there is provision for non-Commerce or Economics graduates to be admitted in special cases, usually subject to a qualifying program.

The requirements for the Master of Commerce (Honours) degree may be satisfied by a program of study emphasising a major thesis and formal courses. The degree of Master of Commerce may be pursued by graduates from either Commerce or non-Commerce disciplines, either primarily in the form of study and professional development in a single field, or as a broader integrated program embracing several of the disciplines offered in the Faculty. The requirements for this degree are satisfied by successful study in formal courses. There is also provision with Head of School's approval, to undertake a two course equivalent Project Report for the degree.

Suitably qualified candidates wishing to pursue a shorter program of postgraduate study may undertake a Graduate Diploma in Commerce. This program comprises six graduate courses from the Commerce and Economics disciplines and as with the other postgraduate degree programs may be undertaken on a part-time or full-time basis.

Students can also elect to do a Graduate Certificate in Commerce of four approved postgraduate courses offered by the Faculty of Commerce and Economics.

The Faculty now offers four additional award programs: Master of Information Studies (by Research); the Master of Information Management (by Coursework); the Master of Finance (by Coursework) and the Master of Business Information Technology (by Coursework).

The Faculty also offers customised and open learning mode MCom and GradDip programs to cohorts of local and international students.

Postgraduate Programs Available in 2002

The program numbers and corresponding titles are listed as a guide for enrolment purposes. Students must nominate a plan and program code at enrolment time. Subject to the Rules appearing below, students may change specialisations throughout their degree.

Doctor of Philosophy (PhD)

Plan	Discipline
ACCTAR1521	Accounting
ACTLBR1545	Actuarial Studies
ECONAR1540	Economics
FINSCR1561	Banking and Finance
IBUSAR1603	International Business
INFSAR1525	Information Systems
IROBGR1601	Industrial Relations and Organisational Behaviour
LEGTFR1535	Business Law and Taxation
IMGTHR1990	Information and Library Management
MARKAR1550	Marketing

Master of Commerce (Honours)

Plan	Discipline
ACCTAR2570	Accounting
ACTLCR2582	Actuarial Studies
ECONAR2571	Economics
ECONCR2572	Econometrics
ECOHB2573	Economic History
FINSCR2574	Banking and Finance
INFSER2575	Information Systems and Management
IROBAR2576	Employment Relations
IROBER2577	Organisational Behaviour
IROBFR2578	Human Resource Management
LEGTER2579	Business Law and Taxation
MARKAR2580	Marketing

Qualifying Program

Plan	Discipline
ACCTAQ6714	Accounting
ECONAQ6715	Economics
FINSAQ6716	Banking and Finance
LEGTEQ6717	Business Law and Taxation
INFSAQ6718	Information Systems
MARKAQ6728	Marketing
IBUSAQ6729	International Business
IROBJQ6730	Human Resource Studies and Organisational Behaviour
IROBAQ6731	Industrial Relations

Master of Commerce

Program	Plan	Discipline
8403	ACCTES8403	International Professional Accounting (Guangzhou)
8404	ACCTAS8404	Accounting
8404	ACCTDS8404	Professional Accounting
8404	ACCTHS8404	Strategic Value Management
8404	ACCTFS8404	Public Sector Financial Administration
8404	ACTLCS8404	Actuarial Studies
8404	ECONGS8404	Business Economics and Statistics
8404	ECONJS8404	Environmental Economics
8404	FINSDS8404	Banking
8404	FINSAS8404	Finance
8404	FINSES8404	Funds Management
8404	FINSFS8404	International Finance
8404	FINSGS8404	Risk Management and Insurance
8404	TAHMCS8404	Tourism, Hospitality Management and Marketing
8404	IBUSAS8404	International Business
8404	COMMBS8404	E-Business Management
8404	INFSHS8404	Health Informatics
8404	INFSES8404 Management	Information Systems and
8404	IROBCS8404	Human Resource Management
8404	IROBIS8404	Employment Relations
8404	IROBHS8404	Organisation and Management Studies
8404	LEGTGS8404	Taxation (Customised)
8404	LEGTAS8404	Business Law
8404	LEGTCS8404	Taxation
8404	IMGTFS8404	Information Management
8404	MARKAS8404	Marketing
8405	ACCTES8405	International Professional Accounting (Beijing)

Master of Finance

Program	Plan
8406	FINSAS8406

Master of Business Information Technology

Program	Plan
8407	INFSAS8407

Master of Technology Management

Program
8007

Master of Information Management

Program	Plan	Discipline
8923	IMGTFS8923	Information Management

Graduate Diploma in Commerce

Program	Plan	Discipline
5390	ACCTAS5390	Professional Accounting (Customised)
5391	ACCTAS5391	Accounting
5391	ACCTFS5391	Public Sector Financial Administration
5391	ACCTHS5391	Strategic Value Management
5391	ACTLCS5391	Actuarial Studies
5391	IMGTES5391	Information Management
5391	ECONGS5391	Business Economics and Statistics
5391	ECONJS5391	Environmental Economics
5391	FINSAS5391	Finance
5391	IROBIS5391	Employment Relations
5391	IROBHS5391	Organisation and Management Studies
5391	IROBCS5391	Human Resource Management
5391	INFSES5391	Information Systems and Management
5391	MARKAS5391	Marketing
5391	MARKCS5391	Professional Marketing (Customised)
5391	TAHMAS5391	Tourism and Hospitality Management
5391	COMMBS5391	E-Business Management
5391	LEGTAS5391	Business Law
5391	LEGTCS5391	Taxation
5391	IBUSAS5391	International Business Finance

Graduate Diploma in Business Information Technology

5394	INFSJS5394	Business Information and Technology

Graduate Certificate in Commerce

Program	Plan	Discipline
7355	ACCTAS7355	Accounting
7355	ACTLCS7355	Actuarial Studies
7355	ECONGS7355	Business Economics and Statistics
7355	FINSAS7355	Finance
7355	TAHMAS7355	Tourism and Hospitality Management
7355	IBUSAS7355	International Business
7355	INFSES7355	Information Systems and Management
7355	IROBIS7355	Employment Relations
7355	IROBHS7355	Organisation and Management Studies
7355	IROBCS7355	Human Resource Management
7355	LEGTAS7355	Business Law
7355	LEGTCS7355	Taxation
7355	MARKAS7355	Marketing
7355	MARKDS7355	Media Sales (Customised)
7355	MARKCS7355	Professional Marketing (Customised)

Program Objectives and Requirements for the Degree of Doctor of Philosophy (PhD)

Objectives

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.

Program Objectives and Requirements for the Degree of 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 – Program Code 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 – Program Code 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 – Program Code 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:

FINS5577	Advanced Topics in Corporate Finance
FINS5578	Recent Developments in Banking Research

2. In addition to completing the courses listed in 1, students shall enrol in FINS5594 and submit a thesis on an approved topic. Normally the thesis should not exceed 50,000 words.

Business Law and Taxation – Program Code 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 – Program Code 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 – Program Code 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 Monetary Economics
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 – Program Code 2578 Master of Commerce (Honours)

1. All students shall study the following core courses:

IROB5920	Men and Women in Organisations
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 – Program Code 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 – Program Code 2577 Master of Commerce (Honours)

1. All students shall study the following core courses:

IROB5903	Organisational Innovation and Change
IROB5905	Organisational Diagnostics
IROB5918	Organisational Restructuring
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 – Program Code 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 (F/T) or INFS6001 (P/T) (Information Systems) or IMGT5994 (F/T) or IMGT6001 (P/T) (Information Management) and submit a thesis on an approved topic. Normally the thesis should not exceed 50,000 words.

Marketing – Program Code 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.

Master of Information Studies - Program Code 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 IMGT5994(F/T) or IMGT6001(P/T) 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.

Program Objectives and Requirements for the Degree of 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 multi-disciplinary 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 Enterprises
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

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 intergrated 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 common 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 who commence their disciplinary studies at an advanced level (see 6 above) and who take *at least six* starred 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
ACCTFS8404	Public Sector Financial Administration
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
INFSHS8404	Health Informatics
INFSES8404	Information Systems and Management
IROBCS8404	Human Resource Management
IROBIS8404	Employment Relations
LEGTAS8404	Business Law
LEGTCS8404	Taxation
LEGTDS8404	Advanced 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, Peoples Republic of China

Program Code 8405

ACCTES8405 International Professional Accounting – Beijing*

*Offered at Beijing University, Beijing, Peoples Republic of China

Program Objectives and Requirements for the Degree of Master of Finance (by Coursework)

This Program provides specialised education in all aspects of advanced finance. It is aimed at graduates who 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 Faculty of Commerce and Economics. Except in exceptional circumstances a candidate shall be expected to have had at least three years appropriate experience.

Objectives:

1. To provide in depth study in Finance.

2. To provide opportunities for the design of study programs that meet professional requirements, or the needs and interests of individuals.

Students who already have a degree majoring in finance or similar studies should complete the following *eight* courses:

FINS6680	Empirical Techniques and Applications in Finance
FINS6681	Advanced Applied Corporate Finance
FINS6682	Advanced Applied Portfolio Management
FINS6683	Project: Topics in Advanced Finance
FINS6684	Fixed Income Portfolio and Risk Management
FINS6685	Financial Risk Management for Financial Institutions
FINS6686	Advanced Quantitative Analysis of Investment and Funds Management
FINS6687	Advanced Applied Funds Management

Number of total credit units required for the award of Master of Finance is 48. Students should refer to the course entries for assumed knowledge requirements.

Program Objectives and Requirements for the Degree of Master of Business Information Technology (by Coursework)

This program provides specialised education in all aspects of advanced commercial information systems and business information technology. It is aimed at graduates who 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 Faculty of Commerce and Economics. Except in exceptional circumstances a candidate shall be expected to have had at least three years appropriate experience.

Objectives:

- To provide commercial and organisational perspectives on Business Information Technology and Information Systems.
- To provide in depth study in Business Information Technology/ Information Systems.
- To provide opportunities for the design of study programs that meet professional requirements, or the needs and interests of individuals.

Requirements

1. Students must complete 48 units of credit for the degree

2. Approved specialisations are listed hereafter

3. Students may have their specialisation noted on their academic transcript

Approved Master of Business Information Technology Specialisations

At present only one specialisation is to be offered, in Electronic Commerce. New specialisations may be approved by the Standing Committee of the Faculty.

Electronic Commerce Specialisation

Students undertaking the specialisation are required to complete the following list of compulsory courses. No options or electives are available.

INFS5721	Electronic Commerce Telecommunications
INFS5722	Advanced Database Implementation for Electronic Commerce
INFS5723	Management Perspectives on Electronic Commerce Technologies
INFS5724	Electronic Commerce Implementation
INFS5725	Electronic Commerce Project
INFS5726	Electronic Commerce Risk, Security and Assurance
INFS5727	Managing Electronic Commerce Projects
INFS5728	Information Design for the Digital Enterprise

48 units of credit are required for the award of Master of Business Information Technology.

Program Objectives and Requirements for the Graduate Diploma in Commerce

Objectives

1. To provide a perspective on commerce as a social phenomenon.

2. To provide opportunities for depth of study in at least one of the commerce disciplines.

3. To provide opportunities for the design of study programs that meet vocational needs and interests or individual interests.

Requirements

1. A student must complete *six* courses for the Graduate Diploma.

2. *Two* of these courses shall be drawn from a common core of graduate courses designed to provide a perspective on commerce as a social phenomenon except where permission is granted for the substitution of other courses on the basis of prior studies.

The common core courses are:

ACCT5901	Accounting: A User Perspective
ECON5103	Business Economics
ECON5203	Statistics for Business
FINS5511	Corporate Finance
IBUS5601	Global Business and Multinational Enterprises
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

3. *Two of* the courses shall be taken from a disciplinary stream defined by the Standing Committee of Faculty, in addition to any disciplinary courses taken as common core.

4. *Two* other courses may be taken as elective studies from postgraduate courses offered or approved by the Faculty. Elective studies may be in one or more disciplines and may be used to extend disciplinary studies taken to meet the requirement in 3 above.

5. Approved substitutions for common core courses may involve either extensions of disciplinary studies (see 3 above) or elective studies (see 4 above).

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 *six* courses in a disciplinary stream (following from permission to substitute for common core courses) shall have their specialisation noted on their academic transcript; students who commence their studies at an advanced level (see 6 above) and who take *six* starred 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 Higher Degree 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 Graduate Diploma Programs

Program Code 5391

Plan	Disciplinary Stream
ACCTAS5391	Accounting
ACCTHS5391	Strategic Value Management
ACCTFS5391	Public Sector Financial Administration
ACTLCS3591	Actuarial Studies
ECONGS5391	Business Economics and Statistics
ECONJS5391	Environmental Economics
FINSAS5391	Finance
TAHMAS5391	Tourism and Hospitality Management
IBUSAS5391	International Business Finance
COMMBS5391	E-Business Management
INFSES5391	Information Systems and Management
COMMCS5391	Knowledge Management
IROBCS5391	Human Resource Management
IROBIS5391	Employment Relations
IROBHS5391	Organisation and Management Studies
LEGTAS5391	Business Law
LEGTCS5391	Taxation
MARKAS5391	Marketing

Special Programs

Program Code 5390

ACCTAS5390	Professional Accounting – Customised

Program Code 5391

INFSES5391	Information Management
ECONJS5391	Environmental Economics
MARKCS5391	Professional Marketing (Customised)
ACCTFS5391	Public Sector Financial Administration
LEGTDS5391	Taxation (Customised)

Program Objectives and Requirements for the Graduate Certificate in Commerce

Objectives

1. To provide a perspective on commerce as a social phenomenon.

2. To provide opportunities for the design of study programs that meet vocational needs or individual interests.

3. To recognise accomplishments in commerce related studies.

Requirements

1. A student must complete *four* courses for the Graduate Certificate.

2. The *four* courses may be drawn from graduate courses offered by the Faculty of Commerce and Economics.

3. Students are required to satisfy course prerequisites in their program of studies and they may be proscribed from taking courses which would duplicate prior studies. Guidance will be provided in these matters to individual students.

4. No exemptions are permitted in the Graduate Certificate in Commerce.

5. Special programs are available within, and customised programs can be designed to suit, the Graduate Certificate program structure.

Programs in each Disciplinary Stream for Master of Commerce (by Coursework) and Graduate Diploma Programs

Note on asterisked courses following:

Students who also commence their disciplinary studies at an advanced level and who take at least six starred courses in the discipline shall have their advanced specialisation noted on their transcript.

Accounting

Plan ACCTAS8404

ACCT5901	Accounting: A User Perspective
*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	Innovative Organisations
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
*INFS5905	Information Systems Auditing

Recognition of PY and CPA Program

The successful completion of:

(a) the Professional Year Program (PY) 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 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.

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
FINS5514	Capital Budgeting and Financial Decisions
FINS5535	Derivatives and Risk Management Techniques
FINS5536	Fixed Income Securities and Interest Rate Derivatives
FINS5554	Life and Health Insurance
MATH5965	Mathematics of Security Markets 1
MATH5816	Mathematics of Security Markets 2
MATH5835	Stochastic Processes

Business Economics and Statistics

Plan ECONGS8404

ECON5103	Business Economics
ECON5104	International Economics
ECON5203	Statistics for Business
*ECON5108	Public Finance
*ECON5115	Natural Resource Economics
*ECON5116	Environmental Economics
*ECON5120	Topics in Business Economics I
*ECON5121	Topics in Business Economics II
*ECON5122	Competing in the Knowledge Economy
*ECON5123	Economics of E-Business
*ECON5153	International Monetary Economics
*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)
ACTL5002	Superannuation and Retirement Benefits

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
LEGT5601	Contemporary Issues in Taxation
*LEGT5999	Project Report

Finance

Plan FINSAS8404

FINS5510	Personal Financial Planning and Management
FINS5512	Financial Markets and Institutions
FINS5513	Security Valuation 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	Asian Financial Market Analysis
*FINS5523	Finance for Entrepreneurial and Small Firms
*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
*FINS5552	Hazard Risk Financial Management
*FINS5553	Insurance Company Operations and Management
*FINS5554	Life & Health Insurance
FINS5566	Electronic Financial Trading
FINS5567	Banking and Financial Innovation
*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
*IROB5705	The Management of Training
*IROB5711	Employment and Industrial Law
*IROB5712	Negotiation, Bargaining and Advocacy
IROB5900	Social and Organisational Analysis
*IROB5903	Organisational Innovation and Change
*IROB5908	Strategic Human Resource Management
*IROB5920	Management Equity, Diversity and Disability
*IROB5945	The Development of Management Thought
*IROB5946	Managing Occupational Health and Safety
*IROB5947	Remuneration and Performance Management
*IROB5948	Human Resources Recruitment, Selection and Development
*IROB5949	International Human Resource Management
ACTL5002	Superannuation and Retirement Benefits
*IROB5941	Special Topic in Human Resource Studies
*IROB5952	Project Report (Human Resource Management)

Employment Relations

Plan IROBIS8404

IROB5700	Management, Work and Organisation
IROB5701	Employment and Industrial Relations
*IROB5705	The Management of Training
*IROB5711	Employment and Industrial Law
*IROB5712	Negotiation, Bargaining and Advocacy
*IROB5715	Wages and Incomes Policy
IROB5900	Social and Organisational Analysis
*IROB5920	Management Equity, Diversity and Disability
*IROB5946	Managing Occupational Health and Safety
ACTL5002	Superannuation and Retirement Benefits
*IROB5731	Special Topic in Australian Industrial Relations
*IROB5750	Project Report (Industrial Relations)

IROB5491	Special Topic in Human Resource Management
IROB5952	Project Report (Human Resource Management)

Information Systems and Management

Plan INFSES8404

*INFS5848	Information Systems Project Management
*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
*INFS5972	Global Business Data Networks
*INFS5974	Advanced Database Implementation
*INFS5975	Advanced Software Implementation
*INFS5982	Advanced Data Communications
*INFS5983	Business Data Communications
*INFS5984	Information Systems Security
INFS5985	Managing Electronic Commerce
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
IMGT5220	Electronic Record keeping Fundamentals
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
*IMGT5550	Advanced Information Retrieval Systems
*IMGT5555	Knowledge Generation: Communication, Structure and Process
*IMGT5560	Information Management: Progressional 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
IBUS5605	Japanese Business and Management
IBUS5606	Chinese Business and Management
IBUS5607	International Entrepreneurship and New Venture Management
ACCT5905	International Accounting and Multinational Enterprises
ACCT5919	Business Risk Management
ACCT5955	Value Based Management in a Global Economy
ECON5104	International Economics
ECON5120	Topics in Business Economics 1
ECON5121	Topics in Business Economics 2
ECON5153	International Monetary Economics
FINS5516	International Corporate Finance
FINS5522	Asian Financial Market Analysis
FINS5526	International Corporate Governance: Accounting and Finance Perspectives
FINS5550	International Banking Management
FINS5551	International Insurance
HOSP5901	Elements of Tourism and Hospitality
IMGT5460	Asian Information Resources and Technology
INFS5972	Global Business Data Networks
INFS5985	Managing Electronic Commerce
IROB5912	International Dimensions of Negotiation Behaviour
IROB5949	International Human Resource Management
JAPN5100	Business Japanese A+
JAPN5101	Business Japanese B
JAPN5102	Professional Japanese A
JAPN5103	Professional Japanese B
LEGT5562	Business Law in a Global Economy
LEGT5583	International Business Taxation
MARK5940	International Marketing
MARK5945	Marketing in Asia
CHIN5006	Business Chinese A+
CHIN5007	Business Chinese B
CHIN5008	Chinese - Language Management Case Studies
CHIN5009	Chinese for Commercial Use
IBUS5681	Business Communication++
IBUS5691	Special Topic in International Business
IBUS5699	Project Report in International Business
TAHM5001	Tourism Demand and Industry Structure

** To qualify for the award of a specialisation, students must include all four courses in their program of study.

+ For students with no Japanese or Chinese. Students with HSC or equivalent competence will be enrolled at a suitable level, subject to the results of a placement test.

++ This course does not qualify for the award of a specialisation in International Business.

Organisation and Management Studies

Plan IROBHS8404

IROB5700	Management, Work and Organisation
IROB5900	Social and Organisational Analysis
IROB5901	Organisational Behaviour
*IROB5903	Organisational Innovation and Change
*IROB5912	International Dimensions of Negotiation Behaviour
*IROB5914	Employee Communication
*IROB5915	Human Potentialities
*IROB5920	Managing Equity, Diversity and Disability
*ACCT5917	Strategic Management: Systems and Processes
*ACCT5920	Managing Intangible Resources
*ACCT5921	Business Performance Management
*ACCT5949	Managing Agile Organisations
*IROB5931	Special Topic in Organisational Behaviour
*IROB5950	Project Report (Organisational Behaviour)

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	Innovative Organisations
ACCT5996	Business Processes: Analysis and Improvement
*IBUS5601	Global Business and the Multinational Enterprise

The PY and CPA programs of the Institute of Chartered Accountants in Australia and CPA Australia are deemed the equivalent of completion of ACCT5931 and ACCT5996 in the Strategic Value Management Program in the Master of Commerce (Plan ACCTHS8404), provided those students undertake at least four advanced courses in the Strategic Value Management stream. Thus students with the appropriate background will only need to complete six courses for the award of their Master of Commerce (Strategic Value Management) degree.

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
*LEGT5601	Contemporary Issues in Taxation
*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 ACCTAS5390.

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
INFS5988	Business 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	Security Valuation 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 Anaylsis

Plus one course from the following list:

FINS5517	Applied Portfolio Management and Modelling
FINS5522	Asian Financial Market Analysis
FINS5523	Finance for Entrepreneurial and Small Firms
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 Management

Plan COMMBS8404

Students are required to complete the core courses ACCT5901, ECON5103, ECON5203 and INFS5988, and 8 courses from lists A, B and C, including at least 6 courses from list A:

List A

ACCT5922	E-Business: Strategy and Processes
ECON5123	Economics of E-Business
FINS5566	Electronic Financial Trading
INFS5885	Management of E-Business Technology
IROB5904	Organisational Transformation at the speed of E
LEGT5421	E-Business and the Law
MARK5947	Interactive Electronic Marketing

List B

ACCT5919	Business Risk Management
ACCT5949	Managing Agile Organisations
ACCT5988	Innovative Organisations
MARK5900	Elements of Marketing
FINS5567	Banking and Financial Innovation
IBUS5602	Cross-Cultural Management
INFS5992	Data Management
LEGT5411	Legal Strategies for Knowledge Protection
LEGT5531	Competition and Consumer Law

List C

ECON5122	Competing in the Knowledge Economy
FINS5535	Derivatives and Risk Management Techniques
IBUS5601	Global Business and the Multi-national Enterprise
IBUS5603	Global Business Strategy and Management
INFS5848	Information Systems Project Management
INFS5982	Advanced Data Communications
INFS5983	Business Data Communication
INFS5984	Information Systems Security
IROB5903	Organisational Innovation and Change
IROB5908	Strategic Human Resource Management
IROB5918	Organisational Restructuring
LEGT5575	Corporate Fraud and Crime
MARK5942	Contemporary Knowledge-Based Marketing
MARK5952	New Product/Service Development

Environmental Economics

Plan ECONJS8404

In addition to the four core courses for Master of Commerce, students must complete:

ECON5115	Natural Resource Economics
ECON5116	Environmental Economics
ECON5121	Topics in Business Economics II Module 1: Project Analysis Module 2: The Economics of Climate Control
ECON5197	Project Report (counts as two courses)
ECON5207	Elements of Econometrics

Plus two courses chosen from the following list:

ECON5104	International Economics
ECON5108	Public Finance
ECON5120	Topics in Business Economics 1
ECON5122	Competing in the Knowledge Economy
ECON5153	International Monetary Economics
ECON5164	Economic Reasoning
ECON5201	Comparative Forecasting Techniques
ECON5204	Mathematics for Business
ECON5233	Operations Research
ECON5248	Business Forecasting
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	Security Valuation 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	Asian Capital Market Analysis
FINS5523	Finance for Entrepreneurial and Small Firms
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
FINS5552	Hazard Risk Financial Management
FINS5553	Insurance Company Operations and Management
FINS5554	Life & Health Insurance
ACTL5002	Superannuation and Retirement Benefits++

Any other graduate course approved by the Head of School of Banking and Finance.

++ Approved modules only. Students must seek advice from the Head of School of Banking and Finance.

Health Informatics

Plan INFSHS8404

In addition to the four common Master of Commerce core courses, students must complete:

INFS5992	Data Management
IMGT5430	Health Information: Retrieval, Systems and Management
HEAL9041	Health Care Systems

Plus five courses from:

ACCT5934	Issues in Public Sector Financial Administration
ACCT5996	Business Processes: Analysis and Improvement
INFS5848	Information Systems Project Management
INFS5989	Information Systems Design
INFS5983	Business Data Communications
IMGT5110	Information Retrieval Systems
IMGT5550	Advanced Information Retrieval Systems
IMGT5120	Organisation of Knowledge
IMGT5555	Informetrics: Methods and Applications
IROB5700	Management, Work and Organisation
IROB5946	Managing Occupational Health and Safety
HEAL9351	Health Economics 1
HEAL9301	Health Services Planning 1
HEAL9381	Policy Studies
HEAL9391	Health services Strategic Management and Planning
HEAL9421	Public Health and Epidemiology
HEAL9442	Health Resources Planning and Development
HEAL9711	Management of Organisation
HEAL9744	Casemix Accounting and Funding

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.

ACCT5901	Accounting: A User Perspective
ECON5103	Business Economics
ECON5203	Statistics for Business
INFS5988	Business Information Systems
IROB5700	Management, Work and Organisation
IMGT5110	Information Retrieval Systems
IMGT5120	Organisation of Knowledge
IMGT5410	Knowledge and Society
IMGT5420	Information Sources: Access, Assessment and Acquisition

3 Electives

International Finance

Plan FINSFS8404

In addition to the four common Master of Commerce core courses, students must complete:

FINS5512	Financial Markets and Institutions
FINS5513	Security Valuation and Portfolio Selection
FINS5514	Capital Budgeting and Financial Decisions
FINS5516	International Corporate Finance
FINS5522	Asian Financial Market Analysis
FINS5550	International Banking Management
FINS5551	International Insurance Management

Plus one course from:

FINS5515	Issues in Corporate Finance
FINS5517	Applied Portfolio Management and Modelling
FINS5523	Finance for Entrepreneurial and Small Firms
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
FINS5552	Hazard Risk Financial Management
FINS5553	Insurance Company Operations and Management
FINS5554	Life & Health Insurance

Any other graduate course approved by the Head of the School of Banking and Finance

Knowledge Management (Not offered in 2002)

Plan COMMCS8404

Students are required to complete the core courses ACCT5901, ECON5103, ECON5203 and INFS5988, and 8 courses from lists A, B and C, including at least 6 courses from list A:

List A

ACCT5920	Managing Intangible Resources
ECON5122	Competing in the Knowledge Economy
IBUS 5602	Cross-Cultural Management
IMGT5120	Organisation of Knowledge
INFS 5927	Knowledge Management Systems and Technology
IROB5902	Organisational Learning
LEGT5411	Legal Strategies for Knowledge Protection
MARK5942	Contemporary Knowledge-based Marketing

List B

ACCT5919	Business Risk Management
ACCT5949	Managing Agile Organisations
ACCT5988	Innovative Organisations
IBUS 5681	Business Communication
INFS 5957	Information and Decision Technologies
IMGT5445	Bus. and Govt Info.: Sources and Services
LEGT5562	Business Law in a Global Economy
LEGT5571	Franchising
LEGT5421	E-Business and the Law
LEGT5531	Competition and Consumer Law
MARK5900	Elements of Marketing

List C

ECON5123	Economics of E-Business
MARK5952	New Product/Service Development
MARK5947	Interactive Electronic Marketing
INFS 5991	Decision Support Systems
IROB5705	The Management of Training

Public Sector Financial Administration

Plan ACCTFS8404

Students are required to complete:

(a) ACCT5901 Accounting: A User Perspective (or ACCT5930 Financial Accounting) together with three core courses from List A or be exempted from all or part of this requirement;

(b) Four courses from List B;
(c) Two courses from List C;
(d) Two courses from List D.

Subject to the following:

(a) Substitutes for courses may be approved by the Program Co-ordinator;

(b) Enrolment in the courses ACCT5931 Strategic Financial and Resource Management and ACCT5996 Business Processes: Analysis and Improvement is not recommended for students with a prior undergraduate degree in accounting.

List A – Core Courses

ACCT5901	Accounting: A User Perspective (or ACCT5930 Financial Accounting) and one of the following:
ECON5103	Business Economics
ECON5203	Statistics for Business
LEGT5511	Legal Foundations of Business
INFS5988	Business Information Systems

List B – Disciplinary Courses

ACCT5919	Business Risk Management
ACCT5921	Business Performance Management
ACCT5932	Public Sector Accounting and Financial Reporting
ACCT5934	Issues in Public Sector Financial Administration
ACCT5996	Business Processes: Analysis and Improvement (1)

List C – Elective Courses

ACCT5931	Strategic Financial and Resource Management
ECON5108	Public Finance
INFS5988	Business Information Systems
FINS5514	Capital Budgeting and Financial Decisions

List D – Elective Courses

ACCT5999	Project Report (3)
ECON5120	Topics in Business Economics 1
ECON5108	Public Finance
FINS5514	Capital Budgeting and Financial Decisions
IROB5700	Management, Work and Organisation
IROB5908	Strategic Human Resource Management
IBUS5602	International Business and Cross-Cultural Management
SLSP5001	Policy Analysis
SLSP5041	Public Policy Process
SLSP5004	Management and Policy in Organisations

Notes: (1) Not recommended for candidates with an undergraduate degree in accounting

(2) Or such other graduate courses as may be approved by the Program Co-ordinator.

(3) ACCT5999 is equivalent to two courses.

Risk Management and Insurance

Plan FINSGS8404

In addition to the *four* common Master of Commerce core courses, students must complete the following eight courses:

ACCT5919	Business Risk Management
FINS5512	Financial Markets & Institutions
FINS5513	Security Valuation & Portfolio Selection
FINS5531	Risk & Insurance
FINS5551	International Insurance Management
FINS5552	Hazard Risk Financial Management
FINS5553	Insurance Company Operations and Management
FINS5554	Life & Health Insurance

For those students who have prior knowledge equivalent to FINS5512, FINS5513 and ACCT5919, any *three* of the following courses should be chosen:

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

Advanced Taxation (customised)

Plan LEGTDJ8404

Candidates are required to complete:

(a) 4 Core courses or be exempted from all or part of this requirement on the basis of prior studies. Core courses should include ECON5103 Business Econonmics, ACCT5901 Accounting: A User Perspective, and INFS5988 Business Information Systems.

(b) 8 courses from list A and B below, with at least 6 courses from List A. LEGT5999 Project Report carries 12 units of credit and counts as two courses.

List A

LEGT5581	Taxation Policy, Principles and Planning
LEGT5582	Taxation of Business Entities
LEGT5583	International Business Taxation
LEGT5602	Tax Administration and Compliance
LEGT5586	Corporate Law, Tax and Strategy
LEGT5589	Capital Gains Tax

List B

LEGT5588	Goods and Services Tax
LEGT5601	Contemporary Issues in Taxation
LEGT5523	Special Topic in Taxation
LEGT5999	Project Report

Any other Postgraduate courses taught in the Faculty of Commerce and Economics.

Tourism, Hospitality Management and Marketing

Plan TAHMCS8404

Program structure

Commerce Core

ACCT5901	Accounting: A User's 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

Master of Information Management – Program Code 8923

Plan IMGTFS8923

This is a fixed program of seven prescribed courses and five electives approved by the Associate Head of the School of Information Systems, Technology and Management.

INFS5988	Business Information Systems
IROB5700	Management, Work and Organisation
IMGT5110	Information Retrieval Systems
IMGT5120	Organisation of Knowledge
IMGT5410	Knowledge and Society
IMGT5420	Information Sources: Access, Assessment and Acquisition
IMGT5560	Information Management: Professional Attachment

5 Electives

Master of Technology Management

Program Code 8007

The Master of Technology Management degree is a multidisciplinary program comprised of courses offered by three Faculties – Science, Engineering and Commerce and Economics.

Candidates are required to complete 48 Units of credit, including a core course 'Technology, Management and Innovation', and 7 courses thereafter to complete the 8 course Program. These courses may be chosen from any postgraduate courses offered by the four faculties, subject to the candidate meeting all the relevant prerequisites. A maximum of 4 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.

Graduate Diploma in Commerce

Professional Accounting (Customised)

Plan ACCTAS5390

This course is only available to corporate groups by prior arrangement with the Faculty.

This program is offered on a customised basis over a fourteen month period. Certain courses are studied during a session on a part-time basis. Others are studied during the Summer and mid-year recesses on a full-time basis.

ACCT5908	Auditing and Assurance Services
ACCT5930	Financial Accounting
ACCT5970	Accounting Concepts and Financial Reporting
ACCT5996	Business Processes: Analysis and Improvement

Plus two courses from:

ACCT5931	Strategic Financial and Resource Management
ECON5103	Business Economics
ECON5203	Statistics for Business
FINS5511	Corporate Finance
INFS5988	Business Information Systems
LEGT5511	Legal Foundations of Business
LEGT5541	Company Law
LEGT5551	Revenue Law

Any other graduate course approved by the Head of School of Accounting

Public Sector Financial Administration

Plan ACCTFS5391

Students are required to complete ACCT5901 Accounting: A User Perspective (or ACCT5930 Financial Accounting), together with one course from List A, two courses from List B, and two courses from List C.

List A – Core Courses

ACCT5901	Accounting: A User Perspective (or ACCT5930 Financial Accounting) and one of the following: (1)
ECON5103	Business Economics
ECON5203	Statistics for Business
LEGT5511	Legal Foundations of Business
INFS5988	Business Information Systems List B – Disciplinary Units

List B - Electives Disciplinary Courses

ACCT5932	Public Sector Accounting and Financial Reporting
ACCT5934	Issues in Public Sector Financial Administration

List C – Electives (2)

ACCT5919	Business Risk Management
ACCT5921	Business Performance Management
ACCT5996	Business Processes: Analysis and Improvement (3)
ECON5108	Public Finance
ECON5120	Topics in Business Economics 1
FINS5514	Capital Budgeting and Financial Decisions
IROB5700	Management, Work and Organisation
IROB5908	Strategic Human Resource Management
IBUS5602	International Business and Cross- Cultural Management
SLSP5001	Policy Analysis
SLSP5041	Public Policy Process
SLSP5004	Management and Policy in Organisation
COMMBS5391	E-business Management

Students must complete six courses from Lists A, B and C under the Public Sector Financial Administration heading, with at least four courses from List A.

E-Business Management

COMMBS5391

Students must complete 6 courses from Lists A,B and C under the E-Business Special Program heading, with at least 4 courses from List A.

Environmental Economics

Plan ECONJS5391

Students are required to take the following six courses:

ECON5103	Business Economics*
Either	
ECON5203	Statistics for Business
or	
ECON5248	Business Forecasting
ECON5115	Natural Resource Economics
ECON5116	Environmental Economics
ECON5121	Topics in Business Economics II Module: Project Analysis Module: Economics of Climate Change
ECON5207	Elements of Econometrics

* Students who receive an exemption from Business Economics must choose a course from the list of MCom options offered by the School, subject to the approval of the Head of School.

Notes

(1) Unless substitutes approved
(2) or such other graduate courses as may be approved by the Program Co-ordinator
(3) Not recommended for candidates with an undergraduate degree in Accounting.

Information Management

Plan IMGTES5391

INFS5988	Business Information Systems
IROB5700	Management, Work and Organisation
IMGT5110	Information Retrieval Systems
IMGT5120	Organisation of Knowledge
IMGT5410	Knowledge and Society
IMGT5420	Information Sources, Access, Assessment and Acquisition

Professional Marketing (Customised)

Plan MARKCS5391

Students are required to complete all of the following 6 courses:

MARK5981	Market Orientation and Market Thinking
MARK5982	Understanding Buyer Behaviour
MARK5983	Decision Support Tools for Marketing
MARK5984	Brand Management and Brand Communications
MARK5985	Customer Relationship Management
MARK5986	Strategic Innovation and Marketing Management

The above courses are available only to students in this program.

Taxation (Customised)

Plan LEGTDS5391

Candidates are required to complete:

2 courses from list A and 4 courses from list B.

List A – Core Courses

ACCT5901	Accounting: A User Perspective
ECON5103	Business Economics
ECON5203	Statistics for Business
FINS5511	Corporate Finance
IBUS5681	Business Communication
IMGT5120	Intellectual Organisation of Information and Records
INFS5988	Business Information Systems
IROB5700	Management, Work and Organisation
LEGT5511	Legal Foundations of Business
MARK5900	Elements of Marketing

List B – Electives

LEGT5581	Taxation Policy, Principles and Planning
LEGT5582	Taxation of Business Entities
LEGT5583	International Business Taxation
LEGT5602	Tax Administration and Compliance
LEGT5586	Corporate Law, Tax and Strategy
LEGT5589	Capital Gains Tax

Graduate Diploma in Business Information Technology

Plan INFSJS5394

Students undertaking the program are required to complete the following list of courses:

INFS5721	Electronic Commerce Telecommunications
INFS5722	Advanced Database Implementation for Electronic Commerce
INFS5723	Management Perspectives on Electronic Commerce Technologies
INFS5724	Electronic Commerce Implementation
INFS5727	Managing Electronic Commerce Projects
INFS5728	Information Design for the Digital Enterprise

Tourism and Hospitality Management

Plan TAHMAS5391

Candidates are required to complete the following six courses:

Commerce Core:

ECON5103	Business Economics
MARK5900	Elements of Marketing

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

*A highly recommended parallel program of hands-on operational training and work placement will be offered through a third party which will be of appeal to those who want to become hotel managers but have had great difficulty getting the required training and industry experience previously. There are separate fees and enrolment policies.

Graduate Certificate in Commerce

Special Programs

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.

Professional Marketing (Customised)

Plan MARKCS7355

Students are required to complete 4 courses from the following list:

MARK5981	Market Orientation and Market Thinking
MARK5982	Understanding Buyer Behaviour
MARK5983	Decision Support Tools for Marketing
MARK5984	Brand Management and Brand Communications
MARK5985	Customer Relationship Management
MARK5986	Strategic Innovation and Marketing Management

The above courses are available only to students in this program.

Tourism and Hospitality Management

Plan TAHMAS7355

Students are required to complete the following courses:

Tourism and Hospitality

TAHM5001	Tourism Demand and Industry Structure
TAHM5002	Strategic Hospitality and Tourism Marketing
TAHM5003	Tourism Development and Delivery
TAHM5004	Hospitality Strategy and Asset Management

*A highly recommended parallel program of hands-on operational training and work placement will be offered through a third party which will be of appeal to those who want to become hotel managers but have had great difficulty getting the required training and industry experience previously. There are separate fees and enrolment policies.

Special Program (Open Learning/Distance Delivery)

This program is only available to corporate groups by prior arrangement with the Faculty. This program is offered on a customised basis.

Students should complete four of the following courses, offered in Open Learning mode through Distance Delivery:

ACCT5912	Accounting: A User Perspective
ECON5103	Business Economics
ECON5203	Statistics for Business
FINS5511	Corporate Finance
INFS5988	Business Information Systems
IROB5700	Management, Work and Organisation
LEGT5511	Legal Foundations of Business
MARK5900	Elements of Marketing

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 under 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 subjects 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 in Information Management-Librarianship 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, Library and Archive Studies (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 information about postgraduate programs offered by the Faculty of Engineering at UNSW. It also contains descriptions of the programs offered and lists areas in which research may be undertaken.

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 Key Centre for Photovoltaic Engineering as well as the Graduate School of Biomedical Engineering. The Faculty has several research Centres and is also actively engaged with nine Co-operative Research Centres (CRCs).

The Faculty of Engineering is dedicated to scholarship, teaching and research in technology and their application for the benefit of the community. The Schools of the Faculty offer numerous combined and concurrent programs as well as 'fast-track' programs leading to the Master of Commerce following an Engineering undergraduate program.

Postgraduate study in the Faculty can lead to the award of Graduate Diplomas and coursework Masters degrees as well as Masters and PhD degrees by research.

The Faculty is committed to developing the scientific, technical and creative skills of its students. Programs also focus on 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 a highly developed skill in communication with other members of the profession and the public.

In order to develop innovation and a reappraisal of current practice, the Faculty provides postgraduate programs for the continuing education of its graduates.

As part of the development of the engineering professional, the Faculty encourages its students to play an active part in the entire life of the University. Student activities and professional organisations are amongst the opportunities to do this.

Tim Hesketh
Acting Dean
Faculty of Engineering

Faculty of Engineering

Contents

Faculty Information and Assistance **97**
- Some people who can help you 97
- Faculty of Engineering Websites 97
- Course Descriptions 97
- English Language Requirements 97
- Enrolment Procedures 97
- Professional Institutions 97

Faculty Centres

- Key Centre for Photovoltaic Engineering 98
- Photovoltaic Special Research Centre 98
- Centre for Third Generation Photovoltaics 98
- Centre for Advanced Macromolecular Design 98
- Centre for Advanced Numerical Computation in Engineering and Science 99
- Centre for Electrochemical and Minerals Processing 99
- Centre for Particle and Catalyst Technologies 99
- Centre for Remote Sensing and Geographic Information Systems 99
- Centre for Water and Waste Technology 100
- Energy Research, Development and Information Centre (ERDIC) 100
- UNESCO Centre for Membrane Science and Technology 100
- Munro Centre for Civil and Environmental Engineering 100
- Centre for Postgraduate Studies in Civil and Environmental Engineering 100
- UNSW Groundwater Centre 100

Program and Course Information

Graduate Study – Summary of Programs **100**
- Research Degrees 101
- Doctor of Philosophy PhD 101
- Master of Engineering/Master of Science ME/MSc 101
- Coursework Masters Degrees 101
- Master of Engineering Science MEngSc 102
- Graduate Diplomas 102
- Graduate Certificate 102
- Graduate Courses 103

Research and Project Areas
- Biomedical Engineering 103
- CANCES 103
- Chemical Engineering and Industrial Chemistry 103
- Civil and Environmental Engineering 104
- Computer Science and Engineering 105
- Electrical Engineering 106
- Mechanical and Manufacturing Engineering 107
- Naval Architecture 107
- Mining Engineering 108
- Petroleum Engineering 108
- Surveying and Spatial Information Systems 108
- Remote Sensing and GIS 109

School of Chemical Engineering and Industrial Chemistry

Program Outlines

8016 Master of Engineering Science in Process Engineering 109
*7334 Graduate Certificate in Aluminium Smelting Technology 110
*5034 Graduate Diploma in Aluminium Smelting Technology 110

School of Civil and Environmental Engineering

Program Outlines

8612 Master of Engineering Science 111
8615 Master of Environmental Engineering Science (Internal mode) 112
8617 Master of Engineering Science (External mode) 112
8618 Master of Environmental Engineering Science (External mode) 113
5459 Graduate Diploma in Civil & Environmental Engineering (Internal mode) 113
5454 Graduate Diploma in Civil & Environmental Engineering (External mode) 113
7336 Graduate Certificate in Civil Engineering 113
7337 Graduate Certificate in Environmental Engineering 113

School of Computer Science and Engineering

Program Outlines

8508 Master of Information Science 114
5453 Graduate Diploma in Information Science 115
8685 Master of Engineering Science in Computer Science & Engineering 116
8680 Master of Computer Science 116
5452 Graduate Diploma in Computer Science 116

School of Electrical Engineering and Telecommunications

Program Outlines

8501 Master of Engineering Science in Electrical Engineering 116
8503 Master of Engineering Science in Telecommunications 117
5458 Graduate Diploma in Electrical Engineering 118
5448 Graduate Diploma in Telecommunications 118

School of Mechanical and Manufacturing Engineering (incorporating Aerospace Engineering, Mechatronic Engineering and Naval Architecture)

Program Outlines

8710 Master of Engineering Science 119
Manufacturing Engineering Plan 119
Mechanical Engineering Plan 120
5710 Graduate Diploma in Mechanical Engineering and Manufacturing Engineering 120

School of Mining Engineering

Program Outlines

8055 Master of Engineering Science in Mining Engineering 121
5040 Graduate Diploma in Mining Engineering 121
5045 Graduate Diploma in Mine Ventilation 122
7335 Graduate Certificate in Mining Engineering 122

School of Petroleum Engineering

Program Outlines

5031 Graduate Dilpoma in Petroleum Engineering (Full-time internal; part-time external) 122
7341 Graduate Certificate in Petroleum Engineering (Part Time External) 123
8655 Master of Engineering Science in Petroleum Engineering (Part Time External) 123

School of Surveying and Spatial Information Systems

Program Outlines

8652 Master of Engineering Science in Surveying and Spatial Information Systems 123
8652 Master of Engineering Science in Surveying and Spatial Information Systems (External Mode) 124
8652 Master of Engineering Science in Geographic Information Systems 124
8653 Master of Engineering Science in Land Administration 124
8641 Master of Engineering Science in Remote Sensing 124
5492 Graduate Diploma in Surveying and Spatial Information Systems 124
5493 Graduate Diploma in Land Administration 124
5496 Graduate Diploma in Remote Sensing 125

Graduate School of Biomedical Engineering

Program Outlines

8660 Master of Biomedical Engineering 125
8665 Master of Engineering Science 126
5445 Graduate Diploma in Biomedical Engineering 126

Centre for Photovoltaic Engineering Program Outlines

8512 Master of Engineering Science in Photovoltaics and Solar Energy 126
5458 Graduate Diploma in Electrical Engineering 127

Graduate Programs in Business and Technology

Program Outlines

8616 Master of Business and Technology 128
5457 Graduate Diploma in Business and Technology 129
7333 Graduate Certificate in Business and Technology 129

Conditions for the Award of Degrees

Higher Degrees

Doctor of Philosophy (PhD) 129
Master of Engineering (ME) and Master of Science (MSc) 130
Master of Engineering (ME) and Master of Science (MSc) without supervision 131

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,** which includes session/s offered, pre/corequisite details, class hours, units of credit, etc.

You will find that almost any program of study you wish to undertake has courses from other Schools, and even other Faculties. This means that in your engineering program, courses are listed from other Schools in the Faculty of Engineering, each with its own identifying code, as well as from the School in which you are planning to study. If, for example, this is Mechanical and Manufacturing Engineering (MECH), all the courses for Mechanical and Manufacturing Engineering are described in the section for that School. As Mechanical and Manufacturing Engineering also includes Aerospace Engineering (AERO), Manufacturing Engineering and Management (MANF), Mechatronic Engineering (MTRN) and Naval Architecture (NAVL) these courses are also included with the School.

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 Enginering Dean's Office: Ms Donna Bailey, Room 605, Building K17
Tel: (02) 9385 6437

School of Chemical Engineering and Industrial Chemistry:
Ms V Werfel, Room 314, Applied Science Building
Tel: (02) 9385 4777

School of Civil and Environmental Engineering: Ms K Irvine, Room 406, Civil Engineering Building,
Tel: (02) 9385 5061

School of Computer Science and Engineering: Dr WH Wilson, 1ST Floor, K17 Building, Tel: (02) 9385 6876 or Ms C Nock, School Office, Ground Floor, K17 Building
Tel: (02) 9385 4728

School of Electrical Engineering and Telecommunications:
Ms Cindy Fuller, School Office, Electrical Engineering Building
Tel: (02) 9385 4000

School of Mechanical and Manufacturing Engineering:
Dr JM Challen, Room 105, Mechanical and Manufacturing Engineering Building
Tel: (02) 9385 4154

School of Mining Engineering: Dr C Daly, Room 37,Old Main Building
Tel: (02) 9385 4514

School of Petroleum Engineering: Ms J Lippiatt, Room 115, Petroleum Engineering Building
Tel: (02) 9385 4144

School of Surveying and Spatial Information Systems: Mr L Daras, School Office, Room 426, Electrical Engineering Building
Tel: (02) 9385 4182

Graduate School of Biomedical Engineering: Mr S Sadler, 5th Floor, Samuels Building
Tel: (02) 9385 3917

Centre for Photovoltaic Engineering: Ms Lisa Cahill, Room 128, Electrical Engineering Building
Tel: (02) 9385 6155

Graduate Programs in Business and Technology:
Ms M Brennan, Newton Building, Level 3
Tel: (02) 9385 6660

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 Websites

Faculty of Engineering
www.eng.unsw.edu.au

School of Chemical Engineering and Industrial Chemistry
www.ceic.unsw.edu.au

School of Civil and Environmental Engineering
www.civeng.unsw.edu.au

School of Computer Science and Engineering
www.cse.unsw.edu.au

School of Electrical Engineering and Telecommunications
www.ee.unsw.edu.au

School of Mechanical and Manufacturing Engineering
www.mech.unsw.edu.au

School of Mining Engineering
www.mining.unsw.edu.au

School of Petroleum Engineering
www.petrol.unsw.edu.au

School of Surveying and Spatial Information Systems
www.gmat.unsw.edu.au

Graduate School of Biomedical Engineering
www.gsbme.unsw.edu.au

Centre for Photovoltaic Engineering
www.pv.unsw.edu.au

Graduate Programs in Business & Technology
www.mbt.unsw.edu.au

Course Descriptions

Course descriptions offered in 2002 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 contact New South Student or www.student.unsw.edu.au.

English Language Requirements

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 to provide proof of their competence by presenting acceptable results from one of the following tests or by satisfying the program authority as to their level of proficiency. A pass in the writing component of the tests listed below is strongly recommended.

Minimum Acceptable Score

1. The Test of English as a Foreign Language (TOEFL), (paper-based) 550* or (computer based) 213. The Test of written English (TWE) 5.0.

2. International English Language Testing Service (IELTS) 6.0 in each sub-band.

3. Combined Universities Language Test (CULT) 65%.

4. UNSW Institute of Languages, English Entry Course (UEEC) C (grade point = 6.5).

Enrolment Procedures

Effective from 2001 all 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. Students in Graduate Programs in Business and Technology will not be able to re-enrol online, please check the School office for information on re-enrolling.

Further information, including details on how and when to enrol for 2002 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 "Enrol via the Web" 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 to promote 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: 9929 8544

2. The Institution of Surveyors, Australia

During their years as undergraduates, students in the Surveying and Spatial Information Systems course 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 quarterly journal of the Institution, The Australian Surveyor and Azimuth which is published by the New South Wales 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.

3. The Association of Professional Engineers, Scientists and Managers, Australia

APESMA is a professional organisation that represents the industrial interests of its members with a major focus on providing advice and assistance on employment related matters, including individual representation and improving salaries and conditions for professional engineers, scientists and managers.

Students are invited to become affiliate members (free of charge) of the Association while they are studying. This membership gives students access to information and advice on industrial experience, salary rates for graduates and contracts of employment. Student members receive The Student Update, a publication designed specifically for students, three times a year. This gives students some practical insight into aspect of the workplace to which they may not have given much thought in particular the employment issues that affect them as professional engineers. More information and student membership application forms can be obtained from APESMA, Level 1, 491 Kent Street, Sydney 2000, Tel: 9264 9500.

Faculty Centres

Key Centre for Photovoltaic Engineering

Director: Professor Stuart R. Wenham

The Key centre for Photovoltaic Engineering commenced in January 1999 and was one of only eight Key Centres established by the ARC Australia-wide across all disciplines. Massive growth in the photovoltaics industry is creating the need for new educational programs and collaborative research programs between manufacturers and institutions such as UNSW. Approximately half of the Key Centre's activities are devoted to research, with industry collaboration as a high priority. The other half of the Key Centre's activities focus on teaching. The primary new initiative in the teaching area is the establishment of a new undergraduate engineering degree in Photovoltaics and Solar Energy. This new program commenced in the year 2000 with further details on educational programs provided in the section under the Centre for Photovoltaic Engineering. In 2001, a "partner" undergraduate degree will commence at Murdoch University being developed in conjunction with the Key Centre and relying heavily on cross-enrolments with UNSW.

Photovoltaic Special Research Centre

Directors: Associate Professor Arim Aberle - Thin-film Device Research,
Associate Professor Christiana Honsberg - Commercial Bulk Technology Research, Dr J. Zhao - High Efficiency Device Program

The Photovoltaic Special Research Centre (PVSRC) was established in 1991 with major initiatives in commercial bulk technology research, thin-film device research and high efficiency devices. All three programs are active and highly successful within the Centre. The High Efficiency Device Program has achieved the distinction of holding the world efficiency record for silicon solar cells for more than a decade. The Commercial Bulk Technology Research has developed the buried contact solar cell, the most successfully commercialised new photovoltaic technology internationally in the last 15 years. The thin-film device research has led to the development of the thin-film multilayer technology which has become the focus of a major $50 million commercialisation program. New approaches, independent of Pacific Solar, are presently being investigated for the fabrication of highly efficient thin-film poly-si cells on glass. The facilities of the PVSRC are widely regarded as among the best internationally in the photovoltaic area.

Centre for Third Generation Photovoltaics

Director: Professor Martin A. Green
Deputy Directors: Associate Professor Armin Aberle, Dr. Richard Corkish

Since the early days of terrestrial photovoltaics (conversion of sunlight to electricity), a common perception has been that "first generation" silicon wafer-based solar cells would be replaced by a "second generation" of lower cost thin-film technology, probably also involving a different semiconductor. Historically, cadmium sulphide, amorphous silicon, copper indium diselenide, cadmium telluride and now thin-film silicon have been regarded as key materials for deposition as thin films onto a supporting substrate or superstrate. Since any mature solar cell technology must evolve to the stage where costs are dominated by those of the constituent materials, be it silicon wafers or glass sheet, it is likely that photovoltaics must evolve, in its most mature form, to a "third generation" of high-efficiency thin-film technology. By high-efficiency, what is meant is energy conversion values double or triple the 15-20% range presently targeted.

The Centre for Third Generation Photovoltaics was one of a small number of research Centres selected for funding as a Commonwealth Government Special Research Centre in the year 2000. It was established specifically to identify and accelerate the development of such "third generation" devices. The aim is to bring the most promising of these approaches to a "proof of concept" stage during the anticipated 9-year life of the Centre. There are outstanding opportunities with the Centre for "state of the art" research at postgraduate and postdoctoral levels in semiconductor device physics and technology, computer simulation of electro-optical devices, electronic materials engineering, and semiconductor device fabrication and characterisation areas.

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 Reseach 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 Advanced Numerical Computation in Engineering and Science

Director: Professor CAJ Fletcher
Administrative Contact Officer: Ms Josefina Musa

The Centre for Advanced Numerical Computation in Engineering and Science (CANCES) is a specialist research centre and is a joint initiative of the Faculties of Engineering and Science and Technology to provide a focus for the very active UNSW community of computational engineers and scientists exploiting state-of-the-art workstation clusters, vector and parallel supercomputers. The Centre contributes to graduate training through coursework and research programs, carries out both fundamental and applied research through developing and using computer codes, provides short courses for industry-based engineers and scientists and organises conferences and workshops on the latest computational techniques. The Centre has three areas of special emphasis: a) Industrial Computational Fluids and Heat Transfer, b) Environmental Modelling, c) Finite Element Structural Analysis.

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, University of New South Wales 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/Professor Jim Metson, Dr Margaret Hyland and Dr Roya Sheikholeslami)
- Electrochemical Engineering, including battery and fuel cell technology (Maria Skyllas-Kazacos and Associate Professor Jim Metson)
- Mineral Processing and Alumina Refining (Associate Professor Tam Tran and Dr Gotz Bickert)
- Applications of Ceramics and Glass Manufacture (A/Professor Michael Brungs)
- High Temperature Corrosion in the Process Industry (Professor David Young)
- High Temperature Glass and Metallurgical Processes (A/Professor Michael Brungs, and Dr Veena Sahajwalla)
- Computational Modelling for the Electrochemical and Minerals Process Industries (Professor Clive Fletcher, CANSES)

In addition to the research and testing programs and facilites, 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 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 inter-disciplinary 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 Large, ARC-SPIRT, Sugar Research Development Corporation, 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, the development of novel magnetic photocatalysts, solid-liquid separation, and computational modeling of particulate systems. In all, 26 PhD students and 4 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 the University. 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 Remote Sensing and Geographic Information Systems

Director: Dr Ray Merton

The Centre is a joint multidisciplinary enterprise aimed at facilitating research in the broad area of spatial information systems, which include remote sensing, geographical information systems (GIS), and land information systems.

The Centre's research interests include applications of artificial intelligence in remote sensing and digital photogrammetry, hyperspectral remote sensing, radar backscattering and inferometry, GIS modelling sea-level rise, multi-temporal imaging spectroscopy, and vegetation mapping from remote sensing imagery. Other interests include: monitoring urban areas using high spatial resolution satellite data, data modelling, 3-*D* visualisation, and spatial information systems for road transport design. Applications utilising multi-sensor, multi-platform, and multi-temporal remote sensing form a core interest of the Centre. GIS applications focus on the modelling and prediction of sea-level induced change in Australia's coastal zone. The growth of new research synergies between remote sensing and GIS data products is actively encouraged within the Centre.

There are more than 30 academic staff associated with the Centre. Active links are maintained with researchers in Asia, North and South America, China, and Europe.

Schools associated with the Centre offer undergraduate and postgraduate teaching and research in remote sensing and geographical information systems. The Centre also offers short courses on remote sensing and geographical information systems to the wider community. The Centre maintains a remote sensing and geographical information system data archive, and world-class computing facilities for the processing and analysis of these data.

Schools actively involved in the Centre include: the School of Geography and the School of Geology (Faculty of Science and Technology), and the School of Surveying and Spatial Information Systems (Faculty of Engineering).

Graduate Programs in Geographic Information Systems

The Master of Applied Science in Geographic Information Systems 8027.1000 is offered in both Geography and Geology within the Faculty of Science and Technology. Entry into either discipline depends on the background of the applicant and the orientation of the proposed program. Detailed information on this course is listed under the School of Geography section in the Science entry of this handbook.

The Masters degree program is also offered in the Faculty of Engineering as a Master of Engineering Science 8652. This course has a stronger engineering bias.

Graduate Programs in Remote Sensing

The graduate programs in Remote Sensing are offered in both the Faculty of Science and Technology and the Faculty of Engineering. Entry into either Faculty depends on the background of the applicant and the orientation of the proposed program.

Programs are available:

Faculty of Science

Master of Applied Science and Technology in Remote Sensing 8713
Master of Applied Science and Technology in Geographic Information Systems 8711
Graduate Diploma in Remote Sensing 5653
Masters in Environmental Management 8712

Faculty of Engineering

Master of Engineering Science in Remote Sensing 8641
Master of Engineering Science in GIS, 8652
Graduate Diploma in Remote Sensing 5496

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 continues 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; 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 enquiries in the wider community for information on energy technologies; particularly new and improved energy technology 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. It has put together a twelve unit subject on energy management which is offered as a subject in the Master of Business and Technology Program at the University. The program is structured to enable it to be offered in packages of various units as shorter courses, both in Australia and overseas.

For further information please refer to web site: http://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 include 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 conducting membranes, membrane biophysics, membrane pervaporation and supported liquid membranes, and membrane-based systems using metal binding liquids to remove heavy metals.

The Membrane Centre has close links, and collaborative projects operating with research institutes in Italy, France, Germany, Denmark, Finland, The Netherlands, the United Kingdom, Romania, the United States, Canada and Thailand. It also maintains connections with membrane groups in China, Indonesia, Japan, Korea, Malaysia, India 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.

Munro Centre for Civil and Environmental Engineering

Director: Vacant

The Munro Centre for Civil and Environmental Engineering was established in the School of Civil and Environmental Engineering in 1992. Its purpose is to support the School, and to facilitate interaction between the School, the engineering profession, industry and government. The Centre promotes ongoing education in civil and environmental engineering by organising conferences, courses and seminars.

Centre for Postgraduate Studies in Civil and Environmental Engineering

Director: Vacant

The Centre offers specialist short courses of 1 to 5 days for practising Civil and Environmental Engineers. The courses are offered under the Munro Centre for Civil and Environmental Engineering.

UNSW Groundwater Centre

(In association with the Faculty of Science)

Director: Dr J Jankowski

The UNSW Groundwater Centre's facilities are based in the School of Geology in the Faculty of Science and at the Water Research Laboratory in Manly Vale.

The Centre supervises research projects for 4th year students, and organises Coursework Masters programs for the MEngSc and MSc Tech Degrees and research students carrying out MEng, MSc or PhD degree programs.

Program and Course Information

Graduate Study
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.

The Graduate Programs in Business and Technology is responsible for the MBT Program offering the Master of Business and Technology, the Graduate Diploma in Business and Technology and the Graduate Certificate in Business and Technology (see Graduate Programs in Business and Technology section in this Handbook).

Conditions governing the award of research degrees are set out later in this handbook in Conditions for the Award of Degrees. Conditions for the award of all other degrees may be found in the University Calendar.

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
Mineral Processing and Extractive Metallurgy	1046
Mining Engineering	1050
Petroleum Engineering	1017
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
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
Mineral Processing and Extractive Metallurgy	2046

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 New South Wales 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 six academic sessions (full-time) and eight 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 ten academic sessions (full-time) and twelve 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 New South Wales 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 three academic sessions (full-time) and six 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 six academic sessions (full-time) and ten 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

Biomedical Engineering	8665
Coastal Engineering & Management	8612
Computer Science and Engineering	8685
Construction Management	8612
Electrical Engineering	8501
Engineering and Technology Management	8612
Geographic Information Systems	8652
Geotechnical Engineering	8612
Groundwater Studies	8612
Hydrology & Water Resources	8612
Intrastructure Management	8612
Land Administration	8653
Manufacturing Engineering	8710
Mechanical Engineering	8710
Mining and Industry Management	8055
Mining Geomechanics	8140
Photovoltaics & Solar Energy	8512
Process Engineering	8016
Project Management	8612
Remote Sensing	8641
Structural Engineering	8612
Surveying & Spatial Information Systems	8652
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

Computer Science and Engineering	8508

External Mode Delivery

All external programs are offered only on a full fee paying basis.

MEngSc

Construction Management	8617
Engineering and Technology Management	8617
Infrastrucure Management	8617
Peteroleum Engineering	8655
Project Management	8617
Transport Engineering	8617
Water Engineering	8617
Waste Management	8617
Water and Wastewater Treatment	8617
Surveying and Spatial Information Systems	8652

MEnvEngSc

Civil and Environmental Engineering	8618

MBT

Business and Technology	8616

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 who enrolled from 1996 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.

From 1997 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 two academic sessions (full-time) or four academic sessions (part-time) from the date of enrolment. The maximum period of candidature is four academic sessions (full-time) and eight 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.

From 1997 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

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
Mine Ventilation	5045
Mining Engineering	5040
Petroleum Engineering	5031
Remote Sensing	5496
Surveying and Spatial Information Systems	5492
Telecommunications	5448

External Mode Delivery

Business and Technology	5457
Civil and Environmental	5459
Petroleum Engineering	5031
Surveying Spatial Information systems	5492

Further details of the recommended programs of study may be obtained from the relevant schools.

Graduate Certificate

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 Mode Delivery

Business and Technology	7333
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

Analysis of patient therapies
Arterial haemodynamics
Arterial morphometry
Artificial blood vessels
Automatic modulation of cardiovascular function
Bioactive materials
Biocompatibility: tissue/materials interactions
Biomaterials
Biomechanics of joints and limbs
Biomedical instrumentation and computer acquisition
Biomedical polymers and acrylic cements
Bioprostheses
Blood pressure and heart rate variability
Cardiovascular effects of body movement
Cell separation technologies
Computer-aided histological analysis
Connective tissue healing
Cytometry
Endothelial cell/biomaterial interactions
Extracorporeal therapies
Flow in collapsible tubes
Flow visualisation and measurement
Image analysis of cells
Implantable sensors
Infection associated with medical devices
In vivo mechanisms of polymer degradation
Mechanisms of age related arterial degradation and hypertension
Medical image processing
Modelling of artificial kidney therapy
Modelling of cardiac electrical potentials
Modelling of mass transfer processes in medicine
Non-invasive blood pressure measurement
Nonlinear dynamical systems analysis
Orthopaedic applications of hydroxyapatite
Orthopaedic implants
Percutaneous access devices
Processing and interpretation of biomedical signals
Pulmonary image analysis
Pulsatile crossflow filtration
Ultrasonic distance measurement
Ventricular assist devices

CANCES

Industrial Computational Fluids and Heat Transfer

Complex turbulent flows and turbulence modelling
Forced convection and radiative heat transfer
Two-phase flows: gas/particle; fluid/particle; water/steam Mineral processing flows
Erosion, particulate deposition and electrostaticprecipitation
Computational wind engineering
Airconditioning and fire modelling
Computational (automatic) design
Computational aerodynamics and turbomachinery

Environmental Modelling

Atmospheric dynamics
Numerical weather prediction
Climate variability
Atmosphere-ocean interactions
Atmospheric Boundary layer studies
Meso-scale numerical modelling
Atmospheric-Land interactions
Wind erosion, soil moisture and wind breaks
Air quality

Finite Element Structural Analysis

Mechanical and manufacturing engineering
Large-scale static, dynamic and nonlinear FE analysis
Constitutive modelling for metals, adhesives and carbon fibre composites
Computational fracture mechanics
Material properties via inverse FE analysis
Biomedical analysis
Adaptive solution methodology and sparse matric algorithms

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
Examination of pozzolanic potential of indigenous materials
Utilisation of industrial waste materials in concrete
Chemistry and mineralogy of cement and lime stabilisation
Durability of concrete
High strength and high performance concrete
Ductility of concrete through the use of polymer fibres
Supplementary cementitous materials such as 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
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
Project management
Contracts, quality 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
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
Geophysical methods for contamination detection
Remote sensing using Landsat and Radar
Contaminated site assessment techniques
Pollutant movement in groundwater systems
Groundwater modelling

Hydraulics and Coastal Engineering

Open channel flow and hydraulic structures
Fluvial and estuarine hydraulics
Catchment drainage and water quality
Sediment transport
Wave action and coastal processes
Coastal structures and port engineering
Numerical and physical modelling

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
Crashworthiness of vehicles and components Instability of structures
Elastoplastic analysis and shakedown of steel frames
Computer aided design of steel structures

Structural and Numerical Analysis, Geometric Modelling

Stability analysis using bubble functions
Optimal structural design
Non linear and large displacement analysis
Lightweight and large span structures
Finite element analysis of hyperbolic paraboloid cooling towers
Development and application of finite element techniques
Investigation of elastic stability

Timber Engineering and Masonry Structures

Timber shell structures
Dynamic behaviour of timber utility poles in car crashes
Non destructive testing of timber
Limit State design methods
Stress laminated timber bridges and design procedures for flat orthotropic plates
Finite element analysis of structural connection

Transport Engineering

Problems of land use and transport interaction
Theories of traffic structure and flow
Measurements, planning and control of traffic
Transport systems analysis
Transport and the environment – accidents, energy, intrusion, noise and pollution
Road and traffic noise
Transport and the community
Urban and rural transport system design
Economic evaluation of transport investments
Transport planning – local, urban, and regional systems
Investigations into transport economics, policy and decision making
Investigations of the geometric shape of the road alignment
Study of road alignment design in three dimensions

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 Languge
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
Learning Algorithms and Theory
Logic Prgramming 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 Web Sites
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 Specificatfication
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
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

Communications

(i) Optical Communications
Optical communications
Optical fibres and integrated optics
Electro-optic devices
Sensors
Nonlinear optical switching
Optical solitons

(ii) Microwaves and Antennas
Microwave circuits and devices
Microwave measurements and electronics
Antennas and phased arrays
CAI in electromagnetic applications
SAW devices
Nonlinear effects in optical fibres
Soliton Propogation in optical fibres

(iii) Signal Processing
Signal processing and analysis
Active and adaptive filtering
Digital Filters
Digital signal processor chip
Acoustic and seismic signal processing
Speech processing and coding
Digital image processing and video signal processing
SAW Signal Processing

(iv) Digital Communications
Digital communications
Digital radio and modulation methods

(v) Communications Networks
Computer communications and local area networks
New architectures for local area
Network reliability and service availability
BISDN, ATM protocols
Wireless networks

(vi) Communications Systems
Radar and navigational aids
Land & Satellite Mobile Communications
Mobile satellite communications
Mobile networks

Electric Power

(i) Power Systems
Power System analysis
Power System Protection
Stability, Dynamics and Control
Distribution System Planning and Operation
Optimisation of Hydro-electric Power Systems
Electromagnetic Transient Analysis
Static VAR Compensation
Power System Planning and Economics
Load Management and Control
Renewable Energy Sources Photovoltaic Systems
Remote area supply
Harmonic
Flexible AC Transmission System

(ii) Electrical Power Equipment and Utilisation
High Voltage and high current phenomena
Insulating material application
Voltage disturbances in LV and MV systems
Electrical measurements and data acquisition
Electrical machines and drives
Arcing fault characteristics
Partial discharge detection and location
Gaseous discharges and insulation
Equipment for hazardous atmospheres
Synthetic loading of machines
Computer aided teaching
Electrical machine modelling
Electrical safety
Vector control of induction and synchronous motor drive

(iii) Power Electronics
DC/DC converters
High frequency power transformers

Inverters for machine drives
Microprocessor control of power electronics
Variable speed drives
Dynamics of drives, speed observer techniques
Power electronic simulation studie
Electronic commutation
Remote area supplies

Electronics

Semiconductor device physics
Novel semiconductor devices
Integrated circuit design
Integrated circuit technology
Optical and infrared detector arrays
Microelectronic sensors
Photovoltaic solar energy conversion
Silicon solar cells
Computer-aided IC design
Plasma processing
Integrated circuits for advanced signal processing
Photovoltaic module design
Microstructured devices
GaAs devices
Nano metre fabrication and quantum computing.

Systems and Control

Multivariable Control, simulation, modelling, expert systems in control design, advanced control of power plant, computer aided design and optimal control.

Robotics: signal, pattern, image and scene, analysis and processing, adaptive control, hierarchical control.

Robust control, computation issues in control, adaptive control.

Digital and adaptive control, real-time computing, non linear control.

Biomedical engineering, biological signal analysis, physiological systems modelling and analysis, data acquisition, signal processing ecg analysis.

Control and simulation, digital system and digital signal processing, physiological system modelling, biological signal processing, computer modelling of information processing, neural computing and learning machines.

Fuzzy control systems, Neural Networks for identification and control, Multirate digital control systems, Adaptive noise cancellation, Process control systems.

On-line Measurement Systems; Systems Analysis, Identification and Control: Digital Image Processing in Measurements and Control; Computer Simulations of Power Generation and Industrial Processes, their Optimisation and Control; Computer Simulations in Education. Hybrid control systems.

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

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

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

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

Industrial Technology 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

Mechatronics

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

Improved Oil and Gas Recovery

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 modeling 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 modeling. 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 modeling 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.

Surveying and Spatial Information Systems

Analysis of deformation measurements
Applications of inertial technology
Computer assisted mapping
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
Geodesy
Geopotential model testing
GPS geodynamics
GPS and GIS
GPS heighting
GPS surveying
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
Photogrammetry
Precise satellite orbit determination
Precise GPS navigation
Quality issues in land information systems
GPS data management
Radar altimetric analysis for oceanography
Remote sensing
Satellite geodesy
Survey network adjustment
Voice recognition for surveying instruments

Remote Sensing and GIS

Incorporation of auxiliary data into classification procedures
Urban area studies
Monitoring land use change using remotely sensed data
Determining the characteristics of surface reflectance
Analysis of image and map quality
Application of satellite imagery to small scale mapping
Multispectral linear transformations
Application of spaceborne synthetic aperture radar data
Application of aircraft and satellite data to arid land studies
Application of satellite data to geological studies
Synergism of radar, visible and infrared remotely sensed data
Analysis of high resolution SPOT and Landsat TM data
Application of remote sensing to pollution and environmental monitoring
Artificial intelligence in remote sensing and GIS
Forest inventory and monitoring
Visualisation
Multimedia
Analysis of errors in DEM determination from radar interferometry
Vertical topology in GIS
Quality issues in hydrographic information systems
GIS in transport planning

School of Chemical Engineering and Industrial Chemistry

Head of School: Associate Professor Michael Brungs
Administrative Officer: Vivienne Brennan
Research Program Co-Ordinator l: Associate Professor John Stubington
Process Engineering Program Co-Ordinator: 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.

(A full list can be obtained by contacting the School)

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 postgraduate program work based Master's 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: ceic@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 be able to 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, 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

Formal programs in the School of Chemical Engineering and Industrial Chemistry lead to the award of the Master of Engineering Science in Process Engineering (8016). The School also has a Graduate Certificate (7334) and Graduate Diploma (5034) in Aluminium Smelting Technology.

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 students 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 (6UOC) from the list of Post-Graduate 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 the CEIC 8320 (12 units of credit) 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 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
CEIC8312	Safety and Communications in the Process Industries
CEIC8313	Environmental Technology
CEIC8320	Process Engineering Project for M.EngSc 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
CEIC8342	Energy Management in the Process Industries
CEIC8350	Industrial Water and Wastewater Engineering

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 credits), while the Graduate Diploma (5034) requires 36 credits 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

Commencing in 2001, the School of Chemical Engineering and Industrial Chemistry will offer 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

Commencing in 2001, The School of Chemical Engineering and Industrial Chemistry will offer 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: Dr 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, and concrete and materials technology), transport engineering (planning design and operation of transport systems, land use and transport modelling, statistical analysis, economic evaluations and environmental impact studies), and water engineering (hydraulics, hydrology, groundwater, 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.

The Centre for Water and Waste Technology and the Munro Centre for Civil and Environmental Engineering are also located within the School. In addition to extensive laboratory facilities on the Kensington campus, the School operates the Heavy Structures Laboratory at Govett Street, Randwick and the Water Research Laboratory at King Street, Manly Vale. The latter complex houses the School's Water Reference Library.

The School is also involved in the UNSW Groundwater Centre, a joint enterprise with the School of Geology in the Faculty of Science.

The School offers the most extensive range of postgraduate coursework in Civil and Environmental Engineering in Australia. There are formal graduate programs 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). Corresponding programs in external mode delivery are 8617, 8618 and 5454. 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 engineering, waste management, water and wastewater treatment, water quality management

and water engineering. 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. Fees are payable for postgraduate coursework but a large number of equity scholarships are available. Details are available from the School Office.

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.

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. There are formal graduate programs 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 a wide range of areas.

Students may also undertake in external mode the Master of Engineering Science 8617, the Master of Environmental Engineering Science 8618 and Graduate Diploma 5454 programs, and specialise in engineering construction and management or aspects of water engineering. Fees are payable for postgraduate coursework programs.

The School also offers a Graduate Certificate qualification on completion of 24 units of credit.

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). 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 plan or specialisation. Usually a student completes the core requirements in the specialisation, and then a choice of elective courses and/or a project. The Postgraduate Coursework Coordinator must approve elective courses.

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 course co-ordinator. 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 with the School Office.

8612 Master of Engineering Science

MEngSc

Internal Mode Delivery

Courses are offered in a range of delivery modes and units of credit. 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.

CVPGAS 8612 Project Management
CVPGBS 8612 Construction Management
CVPGCS 8612 Engineering and Technology Management
CVPGDS 8612 Infrastructure Management

Courses are selected from the following list. Advice on selection is available from the School Office.

Management

CVEN9701 Engineering Economics and Financial Management
CVEN9702 Project Planning and Control
CVEN9703 Quality and Quality Systems
CVEN9706 Human Resources Management
CVEN9707 Contracts Management
CVEN9708 Asset Management
CVEN9710 Management of Risk
CVEN9711 Management of Professional Services
CVEN9714 Resource Management
CVEN9717 Marketing in Technology and Engineering
CVEN9718 Strategic Management in Engineering
CVEN9720 Problem Solving and Decision Making
CVEN9726 Legal Studies and Professional Practice
CVEN9730 International Project Management
CVEN9731 Project Management Framework

Construction

CVEN9723 Design of Construction Operations
CVEN9724 Construction Engineering and Technology
CVEN9727 Construction Estimating and Tendering

CVPGES 8612 Geotechnical Engineering

Specialist areas include geotechnical engineering and pavement engineering. Courses are selected from the following list:

CVEN9775 Numerical Methods in Geotechnical Engineering
CVEN9776 Engineering for Underground Structures
CVEN9779 Soil Dynamics and Earthquake Engineering
CVEN9783 Pavement Materials
CVEN9784 Pavement Analysis and Design
CVEN9785 Pavement Evaluation and Management
CVEN9786 Industrial, Airport and Heavy Duty Pavements
CVEN9788 Geotechnical Site Investigations
CVEN9790 Soil and Rock Slope Instability and Stabilisation
CVEN9792 Foundation Engineering
CVEN9793 Geomechanics
CVEN9794 Geotechnical Engineering of Dams
CVEN9795 Design of Dams for Earthquake
CVEN9798 Fundamentals of Geomechanics
CVEN9799 Geotechnics of Waste Disposal and Site Remediation
CVEN7807 Groundwater Hydrology
CVEN7808 Investigation of Groundwater Resources
CVEN7809 Geophysical Techniques in Groundwater Studies

CVPGFS 8612 Structural Engineering

Courses are selected from the following list:

CVEN9772 Numerical Methods in Civil Engineering
CVEN9802 Structural Stability
CVEN9804 Vibration of Structures
CVEN9806 Prestressed Concrete Design
CVEN9809 Reinforced Concrete Design
CVEN9814 Analysis of Plates and Shells
CVEN9818 Bridge Engineering
CVEN9820 Computational Structural Mechanics
CVEN9822 Steel Structures
CVEN9824 Advanced Materials Technology
CVEN9825 Continuum Mechanics
CVEN9827 Composite Steel – Concrete Structures

CVPGGS 8612 Transport Engineering

Courses are selected from the following list:

CVEN9403 Theory of Land Use Transport Interaction
CVEN9405 Urban Transport Planning Practice
CVEN9407 Transport Systems Design (Non-Urban)
CVEN9408 Transport Systems Design (Urban)
CVEN9410 Highway Engineering Practice
CVEN9414 Transport Systems Part 1
CVEN9415 Transport Systems Part 2
CVEN9418 Transport and Social Impact Assessment
CVEN9420 Special Topic in Transport Engineering
CVEN9421 Fundamentals of Traffic Engineering
CVEN9422 Traffic Management and Control
CVEN9423 Transport Environmental Analysis, Assessment and Control
CVEN9783 Pavement Materials
CVEN9784 Pavement Analysis and Design
CVEN9785 Pavement Evaluation and Management
CVEN9786 Industrial, Airport and Heavy Duty Pavements

CVPGHS 8612 Water Engineering

In addition to the specialisations listed below, a more general MEngSc program in Water Engineering can be undertaken by choosing 48 units of credit from any of the core areas shown below or the list of additional elective courses.

Specialisation in Water Engineering is possible in the following six areas by completing the core courses:

1. Waste Management
2. Water and Wastewater Treatment
3. Groundwater Studies
4. Coastal Engineering and Management
5. Hydrology and Water Resources
6. Water Quality Management

Details of each speciality area's core requirements are given below. It should be noted that not all courses are offered each year and the School Office should be consulted for details of which courses are offered in any particular year.

Specialisation Area Core Course Requirements

CVPGOS 8612 Waste Management

The courses in this 30 units of credit core are all offered over a 14 week period. The remaining 18 units of credit can be made up from the electives listed or as approved by the Postgraduate Coursework Coordinator. The core courses are:

CVEN9851 Unit Operations in Public Health Engineering
CVEN9872 Solid Waste Management
CVEN9881 Hazardous Waste Management
CVEN9884 Environmental Engineering Science 1
CVEN9885 Environmental Engineering Science 2

CVPGJS 8612 Water and Wastewater Treatment

The courses in this 30 units of credit core may be offered over a standard 14 week semester or may be taken in short course mode. The remaining 18 units of credit can be made up from electives listed or as approved by the Postgraduate Coursework Coordinator. The core courses are:

CVEN9851 Unit Operations in Public Health Engineering
CVEN9884 Environmental Engineering Science 1
CVEN9855 Water and Wastewater Analysis
CVEN9856 Water Treatment
CVEN9857 Wastewater Treatment

Additional Elective Courses

CVEN7817 Water in Mining Engineering
CVEN7829 Decision Support Systems
CVEN7822 Water Resources Modelling 2
GEOL9055 Hydrogeochemical Modelling
SESC9261 Introduction to Environmental Risk Assessment

CVPGKS 8612 Groundwater Studies

All courses in this 24 units of credit core are 3 units of credit offered in 3-day short course mode. GEOL courses are offered in cooperation with the School of Geology. The program is organised by the UNSW Groundwater Centre. The remaining 24 units of credit may be from electives listed or as approved by the Postgraduate Coursework Coordinator. The core courses are:

CVEN7807 Groundwater Hydrology
CVEN7808 Investigation of Groundwater Resources
CVEN7809 Geophysical Techniques in Groundwater Studies
CVEN7819 Hydrological Processes
CVEN7823 Applied Groundwater Modelling
GEOL9111 Groundwater Environments
GEOL9053 Hydrogeochemistry
GEOL9054 Analysis and Interpretation of Hydrochemical Data

CVPGLS 8612 Coastal Engineering and Management

All courses in this 24 units of credit core are 3 units of credit offered in 3-day short course mode. The remaining 24 units of credit may be from electives listed or as approved by the Postgraduate Coursework Coordinator. The core courses are:

CVEN7819 Hydrological Processes
CVEN7802 Coastal Dynamics
CVEN7803 Coastal & Beach Processes
CVEN7804 Coastal Structures
CVEN7805 Coastal Zone Management
CVEN7807 Groundwater Hydrology
CVEN7812 Natural and Artificial Wetlands
CVEN7813 Estuarine Processes

CVPGMS 8612 Hydrology and Water Resources

All courses in this 24 units of credit core are 3 units of credit offered in 3-day short course mode. The remaining 24 units of credit may be from electives listed or as approved by the Postgraduate Coursework Coordinator. The core courses are:

CVEN7819 Hydrological Processes
CVEN7820 Rainfall and Runoff Processes
CVEN7800 Urban Hydrology and Stormwater
CVEN7807 Groundwater Hydrology
CVEN7815 Introduction to Catchment Models
CVEN7816 Catchment Surface Models
CVEN7814 Flood Estimation
CVEN7824 Risk Analysis in Water Engineering

CVPGNS 8612 Water Quality Management

All courses in this 36 units of credit core are offered in 3-day short course mode. The remaining 12 units of credit may be from electives listed or as approved by the Postgraduate Coursework Coordinator. The core courses are:

CVEN7819 Hydrological Processes
CVEN7807 Groundwater Hydrology
CVEN7812 Natural and Artificial Wetlands
CVEN7825 Aquatic Chemistry for Engineering
CVEN7826 Microbiology for Engineering
CVEN7806 Catchment and Water Quality Management
CVEN7815 Introduction to Catchment Models
CVEN7824 Risk Analysis in Water Engineering
CVEN7816 Catchment Surface Models
CVEN7805 Coastal Zone Management
CVEN7827 Contaminant Transport in the Environment
CVEN7828 Transformation and Fate of Contaminants

Additional Water Engineering Electives

GEOL9055 Hydrogeochemical Modelling
CVEN7810 Electrical Methods in Groundwater Investigation
CVEN7817 Water in Mining Engineering
CVEN7818 Channel and River Models
CVEN7822 Water Resources Modelling 2
CVEN7830 Physical Apects of Contaminated Groundwater
GEOL9112 Investigation and Management of Salinity
CVEN7801 Design of Stormwater Structures
CVEN7811 Sediment Transport in Alluvial River Systems
CVEN7825 Aquatic Chemistry for Engineering
CVEN7831 Chem and Biol Aspects of Contaminated Groundwater
CVEN9930 Masters Project

8615 Master of Environmental Engineering Science

MEnvEngSc
(Internal Mode Delivery)

The Master of Environmental Engineering Science consists of a core program of three courses, totalling 18 units of credit. The remaining 30 units of credit are taken from elective courses.

Core Courses

CVEN9884 Environmental Engineering Science 1
CVEN9885 Environmental Engineering Science 2
CVEN9888 Environmental Management

Elective Courses

Elective courses are chosen from those 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)

- External MEngSc courses are offered on a fee-paying basis. Specialisation is offered in the following areas:

CVPGAS 8617 Project Management
CVPGBS 8617 Construction Management
CVPGCS 8617 Engineering and Technology Management
CVPGDS 8617 Infrastructure Management

Subject to approval, a program is selected from the following courses. Advice is available from the School Office.

Management

CVEN8701 Engineering Economics and Financial Management
CVEN8702 Project Planning and Control
CVEN8703 Quality and Quality Systems
CVEN8706 Human Resources Management
CVEN8707 Contracts Management

CVEN8708	Asset Management
CVEN8710	Management of Risk
CVEN8711	Management and Professional Services
CVEN8714	Resource Management
CVEN8717	Marketing in Technology and Engineering
CVEN8718	Strategic Management in Engineering
CVEN8720	Problem Solving and Decision Making
CVEN8726	Legal Studies and Professional Practice
CVEN8730	International Project Management
CVEN8731	Project Management Framework

Construction

CVEN8723	Design of Construction Operations
CVEN8724	Construction Engineering and Technology
CVEN8727	Construction Estimating and Tendering

CVPGFS 8617 Transport Engineering

Core Courses:

CVEN8414	Transport Systems Part 1
CVEN8415	Transport Systems Part 2
CVEN8421	Fundamentals of Traffic Engineering
CVEN8422	Traffic Management and Control

Choose electives from management courses listed above.

CVPGHS 8617 Water Engineering

Specialisation is offered in the following areas.

- Waste Management
- Water and Wastewater Treatment

Each specialised area has a requirement of five compulsory core courses with elective courses to be chosen either from core courses in alternative specialisation areas listed below or from additional (non-core) courses listed below. Courses are 6 units of credit unless noted otherwise.

Details of each specialisation's core requirements are given below:

CVPGOS 8617 Waste Management

CVEN8851	Unit Operations in Water and Waste Management
CVEN8872	Solid Waste Management
CVEN8881	Hazardous Waste Management
CVEN8884	Environmental Engineering Science 1
CVEN8885	Environmental Engineering Science 2

CVPGJS 8617 Water and Wastewater Treatment

CVEN8851	Unit Operations in Water and Water Management
CVEN8855	Water and Wastewater Analysis and Quality Requirements
CVEN8856	Water Treatment
CVEN8857	Wastewater Treatment
CVEN8884	Environmental Engineering Science 1

Additional External Courses

CVEN8799	Geotechnics of Waste Disposal & Site Remediation
CVEN8888	Environmental Management
CVEN8930	Masters Project (12 units of credit)

8618 Master of Environmental Engineering Science

MEnvEngSc
(External Mode Delivery)

This program is offered on a fee-paying basis.

Core courses

CVEN8884	Environmental Engineering Science 1
CVEN8885	Environmental Engineering Science 2
CVEN8888	Environmental Management

Elective courses

CVEN8799	Geotechnics of Waste Disposal & Site Remediation
CVEN8851	Unit Operations in Water and Waste Management
CVEN8855	Water and Wastewater Analysis and Quality Requirements
CVEN8856	Water Treatment
CVEN8857	Wastewater Treatment
CVEN8872	Solid Waste Management
CVEN8881	Hazardous Waste Management
CVEN8930	Masters Project

Graduate Diplomas in Civil and Environmental Engineering

Graduate Diploma students undertake 36 units of credit of coursework. Candidates may choose from a range of courses in the special area of their choice.

All courses offered in the Masters programs can also be taken in the Graduate Diploma programs subject to the approval of the Postgraduate Coursework Coordinator. There are also opportunities to select courses from other professional areas in which candidates may be interested. In some cases 12 units of credit may be derived from approved undergraduate courses and the programs may contain courses from other schools of the Faculty, other faculties of the University and other universities to the approval of the Coordinator.

It should be noted that some candidates who have partially or fully completed the requirement but not taken out the diploma might be considered for upgrading to the MEngSc program with advanced standing.

External GradDip programs are offered on a fee paying basis.

5459 Graduate Diploma in Civil Engineering and Environmental Engineering

GradDip
(Internal Mode Delivery)

Courses offered are the same as those for 8612 (see above).

5454 Graduate Diploma in Civil Engineering and Environmental Engineering

GradDip
External Mode Delivery

Courses offered are the same as those for 8617 (see above).

Graduate Certificates in Civil and Environmental Engineering

The School of Civil and Environmental Engineering offers a Graduate Certificate qualification which will be awarded on the successful completion of postgraduate courses totalling 24 units of credit. 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 program subject to the approval of the Postgraduate Coursework Coordinator.

The Graduate Certificate program will suit practising engineers, and other graduates, wishing to pursue a specialised range of courses to enhance their career opportunities in a particular area. It will also provide 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.

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.

7336 Graduate Certificate in Civil Engineering

Grad Cert

7337 Graduate Certificate in Environmental Engineering

Grad Cert

School of Computer Science and Engineering

Head of School: Professor A Sharma

Associate Head of School: Associate Professor WH Wilson

Student Office Manager: Miss CJ Nock

Postgraduate Coordinators: Miss CJ Nock (Admission and Enrolment), Dr JA Shepherd (Academic), Associate Professor A Nymeyer (Research)

In the ten years since it was established on 1 January 1991, 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. In recognition of this growth, the School has recently moved and occupies almost all of the refurbished K17 Building.

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 Computer Science and Engineering. 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 four-year undergraduate degree which includes some mathematics but no (or minimal) 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 three-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 Outline

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.

Course Work 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.

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, providing they are of suitable graduate standard.

Entry to postgraduate programs in Computer Science and Engineering is highly competitive.

Graduate Programs in Information Science

Information Science provides insight for the developers of software and for those designing and building computer systems for large-scale information processing. The degree assumes that students have some background knowledge in computing. The treatment in the UNSW programs complements the emphasis of the typical first degree program in a discipline such as computer science, information systems, mathematics, economics, psychology or librarianship. Those with qualifications such as MBA will also find much that is useful in it.

The Information Science Program offers three plans for graduate diploma and masters students: Information Science, Database Systems, and Internetworking.

Master of Information Science MInfSc

MInfSc students complete a program totalling 72 units of credit (units of credit), typically 12 courses. The typical duration for the MInfSc is 3 semesters full time (based on the maximum full-time load) or 6 semesters part time.

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.

8508 Master of Information Science - COMPFS8508 MInfSc

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
COMP9414	Artificial Intelligence
COMP9416	Knowledge Based Systems
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 units of credit (4 courses) may be taken as electives, or as one elective plus a project worth 18 units of credit. Admission to the project option is by permission of the Postgraduate Enrolment Co-ordinator, given only to students who are able to (a) find a supervisor for the proposed project, and (b) obtain a Distinction average (75%) over the courses that they have taken at UNSW while enrolled in this program. Enrolment in the project will be in the final semester of the MInfSc program. The project option is only available to full-time students.

Electives may be chosen from the CSE Postgraduate timetable or, with the approval of the program and course authority, a course chosen from another school within the university.

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 five courses)

COMP9021	Principles of Programming
COMP9024	Data Structures and Algorithms
COMP9311	Database Systems
COMP9314	Next Generation Databases
COMP9511	Human Computer Interaction

Secondary Core Requirement: (three courses from the following)

COMP9315	Database System Implementation
COMP9331	Computer Networks and Applications
COMP9414	Artificial Intelligence
INFS5927	Knowledge Based Information Systems
INFS5982	Advanced Data Communications

The remaining 24 units of credit (4 courses) may be taken as electives, or as one elective plus a project worth 18 units of credit. Admission to the project option is by permission of the Postgraduate Enrolment Co-ordinator, given only to students who are able to (a) find a supervisor for the proposed project, and (b) obtain a Distinction average (75%) over the courses that they have taken at UNSW while enrolled in this program. Enrolment in the project will be in the final semester of the MInfSc program. The project option is only available to full-time students.

Electives may be chosen from the CSE Postgraduate timetable or, with the approval of the program and course authority, a course chosen from another school within the university.

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
INFS5983	Business Data Communications
COMP9024	Data Structures and Algorithms
COMP9331	Computer Networks and Applications
COMP9332	Network Routing and Switching
COMP9311	Database Systems
INFS5982	Advanced Data Communications
SENG9338	Network Project

Secondary Core Requirement: (three courses from the following)

COMP9333	Advanced Computer Networks
COMP9201	Operating Systems
TELE9303	Network Management
ELEC9337	Data Networks 2
COMP9314	Next Generation Database Systems
INFS5926	Advanced Data Management
INFS5984	Information Systems Security
INFS5985	Managing Electronic Commerce

5453 Graduate Diploma in Information Science - COMPFS8508

GradDip

GradDip candidates are required to complete a program totalling 48 units of credit (units of credit), 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.

COMPFS5453
Graduate Diploma in Information Science

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
COMP9414	Artificial Intelligence
COMP9416	Knowledge Based Systems
INFS5927	Knowledge Based Information Systems
INFS5991	Decision Support Systems
GEOG9012	Remote Sensing Applications
GMAT9604	Land Information Systems
IMGT5110	Information Retrieval Systems

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 five courses)

COMP9021	Principles of Programming
COMP9024	Data Structures and Algorithms
COMP9311	Database Systems
COMP9314	Next Generation Databases
COMP9511	Human Computer Interaction

Secondary Core Requirement: (three courses from the following)

COMP9315	Database System Implementation
COMP9331	Computer Networks and Applications
COMP9414	Artificial Intelligence
INFS5927	Knowledge Based Information systems

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
INFS5983	Business Data Communications
COMP9024	Data Structures and Algorithms
COMP9331	Computer Networks and Applications
COMP9332	Network Routing and Switching
INFS5982	Advanced Data Communications

The remaining 6 units may be taken as an elective course.

Graduate Programs in Computer Science

The Master of Computer Science course 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 will be continually evaluated for their relevance and currency.

The typical duration of these programs are:

MEngSc, two semesters full-time; four semesters part-time.

MCompSc, four semesters full-time; eight semesters part-time. GradDipCS, three semesters full-time; 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 bridging material in computing taught at an accelerated pace for MCompSc and GradDip in CS students. 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
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
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.

COMP4001	Object-Oriented Software Development
COMP4011	Web Applications Engineering
COMP4411	Experiemental Robotics
COMP9921	Personal Software Process
COMP4012	Cryptographic Approaches to Distributed Systems Security
COMP4141	Theory of Computation
COMP9116	Software System Development

COMP9151	Foundations of Concurrency
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
COMP9416	Knowledge-Based Systems
COMP9417	Machine Learning
COMP9444	Neural Networks
COMP9517	Image Processing & Applications
COMP9518	Pattern Recognition
COMP9519	Multimedia Authoring and Co-operative Agents

Note: See timetable for availability of courses – www.cse.unsw.edu.au

8685 Master of Engineering Science in Computer Science and Engineering - COMPES8685

MEngSc

MEngSc students complete a program totalling 48 units of credit (units of credit). The program can be completed in two modes:

Course work only: 8 x 6 units of credit
or
Course work and Project: 5 x 6 units of credit plus an 18UOC project taken during the final semester.

The project option is only available to students who (a) have achieved a Distinction average (75%) in the first 24 units of credit attempted; and (b) have obtained approval for their proposed topic from the potential supervisor and the School's Postgraduate Enrolment Co-ordinator. The project option is only available to full-time students.

Courses in the MEngSc program are divided into three groups. Each course is worth 6 units of credit.

The number of units of credit, which must be taken from each group, is given below:

Mode: Course work only

Group B & C	max 18 UOC
Group D	min 30 UOC
Other	–

Mode: Course work and Project

Group B & C	max 12 UOC
Group D	min 18 UOC
Other	18 UOC project

A student may be allowed to take up to two postgraduate courses from other schools with prior approval from the Postgraduate Enrolment Co-ordinator.

8680 Master of Computer Science - 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 units of credit
or
Course work and Project: 12 x 6 units of credit, and a 24 units of credit project taken during the final semester.

The project option is only available to students who (a) have achieved a Distinction average (75%) in the first 24 units of credit of courses attempted (excl Group A); and (b) have obtained approval for their proposed topic from the potential supervisor and the School's Postgraduate Enrolment Co-ordinator. The project option is only available to full-time students.

Courses in the MCompSc program are divided into four groups. Each course is worth 6 units.

The units of credit which must be taken from each group is given below:

Mode: Course work only

Group A	24 UOC
Group B	36 UOC
Group C	12 UOC
Group C & D	24 UOC

Mode: Course work and Project

Group A	24 UOC
Group B	36 UOC
Group C & D	12 UOC
Other	24 UOC PROJECT

Under both options, a student may be allowed to take up to two postgraduate courses from other schools with prior approval from the Postgraduate Enrolment Co-ordinator.

5452 Graduate Diploma in Computer Science - COMPAS5452

GradDip

GradDipCS students complete a program totalling 72 units of credit (units of credit), typically 12 courses.

Courses in the GradDipCS program are divided into four groups. Each course is worth 6 units.

The units of credit which must be taken from each group is given below:

Group A	24 UOC
Group B	36 UOC
Group C & D	12 UOC

A student may be allowed to take one postgraduate course from another school with prior approval from the Postgraduate Enrolment Co-ordinator.

School of Electrical Engineering and Telecommunications

Head of School: Professor BG Celler

Director of Academic Studies: Dr E Ambikairajah

Administrative Officers: Mrs S Ratinac, Ms MV Spano

The School comprises several discipline areas, indicating shared research interests and teaching commitments: Telecommunications; Energy Systems; Electronics; 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 everchanging 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 Co-operative 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.

Postgraduate Coordinator Associate Professor C.Y. Kwok

Coursework Programs

8501 Master of Engineering Science in Electrical Engineering - ELECXS8501

MEngSc

Major Areas of Study

Programs consist of 48 Units of Credit of coursework. At least 24 Units of Credit must be taken from one of the following areas of specialisation (plans):

Electrical Energy Systems (ELECDS8501)
Program Coordinator: Associate Professor T.R. Blackburn

Electronics (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

Photovoltaics (ELECJS8501)
Program Coordinator: Dr. C. Honsberg

Course unit descriptions for Photovoltaic courses and programs can be found in the Centre for Photovoltaic Engineering section of the University handbook.

The courses satisfying the 48 Units of Credit requirement may be selected from the following:

0 - 6 Units of Credit	Year 4 Electives
12 - 48 Units of Credit	Core Postgraduate Electives
0 or 12 Units of Credit	Postgraduate Project
0 - 36 Units of Credit	Postgraduate Electives

24 Units of Credit must be taken in the area of specialisation. At least 12 of these Units must be Core Postgraduate Electives.

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. 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 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 Units of Credit which may be counted toward the MEngSc, or may be taken as a non-award course.

Short courses may contribute either 3 Units of Credit or 6 Units of Credit, (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

Electrical Energy

ELEC9213	Electrical Energy Systems
ELEC9240	Power Electronics

Electronics

ELEC9340	Electronic Communication Systems
ELEC9503	Microelectronics Design

Photonics

ELEC9350	Theory of Optical Fibres and Optical Signal processing
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

Photovoltaics

SOLA9001	Photovoltaics
SOLA9002	Solar Cells and Systems

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 units of credit from the Special Electives from the MBT program.

Electrical Energy

ELEC9201	Power System Planning & Economics
ELEC9202	Power System Operation & Control
ELEC9214	Power Systems Equipment
ELEC9223	Power Engineering Seminars
ELEC9226	Electrical Services in Buildings
ELEC9231	Electric Drive Systems
ELEC9232	Motion Control Systems
ELEC9233	Electrical Safety

Electronics

ELEC9353	Microwave Circuits, Theory, Techniques
ELEC9501	Advanced Semiconductor Devices
ELEC9502	VLSI Technology
ELEC9505	Micro-systems Technology - Design and Fabrication
COMP9231	Integrated Digital Systems

Signal Processing

ELEC9344	Speech and Audio Processing
ELEC9345	Neural Networks and Applications

Systems and Control

ELEC9403	Real Time Computing and Control
ELEC9404	Topics in Digital Control
ELEC9405	Human Movement Control Systems
ELEC9412	Biomedical Instrumentation and Informatics

Photovoltaics

SOLA9003	High Efficiency Solar Cells
SOLA9004	Solar Energy
SOLA9005	Advanced Semiconductor Devices
SOLA9006	Solar Cell Technology & Manufacturing
SOLA9007	Grid Connected Photovoltaics

Telecommunications

TELE9337	Advanced Networking
TELE9343	Principles of digital Communications
COMP9008	Software Engineering
COMP9242	Advanced Operating Systems
TELE9344	Cellular Mobile Communication Systems

Special Electives

GBAT9101	Project Management
GBAT9105	Risk Management
GBAT9113	Strategic Management of Business and Technology
IROB5690	Strategic People Management

8503 Master of Engineering Science in Telecommunications - TELEAS8503

MEngSc

Program Coordinator: Dr H. Mehrpour

Major Areas of Study

The program consists of 48 Units of Credit of coursework. The courses satisfying the 48 Units of Credit requirement may be selected from the following:

0 - 6 Units of Credit
Year 4 Telecommunications Electives

18 - 48 Units of Credit
Core Postgraduate Telecommunications Electives

0 or 12 Units of Credit
Postgraduate Telecommunications Research Project

0 - 30 Units of Credit
Postgraduate Electives

30 Units of Credit must be taken in the area of Telecommunications. At least 18 of these Units must be Core Postgraduate Telecommunications Electives.

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.

The Postgraduate Telecommunications Research Project must be supervised by a member of the Academic Staff of the University.

Postgraduate Electives are as for Program 8501.

Core Postgraduate Telecommunications Electives

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
ELEC4010	Introduction to Management for Electrical Engineers
TELE3010	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 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 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).

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 Degrees 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 Credit Units, 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 - ELEC(A-F)S5458

Grad Dip

5448 Graduate Diploma in Telecommunications - TELEAS5448

Grad Dip
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 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).

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. A full program consists of 54 Units of Credit of coursework, taken over three sessions.

Advanced standing for 18 Units of Credit of undergraduate subjects 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**). A Graduate Diploma Program comprises the following:

18 Units of Credit	Year 3 and year 4 courses
0 - 12 Units of Credit	Year 4 Electives
12 - 36 Units of Credit	Core Postgraduate Electives
0 - 24 Units of Credit	Postgraduate Electives

Undergraduate courses and core postgraduate courses and electives are listed earlier in the Master of Engineering Science programs. 24 units of credit must be taken in the areas of specialisation. At least 12 of these units must be core postgraduate electives.

School of Mechanical and Manufacturing Engineering (incorporating Aerospace Engineering, Mechatronic Engineering and Naval Architecture)

Head of School: Professor KP Byrne
Executive Assistant to Head of School: Dr JM Challen
Administrative Officer: Ms G Pearson

Program Outlines

Formal graduate coursework programs offered are program **5710** leading to the award of a Graduate Diploma and program **8710** leading to the award of the degree Master of Engineering Science. For more information about these programs, please contact Mrs Sharon Turnbull, Telephone [02] 93854085, 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 Mary Rolfe, Telephone [02] 93855782, Email: mary.rolfe@unsw.edu.au or Prof Masud Behnia, Telephone [02] 93854253, Email: m.behnia@unsw.edu.au.

8710 Master of Engineering Science Program

MEngSc

Manufacturing Engineering (MEngSc) Plan

To satisfy the requirements for the degree, students are required to complete 48 Units of Credit.

A Specialisation strand must be selected from the following list. Usually the maximum number of core courses listed should be completed by the student.

The remaining courses should be selected from the *Elective courses* list. At the discretion of the Head of School a 12 Units of Credit project, MANF9010, may be undertaken instead of two courses.

Specialisation Strands

1. Computer Integrated Manufacturing
Staff Contact: Associate Professor K Hoang

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

2. Industrial Management
Staff Contact: Dr B Kayis

Core courses:		
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 IndustrialManagement	6
Elective courses:		
MANF9340	Factory Automation	6
MANF9543	CAD/CAM	6
MANF9544	Concurrent Product and Process Design	6
SESC9471	Industrial Ergonomics	6

3. Manufacturing Management (Distance Delivery)
Staff Contact: Prof H Kaebernick

This Strand is available in Distance Delivery Mode, therefore the structure and delivery of the Strand is based on self study. Students have to complete 8 courses with a total of 48 Units of Credit. The six core courses are compulsory. Two elective courses have to be chosen from the elective courses list. Not all elective courses are offered in any one year. Students may also select other elective courses available in the Faculty's Distance Learning Strands on approval by the Head of School.

Core courses:		**UOC**
MANF8340	Factory Automation	6
MANF8420	Managing Manufacturing Operations	6
MANF8455	Concurrent Product and Process Design	6
MANF8471	Manufacturing Strategy	6
MANF8472	Production Planning and Control	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
CVEN8714	Resource Management	6
CVEN8718	Strategic Management for Engineering	6
CVEN8720	Problem Solving and Decision Making	6
SECS9471	Industrial Ergonomics	6

4. Manufacturing Management (Combined Delivery)

The courses of this Strand can be taken as a combination of internal and external delivery.

It is recommended that the internal component (on campus) count for about 50% of the program.

Students have to complete 8 courses with a total of 48 Units of Credit. The six core courses which are available in internal or distance delivery mode are compulsory. Electives are usually available for internal delivery only. Not all elective courses are offered in any one year.

Core Courses		**UOC**
MANF8340	Factory Automation	6
MANF8420	Managing Manufacturing Operations	6
MANF8455	Concurrent Product and Process Design	6
MANF8471	Manufacturing Strategy	6
MANF8472	Production Planning and Control	6
MANF8560	Computer Integrated Manufacturing	6
Elective Courses:		
MANF9400	Industrial Management	6
MANF9410	Total Quality Management	6
MANF9543	CAD/CAM	6
MANF9601	Economic Decisions in Industrial Management	6

5. Manufacturing Management (External Delivery)

This Strand is available in External Delivery Mode which implies being taught in Singapore only. Therefore the structure and delivery mode of this Strand is different to those of the other Strands. Students have to complete 8 courses with a total of 48 Units of Credit. All 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
CVEN8706	Human Resources Management	6
CVEN8710	Management of Risk	6
CVEN8717	Marketing in Technology and Engineering	6
CVEN8718	Strategic Management for Engineering	6

Students who upgrade to MEngSc after commencing the Grad Dip must take 10 courses in total. Included must be all 6 core courses above, 2 of the elective courses above, and the following 2 courses:

CVEN8703	Quality and Quality Systems	6
CVEN8720	Problem Solving and Decision Making	6

Mechanical Engineering (MEngSc) Plan

Two options are available to students: a General option or a Specialisation strand option.

1) The General option is designed for graduates wishing to enhance their career prospects, complete further studies in a particular field of engineering, or to update their knowledge with advances in technology.

- A combination of mechanical and management courses, which may be modelled to suit students' personal requirements, will add to their engineering knowledge and put them in line for a management position.
- To satisfy the requirements for the degree, students are required to complete 48 Units of Credit. Each course is worth 6 Units of Credit and a project is worth 12 Units of Credit.
- Courses can be selected from the current Mechanical and Manufacturing Engineering timetables.
- At the discretion of the Head of School, a project, MECH9010, may replace two courses.

2) Specialisation strands within the Mechanical Engineering (MEngSc) Plan may be undertaken by taking selective courses in such areas as Aerospace Engineering, Computational Engineering, Mechatronic Engineering, Noise and Vibration and Refrigeration and Air Conditioning.

- To satisfy the requirements for the degree with a specialisation, students are required to complete 48 Units of Credit. Each course is worth 6 Units of Credit and a project, MECH9010 or AERO9010, is worth 12 Units of Credit.
- When specialising, usually the maximum number of core courses listed should be completed by the student.
- The remaining courses, in the first instance, should be selected from the *Elective courses* list followed by any other courses from the current Mechanical and Manufacturing Engineering timetables. At the discretion of the Head of School, a project may replace two courses.

Specialisation Strands

1. Aerospace Engineering

Staff Contact: Dr NEA Ahmed

Core courses:		**UOC**
AERO9105	Aerospace Vehicle Design and Manufacture	6
AERO9606	Aerodynamics	6
Elective courses:		
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

2. Computational Engineering (Computational Fluid Dynamics and Heat Transfer Strand)

Staff Contact: Prof E Leonardi

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

3. Computational Engineering (Structural Analysis Strand)

Staff Contact: Prof DW Kelly

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

4. Mechatronic Engineering

Staff Contact: Associate Professor RA Willgoss

Core courses:		
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
MTRN9300	Mechanics of Manipulators	6

5. Noise and Vibration

Staff Contact: Associate Professor RB Randall

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

6. Noise and Vibration (Distance Delivery)

Staff Contact: Associate Professor RB Randall

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

7. Refrigeration and Air Conditioning

Staff Contact: Prof E Leonardi

MECH9325	Fundamentals of Noise	6
MECH9326	Advanced 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
MECH9753	Refrigeration and Air Conditioning Design 1	6
MECH9754	Refrigeration and Air Conditioning Design 2	6
MECH9757	Ambient Energy Air Conditioning	6
MECH9761	Internal Combustion Engines	6

5710 Graduate Diploma Program

Grad Dip

Manufacturing Engineering (Grad Dip) Plan

Mechanical Engineering (Grad Dip) Plan

The Graduate Diplomas are based on 36 units of credit of coursework only. Courses can be selected from the current Mechanical and Manufacturing Engineering postgraduate timetables.

School of Mining Engineering

Head of School: Professor JM Galvin
Executive Assistant: Dr Chris Daly
Administrative Assistant: Mrs Carol Bell

Mining Engineering offers one of the most diverse ranges of career paths, very 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. 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, 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 between 1 and 3 years gaining work experience at minesites and may then elect to gain their statutory Mine Managers 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 Mining Engineering Master of Engineering Science

MEngSc

The Master of Engineering Science in Mining Engineering will be awarded after successful completion 48 Units of Credit points 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 8055.1000

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 4 6UC 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 8055.2000

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 4 from the following List of 6UoC 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

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 Units of Credit points 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 4 from the following List of 6 Units of Credit Courses

1 course to be undertaken in Session 1 and 3 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

5045 Graduate Diploma in Mine Ventilation

Grad Dip

This program provides professional development for mining engineers and other mining personnel in mine ventilation. This area of study has been recognised in several Warden's inquiries into mining disasters as the fundamental knowledge deficiency that led to the loss of life in many disasters. Recommendations were made in the final report from Moura No4 enquiry that a position of statutory ventilation officer be created and that such persons appointed to these positions must have undertaken a recognised study program in mine ventilation. To this end the NSW Legislature have written this requirement in the COAL MINES (UNDERGROUND) REGULATION 1999 - SECT 75 Division 2 Ventilation officers. This clause states that an appointment on or after 1 September 2000 must have successfully completed the current Ventilation Officer Training Course (conducted by the School of Mining Engineering at the University of New South Wales or a Program specified as an equivalent course – including this Graduate Diploma which will replace the Ventilation Officer Training Course).

This program consists of 6, 6 units of credit core courses, each presented in Block Teaching format.

MINE9901 Mine Atmospheric Behaviour
MINE9902 Mine Ventilation Networks and Analysis
MINE9903 Mine Fans and Airflow Distribution
MINE9904 Underground Hazards
MINE9905 Instrumentation/Monitoring & Spontaneous Combustion
MINE9906 Ventilation Planning and Management

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.

7335 Graduate Certificate in Mining Engineering

Grad Cert

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 2 electives.

Core Courses:

MINE8110	Mining Processes and Systems
MINE8120	Hazard Identification, Risk and Safety Management in Mining

Elective Courses:

Select 2 from the following List of 6 Units of Credit Courses

1 course to be undertaken in Session 1 and 1 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

Director: Professor WV Pinczewski

Petroleum Engineering is a specialised engineering discipline which prepares graduates for a career in the oil and natural gas industries. Its related operations apply physical, mathematical and engineering principles to identify and solve problems associated with exploration, exploitation, drilling, production and all the related economic and management problems associated with recovery of hydrocarbons and geothermal energy from deep beneath the earth's surface.

The School of Petroleum Engineering offers both undergraduate and postgraduate programs as well as open learning programs on the Internet leading to the award of Graduate Diploma, Graduate Certificate and Master of Engineering Science degrees in Petroleum Engineering.

The postgraduate degrees by research lead towards the award of the degrees of Master of Engineering (Petroleum Engineering), M.E. Pet.Eng. and Doctor of Engineering (Petroleum Engineering), Ph.D Pet.Eng. Students in these programs perform leading-edge research in an area related to the science or engineering of petroleum or geothermal resource development.

Program Outlines

5031 Graduate Diploma in Petroleum Engineering Full Time / Part Time Internal / External

GradDip

Program is also offered in open learning.

Course	Title	UOC
Core		
PTRL5007 / 6007*	Reservoir Engineering II	3/6
PTRL5009 / 6009*	Well Drilling Equipment & Operations	3/6
PTRL5016 / 6016*	Well Completions & Stimulation	3/6
PTRL5022 / 6022*	Drilling Systems Design & Optimisation	3/6
PTRL5107 / 6107*	Formation Evaluation	3/6
GEOL5031**	Introduction to Petroleum Geology	3
GEOL5312**	Petroleum Geology & Geophysics	3
Elective		
PTRL5001 / 6001*	Reservoir Engineering I	6
PTRL5003 / 6003*	Well Pressure Testing	6
PTRL5004 / 6004*	Numerical Reservoir Simulation	6
PTRL5008 / 6008*	Petroleum Production Economics	6
PTRL5012 / 6012*	Drilling Mud – Formulation, Selection & Maintenance	6
PTRL5021 / 6021*	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
PTRL6030*	Advanced Recovery Methods	6
GEOL9151*	Petroleum Geology	6
GEOL9152*	Petroleum Geophysics	6
CVEN8706* / 9706	Human Resources Management	6
CVEN8707* / 9707	Contracts Management	6
CVEN8710* / 9710	Management of Risk	6
CVEN8714* / 9714	Resource Management	6
CVEN8888* / 9888	Environmental Management	6

*External code
**GEOL5031 & GEOL5312 are to be taken together, and will be treated/charged as one 6UC-subject

To qualify for a GradDip in Petroleum Engineering, candidates will have to pass a minimum of 36 Units of Credit. The final composition of the proposed program will require Head of School or nominee's approval.

Open Learning Programs

7341 Graduate Certificate in Petroleum Engineering - Part Time External

Grad Cert

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.

Course	Title	UOC
PTRL6009	Well Drilling Equipment & Operations	6
PTRL6012	Drilling Mud – Formulation, Selection & Maintenance	6
PTRL6016	Well Completions & Stimulation	6
PTRL6022	Drilling Systems Design & Optimisation	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
GEOL9151	Petroleum Geology	6
CVEN8710	Management of Risk	6
CVEN8888	Environmental Management	6

To qualify for a Graduate Certificate (Petroleum Engineering), candidates will have to pass a minimum of 24 Units of Credit. The final composition of the proposed program will require Head of School or nominee's approval.

8655 Master of Engineering Science in Petroleum Engineering - Part Time External

MEngSc

This program is designed to cater for upstream oil and gas personnel who are interested in expanding their knowledge base. The candidates shall have an appropriate degree of Bachelor plus a minimum of one year of petroleum industry experience.

Course	Title	UOC
PTRL6001	Reservoir Engineering I	6
PTRL6003	Well Pressure Testing	6
PTRL6004	Numerical Reservoir Simulation	6
PTRL6007	Reservoir Engineering	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
PTRL6022	Drilling Systems Design & Optimisation	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
PTRL6030	Advanced Recovery Methods	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 a MEngSc in Petroleum Engineering, candidates will have to pass a minimum of 48 Units of Credit. The final composition of the proposed program will require Head of School or nominee's approval.

School of Surveying and Spatial Information Systems

Head of School: Associate Professor A H W Kearsley
Administrative Officer: Mr L Daras

The School of Surveying and Spatial Information Systems has recently changed its name from the School of Geomatic Engineering. The names of degrees will similarly change.

In some regions of the world these disciplines are described by the single term Geomatics which is a modern scientific term to describe an integrated approach to the acquisition, analysis, storage, distribution, management and application of spatially-referenced data. It embraces the traditional area of **surveying and mapping**, as well as the comparatively new fields of remote sensing and spatial information systems. Today, a Surveying and Spatial Information Systems engineer may choose to work in Surveying or Spatial Information Systems or in other areas.

Surveying:

- Satellite Surveying (position determination techniques using satellite signals)
- Geodesy (determining the mathematical model of the Earth, and its gravity field, and the practice of control network surveying)
- Hydrography (mapping the seabed and waterways for navigation and off-shore resource management)
- Engineering Surveying (precise surveying for engineering projects)
- Cadastral Surveying (knowledge of the laws and practices for survey of property boundaries)
- Land Management and Development (project management for land development, environmental assessment for resource management and change of land use)

Spatial Information Systems:

- Land Information Management (the use of computer-based information systems of spatially related data for planning and administration purposes)
- Geographic Information Systems (GIS) (computer-based information systems for environmental assessment and monitoring)
- Photogrammetry and Remote Sensing (the use of airborne and spaceborne remotely sensed images for mapping and resource surveys).

The School boasts a proud record of achievement; its graduates are leaders in industry, government and academic circles. It has forged strong links with leading research and teaching institutions in North America, Europe and Asia, and members of the School's staff hold positions of leadership in both international and national scientific and professional bodies.

Program Outlines

Formal graduate programs lead to the award of the degrees of **Master of Engineering Science 8652.** Specialisation is available in **GIS 8652** and **Land Administration 8653**. Programs are also available leading to **Graduate Diplomas in Surveying and Spatial Information Systems 5492** and **Land Administration 5493**.

Opportunities are provided for graduate research leading to the award of the degrees of **Master of Engineering 2721** and **Doctor of Philosophy 1681**.

The School of Surveying and Spatial Information Systems is also involved in the Centre for Remote Sensing and Geographic Information Systems in association with the School of Geography in the Faculty of Science. The Centre supports graduate programs leading to the award of the degree of **Master of Engineering Science in Remote Sensing 8641** or **Master of Applied Science 8720.4003** or the **Graduate Diploma in Remote Sensing** and **Geographic Information Systems 5496 or 5522.4003**.

8652 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,
- 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. About 2 units of credit 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.

8652 Master of Engineering Science in Surveying and Spatial Information Systems *(External Mode Delivery)*

MEngSc

Candidates are required to complete a program totalling at least 48 units of credit.

Core Courses		**UOC**
GMAT9950	Modern Technology in Surveying and Spatial Information Systems	6
GMAT9951	Land Information Systems	6
GMAT9952	GPS Surveying	6
GMAT9953	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 Engineering, Geography, 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 units of credit 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**
GEOG9016	Principles of Geographic Information Systems	6
GEOG9017	Advanced Geographic InformationSystems, *or*	6
GEOG9020	Application and Management of GIS	6
GMAT9604	Land Information Systems	6

Elective Courses		**UOC**
COMP9021	Principles of Programming	6
COMP9311	Data Base Systems	6
GEOG9014	Computer Mapping and Display	6
GEOG9012	Remote Sensing Applications	6
GEOG9018	Transport Applications of GIS	6
GEOG9021	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

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 units of credit 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**
CVEN8731	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
SOCA3212	Environment, Society and Culture	6

Elective Courses		**UOC**
REST0005	Real Estate Valuation	3
CVEN8701	Engineering Economics & Financial Management	6
GEOG9016	Principles of Geographic Information Systems	6
GEOG9018	Transport Applications of GIS	6
GEOG9020	Application and Management of Geographical Information Systems	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 units of credit, 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 units of credit) or two years of part-time study.

Core courses		**UOC**
GEOG9012	Remote Sensing Applications	6
GEOG9021	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
ELEC9408	Computer Display Systems and Interactive Instrumentation	6
GEOG9014	Computer Mapping and Data Display	6
GEOG9016	Principles of GIS	6
GEOL0360	Remote Sensing Applications in Geoscience	6
GMAT9604	Land Information Systems	6
GEOG9020	Application and Management of GIS	6

5492 Graduate Diploma in Surveying and Spatial Information Systems

GradDip

Candidates are required to complete a program totalling 36 units of credit. 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 units of credit, 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**
CVEN8731	Project Management Framework	6
GMAT9604	Land Information Systems	6
GMAT9608	Cadastral Systems	6
GMAT9609	Land Registration Systems	6
SOCA3212	Environment, Society and Culture	6
1 Elective		

5496 Graduate Diploma in Remote Sensing

GradDip

Candidates are required to complete a program totalling 36 units of credit. 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 co-ordinator.

Graduate School of Biomedical Engineering

Head of School: Associate Professor BK Milthorpe

The Graduate School of Biomedical Engineering is an interdisciplinary unit which promotes and coordinates biomedical engineering studies and research being conducted by various Schools and Departments within the University and its teaching hospitals. Biomedical Engineering is the application of engineering techniques and analysis to problem solving in medicine and the biological sciences. The engineering disciplines embraced within the scope of Biomedical Engineering include: Electrical Engineering, Mechanical Engineering, Computer Engineering 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 and Chemical Engineering and Industrial Chemistry offers concurrent courses in Mechanical Engineering/Biomedical Engineering, Mechatronic Engineering/Biomedical Enguineering, Electrical Engineering/Biomedical Engineering, Computer Engineering/Biomedical Engineering, Chemical Engineering/ Biomedical Engineering, and in Telecommunication Engineering/Biomedical Engineering. The concurrent courses allow the completion of a Bachelor of Engineering and a Master of Biomedical Engineering within a 5 year period.

Formal graduate courses in Biomedical Engineering are offered. These are: the Master of Biomedical Engineering, the Master of Engineering Science in Biomedical Engineering, and the Graduate Diploma in Biomedical Engineering. Opportunities are provided for graduate research leading to the award of the degrees of Master of Science, Master of Engineering and Doctor of Philosophy.

Concurrent Degree Programs

The concurrent degree programs are specifically designed for undergraduate students wishing to pursue a career in Biomedical Engineering. These programs allow students to enter an integrated course which provides both the prerequisite engineering education and the specialist Biomedical Engineering training.

Students are expected to perform at a credit level 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.

Program Outlines

Formal graduate programs 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.

Course Work 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 subjects 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 project report conducted in either a hospital or other institution. The course of study offers scope for original research into the application of engineering principles and technology to medical problems. Candidates must complete a program totaling 72 units of credit, 48 of which must be for the study of subjects at graduate level. A minimum of 48 units must be from subjects offered by the Graduate School of Biomedical Engineering (ie. any courses with BIOM9 prefix).

Period of candidature: The normal period is four academic sessions (full-time) or six academic sessions (part-time) from the date of enrolment. The maximum period of candidature is eight academic sessions (full-time) and ten academic sessions (part-time). In special cases extensions may be granted. A candidate is not permitted to continue in the course if the unit value of the subjects 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 unit project.

Session 1			**UOC**
Strand A Subjects, Engineering/Physical Sciences Candidates			
ANAT2511	Fundamentals of Anatomy	HR	6
PHPH2101	Physiology 1A	HR	6
PHPH2201	Physiology 1B	HR	6
Strand B Subjects, 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 Subjects			
BIOM9060	Biomedical Systems Analysis		6
BIOM9510	Introductory Biomechanics	(1)	6
BIOM9551	Biomechanics of Physical Rehabilitation		6
BIOM9601	Biomedical Applications of Microcomputers		6
BIOM9621	Biological Signal Analysis		6
BIOM9701	Dynamics of the Cardiovascular System		6
ELEC9411	Introductory Physiology for Engineers	P	6

Session 2			
General Subjects			
BIOM9010	Biomedical Engineering Practice		3
BIOM9012	Biomedical Statistics		6
BIOM9027	Medical Imaging		6
BIOM9311	Mass Transfer in Medicine		6
BIOM9321	Physiological Fluid Mechanics		6
BIOM9332	Biocompatibility		6
BIOM9541	Mechanics of the Human Body		6

BIOM9561	Mechanical Properties of Biomaterials	6
BIOM9612	Medical Instrumentation	6

Notes: HR Highly recommended, P Part-time students only, (1) For students with no mechanics background

8665 Master of Engineering Science

MEngSc

Candidates are required to complete a program totalling at least 48 units of credit composed of graduate level courses, including an optional 12 unit 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
BIOM9510	Introductory Biomechanics	(1)	6
BIOM9551	Biomechanics of Physical Rehabilitation	(2)	6
BIOM9601	Biomedical Applications of Microcomputers	(3)	6
BIOM9621	Biological Signal Analysis		6
BIOM9701	Dynamics of the Cardiovascular System		6
ELEC9411	Introductory Physiology for Engineers	(4)	6
Session 2			
BIOM9010	Biomedical Engineering Practice	(4)	3
BIOM9012	Biomedical Statistics		6
BIOM9027	Medical Imaging		6
BIOM9311	Mass Transfer in Medicine		6
BIOM9321	Physiological Fluid Mechanics		6
BIOM9332	Biocompatibility		6
BIOM9541	Mechanics of the Human Body	(2)	6
BIOM9561	Mechanical Properties of Biomaterials	(2)	6
BIOM9612	Medical Instrumentation		6
BIOM9913	Project Report	(5)	12

Notes:

1. For students with no mechanics background

2. These three electives vary according to session offered. BIOM9510, or equivalent, is prerequisite for BIOM9541, and BIOM9541 is prerequisite for BIOM9551.

3. Prerequisite BIOM9050 or equivalent. Class size restricted.

4. Highly Recommended for 8665 MEngSc students

5. Research project may be done concurrently with course work during the other sessions.

5445 Graduate Diploma in Biomedical Engineering

GradDip

Details of the recommended programs of study, totalling at least 36 units, 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.

Centre for Photovoltaic Engineering

Head of Centre: Professor S.R. Wenham
Director of Academic Studies: Associate Professor C.B. Honsberg
Co-ordinator of Research: Dr J. E. Cotter
Administrative Office Manager: Ms. L. Cahill

The Centre for Photovoltaic Engineering was formerly part of the School of Electrical Engineering. It comprises 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. The need for the latter has arisen due to rapid growth and evolution in the photovoltaics industry in recent years, with considerable demand by industry for University of New South Wales' (UNSW) developed technologies and appropriately trained engineers across the entire photovoltaic and renewable energy sectors.

The Centre for Photovoltaic Engineering offers undergraduate and graduate training encompassing all aspects of the photovoltaic sector. Innovative teaching techniques have been developed to enhance the learning environment including the availability of material via the internet to facilitate distance learning. 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.

Photovoltaic Engineering has close links with several other engineering and science disciplines.

Program Outlines

The Centre for Photovoltaic Engineering offers postgraduate education at the Masters and PhD level, some of which is offered through the School of Electrical Engineering & Telecommunications. These degrees are intended to provide students with an exceptional basis in advanced concepts and research in the photovoltaics area.

Postgraduate Co-ordinator: Dr A. B. Sproul

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 which will generally require enrolment in the Graduate Diploma, 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. 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 requirement may be selected from the following:

0 - 6 Units of Credit	*Year 4 Electives
12 Units of Credit	Core Postgraduate Electives
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 Units of Credit 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 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 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 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, 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 Units of Credit which may be counted toward the MEngSc, or may be taken as a non-award course.

Short courses may contribute either 3 Units of Credit or 6 Units of Credit, (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 Units of Credit of Coursework, with 12 Units of Credit comprising the core postgraduate courses:

SOLA9001 Photovoltaics
SOLA9002 Solar Cells and Systems

May also be offered on line

At least 18 Units of Credit 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 Solar Cell 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
ELEC9502 Integrated Circuit Technology

Photovoltaic Systems and Applications

Program Coordinator: Prof. S. R. Wenham

SOLA9007 Grid-Connected Photovoltaics
SOLA9028 Special Topic in Photovoltaic Systems & Applications
SOLA9009 Photovoltaics in Buildings
SOLA9013 Renewable Energy Product Reliability
M523 (Murdoch University) Renewable Energy Systems Design

Renewable Energy Technologies

Program Coordinator: Dr A.B. Sproul

SOLA9004 Solar Energy
SOLA9018 Special Topic in Renewable Energy
SOLA9012 Renewable Energy Policy
SOLA9013 Renewable Energy Product Reliability
SOLA9011 Biomass Energy Sources
SOLA9010 Wind Energy
M523 (Murdoch University) Renewable Energy Systems Design

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 Units of Credit from the Special Electives from the MBT program.

5458 Graduate Diploma in Electrical Engineering

GradDip

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. 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. 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.

4. Enrolment with advanced standing will be permitted where a candidate has completed non-award courses which would otherwise be acceptable for the Grad. Dip.

Programs consist of 36 Units of Credit of coursework. At least 18 Units of Credit must be taken from one of the areas of specialisation defined for the MEngSc (see Electrical Engineering, Major Areas of Study).

The Grad. Dip. Program comprises coursework only. There is no thesis or project in the Grad. Dip.

PhD
Research Areas

PhD 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.

Key Centre for Photovoltaic Engineering

Director: Professor Stuart R Wenham

The Key centre for Photovoltaic Engineering commenced in January 1999 and was one of only eight Key Centres established by the ARC Australia-wide across all disciplines. Massive growth in the photovoltaics industry is creating the need for new educational programs and collaborative research programs between manufacturers and institutions such as UNSW. Approximately half of the Key Centre's activities are devoted to research, with industry collaboration as a high priority. The other half of the Key Centre's activities focus on teaching. The primary new initiative in the teaching area is the establishment of a new undergraduate engineering degree in Photovoltaics and Solar Energy. This new program commenced in the year 2000 with further details on educational programs provided in the section under the Centre for Photovoltaic Engineering. In 2001, a "partner" undergraduate degree will commence at Murdoch University being developed in conjunction with the Key Centre and relying heavily on cross-enrolments with UNSW.

Photovoltaic Special Research Centre

Directors: Associate Professor Armin Aberle - Thin-film Device Research, Associate Professor Christiana B Honsberg - Commercial Bulk Technology Research, Dr J. Zhao - High Efficiency Device Program

The Photovoltaic Special Research Centre (PVSRC) was established in 1991 with major initiatives in commercial bulk technology research, thin-film device research and high efficiency devices. All three programs are active and highly successful within the Centre. The High Efficiency Device Program has achieved the distinction of holding the world efficiency record for silicon solar cells for more than a decade. The Commercial Bulk Technology Research has developed the buried contact solar cell, the most successfully commercialised new photovoltaic technology internationally in the last 15 years. The thin-film device research has led to the development of the thin-film multilayer technology which has become the focus of a major $50 million commercialisation program. New approaches, independent of Pacific Solar, are presently being investigated for the fabrication of highly efficient thin-film poly-si cells on glass. The facilities of the PVSRC are widely regarded as among the best internationally in the photovoltaic area.

Centre for Third Generation Photovoltaics

Director: Professor Martin A Green
Deputy Directors: Associate Professor Armin Aberle, Dr Richard Corkish

Since the early days of terrestrial photovoltaics (conversion of sunlight to electricity), a common perception has been that "first generation" silicon wafer-based solar cells would be replaced by a "second generation" of lower cost thin-film technology, probably also involving a different semiconductor. Historically, cadmium sulphide, amorphous silicon, copper indium diselenide, cadmium telluride and now thin-film silicon have been regarded as key materials for deposition as thin films onto a supporting substrate or superstrate. Since any mature solar cell technology must evolve to the stage where costs are dominated by those of the constituent materials, be it silicon wafers or glass sheet, it is likely that photovoltaics must evolve, in its most mature form, to a "third generation" of high-efficiency thin-film technology. By high-efficiency, what is meant is energy conversion values double or triple the 15-20% range presently targeted.

The Centre for Third Generation Photovoltaics was one of a small number of research Centres selected for funding as a Commonwealth Government Special Research Centre in the year 2000. It was established specifically to identify and accelerate the development of such "third generation" devices. The aim is to bring the most promising of these approaches to a "proof of concept" stage during the anticipated 9-year life of the Centre. There are outstanding opportunities with the Centre for "state of the art" research at postgraduate and postdoctoral levels in semiconductor device physics and technology, computer simulation of electro-optical devices, electronic materials engineering, and semiconductor device fabrication and characterisation areas.

Graduate Programs in Business and Technology

Director: Dr John Toohey, Adjunct Professor, Faculty of Engineering
Acting Director: Mr Michael McGuirk, Adjunct Associate Professor, Faculty of Engineering

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 Engineering.

GPBT currently offers the Master of Business and Technology (MBT) with the Graduate Diploma in Business and Technology (GradDip) and the Graduate Certificate in Business and Technology (GradCert). The Faculty of Engineering is the Course Authority for the MBT, GradDip and 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

Master of Business and Technology (MBT) Program

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.

Courses in the MBT Program can be taken by distance mode, on campus or through a combination of both. This flexible delivery assists with the demands of modern work organisations and family commitments. Study guides required for the completion of the program are provided and are assisted by web supported classes. Textbooks are purchased separately.

Assessment, as far as possible, is centered on the day to day work of students and around their education and training needs of their organisations. UNSW academic staff are supported by external industry experts in the delivery of courses including interaction and consultation with students.

Candidates successfully completing four MBT courses with a credit average will have the option of either being awarded the Graduate Certificate in Business and Technology (GradCert) or proceeding to the second level, the Graduate Diploma in Business and Technology (GradDipBT). Those successfully completing the requirements for the Graduate Diploma may be eligible to transfer to the Master of Business and Technology award, subject to approval by the Faculty of Engineering.

In some cases candidates may be granted advanced standing in courses not already taken for an award.

In order to fulfil the requirements of the program, candidates are normally expected to have a degree or substantial industry experience. The courses in the Program are full-fee paying.

8616 Master of Business and Technology

MBT

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). However candidates admitted to the MBT with an approved degree need only complete a minimum of 60 Units of Credit (normally 10 courses of 6 Units of Credit each). The program can be completed in five sessions. The minimum time for completion is two sessions on a full time basis; however, the program must be completed within a maximum of ten sessions.

Courses		UOC
ACCT5912	Accounting: A Users Perspective	6
ACCT5980	Value Based Management in a Global Economy	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	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	Maintenance 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 work 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.

5457 Graduate Diploma in Business and Technology

GradDip

Candidates must complete a minimum program totaling 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 if they wish, to proceed to the Masters. For further information, contact the MBT Co-ordinator, Graduate Programs in Business and Technology.

The Graduate Diploma in Business and Technology is based on open learning principles. It can normally be completed in a minimum of four academic sessions. The maximum period of candidature is six academic sessions. In special circumstances extensions may be granted.

7333 Graduate Certificate in Business and Technology

Grad Cert

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 with a minimum of a credit grade average, which will then entitle them to upgrade to the Graduate Diploma in Business and Technology.

Alternatively, candidates may choose to exit the program at this point and graduate with the GradCert.

The GradCert is based on open learning principles and can normally be completed in two academic sessions. The maximum period is four academic sessions. In special circumstances extensions may be granted.

Conditions for the Award of Degrees

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 appear in the relevant Faculty entries in this handbook.

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.

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

A Message from the Dean

Welcome to postgraduate study at UNSW. UNSW Law School offers postgraduate coursework programs and research supervision in a broad range of fields.

Postgraduate coursework programs

Those who are undertaking a postgraduate coursework program will find that they offer a unique opportunity to strengthen professional skills and knowledge base in anticipation of career advancement or a shift in direction or specialisation. Postgraduate study provides for many the necessary academic and professional preparation for the acquisition of higher specialist qualification and skills. For this reason, research papers and projects play an important part in the assessment program at the postgraduate level.

UNSW Law School offers three postgraduate coursework degrees - the Master of Laws (LLM), the Graduate Diploma in Law (Grad Dip Law), and the Master of Law and Management (LLM) which is offered jointly with the Australian Graduate School of Management, the premier Australian management school.

UNSW Law School's postgraduate curriculum is structured to be relevant to the needs and expectations of its students. Thus, it has a particular depth in the following six areas of specialisation - Corporate, Commercial and Taxation Law, Media, Communications and Information Technology Law, International Law, Criminal Justice and Comparative Law. LLM and Grad Dip students who complete four of six courses within one of these six designated areas may elect to have the specialisation noted upon their testamur.

Research degrees

The Faculty also offers three research degrees under the supervision of leading scholars: the Doctor of Philosophy (PhD), Doctor of Juridical Science (SJD) and Master of Laws (LLM).

UNSW has a strong commitment to research and is developing a group of research students of the highest quality. The Faculty is committed to the support of its research students. The Julius Stone Postgraduate Room provides an excellent facility for research students with computerised work-stations and quiet, reflective space.

The Faculty's commitment to active learning through close contact between students and staff applies as much to research students as it does to undergraduates. While research students' primary contact is with their supervisors, they benefit also from the collegiate nature of the Faculty which encourages staff and research students to discuss ideas and projects widely, drawing on the expertise of the Faculty as a whole.

The Faculty has particular research strengths in Constitutional and Administrative Law, Corporate and Commercial Law and Taxation Law, Criminal Justice and Criminology, European Law and International Law, Indigenous law and Human Rights, Information Technology Law, Intellectual Property, Media and Communications Law, Law and Social Theory, Procedure and Evidence, and Professional Ethics. Supervision can also be provided in most other major areas of legal scholarship.

The Faculty works closely with its specialist research centres – the Australian Human Rights Centre, Indigenous Law Centre, Australasian Legal Information Institute (AustLII), Baker & McKenzie Cyberspace Law and Policy Centre, European Law Centre, Communications Law Centre, Gilbert & Tobin Centre of Public Law, Financial Services Consumer Policy Centre, and the National Children's Youth Law Centre.

A foundation stone of the Faculty's work is its commitment to social justice, specifically the examination of the limits and possibilities of the use of law in attempts to achieve just social outcomes. This commitment prompts the disposition to research law in its social, economic, and political contexts, as a distinctive and flexible source of discipline, regulation, and facilitation.

Professor Paul Redmond
Dean
Faculty of Law

Faculty of Law

Contents

Faculty Information and Assistance

- Some people who can help you 133
- Advanced Standing 133
- Course Descriptions 133
- Enrolments 133
- Cross Institutional Studies and Exchange Programs 133
- Professional Associates 133

The Law Society 133

Student Members of Faculty 133

Centres and Units

- Australasian Legal Information Institute (AustLII) 133
- Australian Human Rights Centre 133
- Australian Taxation Studies Program (ATAX) 134
- Baker & McKenzie Cyberspace Law and Policy Centre 134
- Communications Law Centre 134
- Continuing Legal Education Centre 134
- Diplomacy Training Program 134
- European Law Centre 134
- Financial Services Consumer Policy Centre 134
- Gilbert & Tobin Centre of Public Law 135
- Indigenous Law Centre 135
- Kingsford Legal Centre 135
- National Children's and Youth Law Centre 135
- Social Justice Project 135

Program and Course Information

Postgraduate Study

Program Outlines

1740 Doctor of Juridical Science 136
9200 Master of Laws Degree by Coursework 136
9210 Master of Law and Management 137
5740 Graduate Diploma In Law 137
Postgraduate Enrolment Procedures 138
Elective Courses 138

Conditions for the Award of Degrees

Higher Degrees 139
Doctor of Philosophy 139
Doctor of Juridical Science 139
Master of Laws by Research 139

Faculty 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 Kerrie Daley by email: k.daley@unsw.edu.au or by phone 9385 3284.

The Faculty of Law homepage (timetables and general information) can be found at www.law.unsw.edu.au

Advanced Standing

The policy of the Faculty 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 Faculty, 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)

Course Descriptions

Course descriptions offered in 2002 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 contact NewSouth Student or www.student.unsw.edu.au.

Faculty of Law 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 Faculty requires that at least 50% of law studies be completed at UNSW.

Students should discuss their plans for cross-institutional studies with the Postgraduate Co-ordinator.

Professional Associates

In addition to full-time teaching staff in the Faculty 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.

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, the Council and various committees.

Members of the Executive, the Council 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, student publications, competitions and various other activities. The social events include first year 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 with the faculty known as Innominate; the Law Annual; the Alternative Law Handbook and careers guides. The internal mooting, witness examination, client counselling and petty sessions competitions are also run by the Law Society. A speakers' forum with guest speakers from the judiciary, legal practitioners and public figures is held weekly in the level 9 common room. Law Society has officers representing the concerns of International Students and graduate law students and is involved in the Australasian Law Students' Association.

The Law Society office is Room 1112, Tel: 9385 2271,
Email: lawsoc@unsw.edu.au

Student Members of Faculty

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.

Centres and Units

Australasian Legal Information Institute (AustLII)

The Australasian Legal Information Institute provides free internet access to Australian legal materials. AustLII is one of the largest sources of legal materials on the net, with over six gigabytes of raw text materials and over a million searchable documents. AustLII publishes public legal information: that is, 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 most Australian decisions and legislation. Current databases include Commonwealth, ACT, Northern Territory, Victorian, Western Australian, NSW and SA legislation and regulations, most federal courts (High Court, Federal Court, Family Court, AAT etc) and most state courts and tribunals. AustLII also includes a number of more specialised (subject specific) databases as well as the most comprehensive index to Australian law on the Net.

AustLII is used by over 80,000 people each working day. Our usage statistics indicate that AustLII's users span the whole community, including educational institutions (about 30%), the legal profession and business (25%), community organisations (15%), government (10%), and 20% from overseas.

AustLII is operated jointly by the Faculties of Law at the University of Technology, Sydney (UTS) and the University of New South Wales (UNSW). It is funded by grants of around $.5 million per year from the Australian Research Council, the Law Foundation of New South Wales, the Council for Aboriginal Reconciliation, 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 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, John Pace, (tel: 9385 3637).

Australian Taxation Studies Program (ATAX)

This major distance education program was established in 1990 by the Faculty of Law and the Faculty of Commerce and Economics. For more information see the ATAX section of this handbook.

Baker & McKenzie Cyberspace Law and Policy Centre

The Baker & McKenzie Cyberspace Law and Policy Centre provides a focus for research, public interest advocacy and education on issues of law and policy concerning digital transactions in cyberspace.

The Centre's distinctive focus is to take a public interest perspective on these often-technical issues. The emphasis is not on technology as such but rather on the regulation of the social space created by computing networks - 'cyberspace'.

For more information, see the Centre's web pages at http://www.austlii.edu.au/CyberLPC/

Communications Law Centre

The Communications Law Centre is a public interest research, teaching and public education centre, specialising in media and communications law and policy. It also operates a specialist Internet law practice, Oz NetLaw. It seeks to integrate these different activities to develop new ways of looking at communications issues and new solutions to the public policy questions they raise. The Centre's role is to ensure that the public interest in media and communications is articulated and advanced.

Particular areas of law in which the Centre specialises include: broadcasting, telecommunications, defamation and free speech, privacy, and legal issues associated with online activity by consumers, small businesses, and community non-profit groups.

The Centre regularly makes submissions to government and other inquiries on communications matters. Located on campus at UNSW, the Centre cooperates with the School of Law in research and teaching, as well as organising seminars and conferences, collecting and disseminating specialist legal information, and publishing research papers and a quarterly magazine, *Communications Update*. It publishes a comprehensive guide to Australian Telecommunications Regulation and maintains a specialist library, which is open to students and the public. Volunteer assistance from students and others is welcomed in appropriate projects.

The Centre was established in Sydney in 1988 and in Melbourne in 1990. It is affiliated with the University of New South Wales and the Victorian University of Technology. Oz NetLaw, the Internet law practice of the CLC, was established in 2001 with funding from the Federal Attorney-General's Department and law firms Clayton Utz and Gilbert & Tobin.

For more information contact the Centre on 9385 7385 or admin@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 Manager, Anne Measday: (Tel: 9385 3227; Fax: 9385 1155). The Centre's website is ***http://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 Jose 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 three-four weeks in Bangkok, Manila, Sydney and Darwin, as well as sixteen in-country sessions of one to two 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), Professor Garth Nettheim (UNSW), Dr Sarah Pritchard, Ms Louise Sylvan (Australian Consumers Association). 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 co-operation between Europe and the Australasian region;
- workable models for regional economic and political co-operation which may be of use in Australia's own region.

For further information contact the Director, Dr Stephen Hall (tel: 9385 2189), or Professor George Winterton (tel: 9385 2245).

Financial Services Consumer Policy Centre

The Financial Services Consumer Policy Centre is a non-profit research and advocacy organisation. The FSCPC was set up with a grant from the National Consumer Trust Fund. Our objective is to become a permanent organisation conducting 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 is also making preparations for a number of courses to be run in the coming years.

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;

best practice in the provision of insurance products; migrants and banking; and consumer protection in electronics commerce.

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 work of the Centre is concentrated on specific long and short-term projects. The Centre's Director is George Williams, who is the Anthony Mason Professor of Law. 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 Centre's activities and 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 graduate students.

George Williams can be contacted on 9385 2259 or george.williams@unsw.edu.au.

Indigenous Law Centre

Formally established within the Faculty of Law in 1986, the Indigenous Law Centre aims to develop and coordinate research, teaching and dissemination of information in the multi-disciplinary area of the relationship between indigenous peoples and the law.

Some of the objectives of the Centre are:

- to provide a focus for, and to foster research concerning indigenous peoples and the law;
- to publish the results of research undertaken by individuals working with the Centre or independently of the Centre;
- to disseminate information concerning indigenous peoples and the law to interested individuals and bodies throughout Australia and abroad;
- to organise and participate in conferences and seminars from time to time;
- to encourage the development of education programs and teaching materials in the field of indigenous peoples and the law for use in the University of New South Wales and elsewhere.

The Centre publishes the Indigenous Law Bulletin nine times per year and the Australian Indigenous Law Reporter four times per year. For further information contact the Co-ordinator (tel: 61 2 9385 2252).

Kingsford Legal Centre

Kingsford Legal Centre is the Faculty of Law's law 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 New South Wales 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.

The Centre's postal address is 11 Rainbow Street Kingsford NSW 2032 Australia. The Centre's contact numbers are telephone (02) 9398 6366; Fax: (02) 9399 6683; TTY: (02) 9314 6430 and 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 is 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 the University of New South Wales 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 Australian children and young people. The Centre has a website which provides legal information to young people on a broad number of issues in an accessible, colourful and approachable format. The site's address is: http://www.lawstuff.org.au. *Rights Now*, a leading bulletin on young people and law, contains news and comments on a variety of children's rights issues, and includes a section on indigenous youth. The Centre can be contacted by telephone (02) 9398 7488, fax (02) 9398 7416 or by mail via UNSW, Sydney NSW 2052. They are also contactable on email: ncylc@unsw.edu.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 to them. He also provides advice to the Dean in relation to other developments that it might consider to strengthen its research, teaching and community service role in the social justice area.

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 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. 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 sessions 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 sessions 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.

A proposal is currently being developed to introduce two new programs in 2002. 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 sessions to non-lawyers. 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. When further information is available details will be advertised 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 sessions or part-time in a minimum of three sessions. Students must undertake and satisfactorily complete six session-long (single semester) 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 sessions and over teaching breaks. While many are taught for two hours per week over a teaching session, 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 session-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 three single-semester courses offered at postgraduate level by another University, and three single-semester LLB courses offered by the Faculty, but no student may be permitted to take in all more than three single-semester courses of either type (or their equivalent in year-long courses). A student taking an LLB course at UNSW is assessed in a manner and at a level appropriate to an LLM course.

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:

- Criminal Justice
- Media, Communications and Information Technology Law
- Corporate and Commercial Law
- Corporate, Commercial and Taxation Law
- International Law
- Asian and Comparative Law
- Comparative Law
- Financial Services Law
- Human RIghts and Social Justice

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 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 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 sessions from the date of enrolment in the case of a full-time candidate or three sessions in the case of a part-time candidate. The maximum period of candidature shall be three 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.

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), with support from the Australian Taxation Studies Program (ATAX).

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 are: Managing People and Organisations; Marketing Principles; Managers, Markets and Prices; and Corporate Finance. The elective management courses, from which a maximum of two may be selected, are: Performance Improvement Beyond Total Quality Management; Accounting and Financial Management; Managerial Skills; and Managing Change.

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. 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 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 at least two calendar months before the commencement of the session in which enrolment is to begin.

(2) Applicants shall in addition submit a study plan for approval by the Committees, which outlines the courses that they wish to take and explains the relationship between these courses and their current and future career development. The Committees may delegate this function to the Program Director.

(3) A candidate for the degree shall be required to undertake such formal courses and pass such assessment as is prescribed by the Committees.

(4) 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.

(5) 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.

5740 Graduate Diploma in Law (Grad Dip Law)

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 session-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 session-long courses.

A student may apply to the Associate Dean (Postgraduate) for permission to take, as appropriate to the student's overall program, two single-semester courses offered at postgraduate level by another University, and two single-semester LLB courses offered by the Faculty but no student may be permitted to take in all more than two single-semester courses of either type. A student taking an LLB course at UNSW is assessed in a manner and at a level appropriate to a postgraduate course.

Specialist Major Sequences

1. Candidates may undertake study incorporating a major sequence in any one of the following specialist areas:

- Criminal Justice
- Media, Communications and Information Technology Law
- Corporate, Commercial and Taxation Law
- Corporate and Commercial Law
- Financial Services Law
- Human Rights and Social Justice
- International Law
- Asian and Comparative Law
- Comparative 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 permitted 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 closing date, which shall be at least two calendar months before the commencement of the session in which the enrolment is to begin.

(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 sessions from the date of enrolment in the case of a full-time candidate or four sessions in the case of part-time candidate. In special circumstances a variation of these times may be approved by the Head of School.

Postgraduate Enrolment Procedures

All students enrolling in postgraduate programs should obtain a copy of the free leaflet Enrolment for Postgraduate Students available from School Offices and the Admissions Office. This leaflet provides detailed information on enrolment procedures and fees, enrolment timetables by Faculty and program, enrolment in miscellaneous courses, locations and hours of Cashiers and late enrolments.

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.

Elective Courses

LLM, MLM, SJD, and Grad Dip Courses

8 unit of credit courses

LAWS4081	Advanced Issues in International Law
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
LAWS3002	Community Corrections
LAWS4291	Comparative Constitutional Law
LAWS9999	Contemporary Challenges to the Rule of Law
LAWS3091	Corporate Control Transactions
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
LAWS4275	Economic Analysis of Law
LAWS3053	Entertainment Law
LAWS4151	European Union: Institutions and Legal Systems
LAWS4391	Families and Financial Adjustment
LAWS9994	Financial Services Law and Compliance
LAWS4022	The Frontiers of Contract
LAWS4084	History and Theory of International Law
LAWS4292	Human Rights under the Australian Constitution
LAWS4211	Indigenous Legal Issues
LAWS9977	Information Technology: Internet Governance
LAWS3080	Insurance Law
LAWS9984	International and Comparative Indigenous Legal Issues
LAWS4182	International Aspects of Social Justice
LAWS9993	International Business Transactions
LAWS4083	International Commercial Arbitration
LAWS9991	International Criminal Law
LAWS9998	International Economic Law: Goods and Services, Capital and Labour
LAWS9119	International Environmental Law
LAWS7000	International Litigation
LAWS4085	International Organisations
LAWS4052	International Taxation
LAWS9972	International Trade Law
LAWS4301	Issues in Evidence
LAWS4181	Issues in Human Rights
LAWS9190	Issues in Immigration Law
LAWS4021	Issues in Intellectual Property
LAWS4124	Japanese Law
LAWS4130	Japanese Law and Economics
LAWS4128	Japanese Law and Politics
LAWS4129	Japanese Law and Society
LAWS4127	Japanese Law in Context
LAWS3005	Juvenile Justice
LAWS3039	Law and Internet Cultures
LAWS4302	Law of Damages
LAWS4086	Law of the Sea
LAWS4334	Legal Reasoning
LAWS4087	Legal Regulation of the Use of Force
LAWS4431	Legal Research
LAWS4153	Modern Civil Law Systems
LAWS3004	The 'New' Prosecutors
LAWS4141	Pacific Islands Legal Systems
LAWS4150	Parliaments, Politics and Legislation
LAWS4082	Peaceful Settlement of International Disputes
LAWS3006	Policing
LAWS3007	Punishment in Contemporary Society
LAWS9190	Recent Issues in Immigration Law
LAWS3094	Regulation of Managed Investments
LAWS4423	Research Thesis: 8 UOC
LAWS4422	Research Thesis: 16 UOC
LAWS4303	Restitution
LAWS3092	Securities Regulation
LAWS3001	Sentencing: Law, Policy and Practice
LAWS4090	Space Law
LAWS3081	Superannuation Law and Compliance
LAWS3051	Telecommunications Competition and Consumers
LAWS4123	Trade and Investment in Japan
LAWS4152	Trade Law of the European Union
LAWS3032	TV, Radio and New Media

4 unit of credit courses

LAWS3042	Censorship and Free Speech
LAWS4335	Contemporary Legal and Social Theory - Jürgen Habermas 1
LAWS4336	Contemporary Legal and Social Theory - Jürgen Habermas 2
LAWS3041	Contempt and the Media
LAWS3000	Selected Issues in Sentencing

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 under 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 6 single semester courses 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 best 4 (of 6) coursework courses in the qualifying program, excluding the course Legal Research. In addition, a research proposal must be submitted as soon as feasible after completion of 4 of the 6 coursework courses in 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 Faculty in October or May 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 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 2 years and no later than 3 years 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 4 years and no later than 6 years 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 of between 60,000 and 70,000 words 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 my 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 my 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 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) 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 (or external) candidates for the degree shall submit, within one or two sessions 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 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 the equivalent of 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.

(9) 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.

(10) 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.

(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.

A Message from the Director of ATAX

Welcome to The University of New South Wales and in particular to the Australian Taxation Studies Program (ATAX). You have been admitted to study in one of Australia's leading universities. I trust that you will find the experience a challenging one that will open new opportunities for you in your career development.

At ATAX you will study with a team of talented academic staff with wide experience and expertise. Whilst lecturers naturally develop individual teaching styles appropriate to their areas, the single unifying principle which underlies our teaching is that the staff are dedicated to ensuring the intellectual development of our students. I am sure you will find staff responsive to your concerns and they will always be helpful in trying to lead you, wherever possible, to a broader understanding of the Course material.

The academic staff are complemented by a Panel of Experts which has been developed with regard to the needs of the Program – this Panel is comprised of a unique blend of expert practitioners and government representatives who have the very highest levels of experience.

In addition, our administrative support staff are there to provide assistance to students in fulfilling all student requirements and, of course, in a program with the level of national and international coverage which ATAX provides, this is a crucial part of the overall process.

The mode of delivery is efficient and flexible and is conducted through ATAX's National Classroom. The National Classroom's learning facilities are located at 23 sites across Australia and provide infrastructural support to aid you in your studies. The form of study which we offer has many practical advantages but it also creates an important responsibility – the responsibility for the student to organise time effectively, to work steadily through the program material and to contribute to the many and varied forms of dialogue which the programs offer. If you approach your studies with enthusiasm and a commitment to succeed, the process will be intellectually stimulating and rewarding. Since you may not have the constant access to a peer group that you encounter on campus, it is important that you know the communication facilities we use and our administrative procedures. Keep up with the *Weekly Bulletin*; make sure that you know the cut-off dates for withdrawal without penalty. Get an early feel as to how Audio Conferences work.

Above all, the program can only be as good as the participants in it – this includes both ATAX staff and students. I believe that we have dedicated hard working staff at both the academic and the administrative levels and I have every confidence that they will provide you with the intellectual stimulation and support you need. Students need to focus on their work and provide a commitment to doing their best. The combination will provide outstanding results and a rewarding experience for you.

Good luck in your studies and, if you need help, ask for it early.

Associate Professor Chris Evans
Director of ATAX

Australian Taxation Studies Program (ATAX)

Contents

Information and Assistance

Some people who can help you 142
Academic Support 142
Enrolment Procedures 142
Sources of Information 142

Delivery through the National Classroom 143

National Classroom Facilities 143
Access to Australian Taxation Office Premises by Non-ATO Students 143
Study Materials 143
Audio Conferences 143
Tutorials 144
Intensive Regional Classes 144
Web Course Tools 144
Library Services 144

Program and Course Information

Information on Programs and Codes 144
Courses Descriptions 144
Course Availability in Respect of All Programs 145
Program Completion 145

Postgraduate Study

Program Information 145

Master of Taxation

Overview 145
Assessment Policy 145
Admission Requirements 145
Program Requirements 145
Selection of Courses 145

Graduate Diploma in Advanced Taxation

Overview 146
Assessment Policy 146
Admission Requirements 146
Program Requirements 146
Selection of Courses 146
Articulation of Studies from the Graduate Diploma in Advanced Taxation to the Master of Taxation 146
Specialist Professional Accreditation 147
Exemptions Policy for Master of Taxation and Graduate Diploma in Advanced Taxation 147

Graduate Diploma in Taxation Studies

Overview 147
Assessment Policy 148

Program Structure 148
Exemptions Policy 148

Non-Award (Single Course), Cross-Institutional and Cross-Group (Faculty) Enrolments

Introduction and Overview 149
Cross-Institutional Enrolment Procedures 149
Cross-Group Enrolment Procedures 149

Tuition Fees For Postgraduate Students

Level of Fees and Basis of Calculation 149
Non-Award and Cross-Institutional Enrolments: Special Provisions 149

Information and Assistance

This section of the handbook provides information on programs of study offered by the Australian Taxation Studies Program (ATAX), at the postgraduate level.

ATAX delivers tax education across Australia. It is designed to educate tax professionals for all sectors of the tax profession - accounting and legal majors, in the tax groups of large and medium sized corporations, in smaller accounting and law firms and in the Australian Taxation Office, State Government Treasury Departments and Revenue Offices. The Program was 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

Postal Address:
ATAX
The University of New South Wales
UNSW SYDNEY NSW 2052 AUSTRALIA

If contact is required with Academic or other General Staff, please refer to the Contact List in the Student Information Booklet or on the ATAX website (www.atax.unsw.edu.au). If the staff member is unavailable ring the ATAX Student Services Office on (02) 9385 9333 and your call will be transferred, or a message taken.

FACSIMILE NUMBER for all ATAX Staff:

Fax: (02) 9385 9380

Academic Support

A range of different academic support services is provided by ATAX through the Academic Support Co-ordinator. These include support packages on general study skills and basic grammar and writing skills.

ATAX recognises students come to the program with a broad range of backgrounds. Adjusting to the demands of part-time study in the distance education mode in a University environment is a considerable challenge. In order to remain responsive to the diverse needs of students, ATAX provides both formal and informal academic support options.

Two formal Audio Conferences are conducted each Session. These are intended for new students, although continuing students are also welcome to participate. The Audio Conference sessions provide an opportunity for students to discuss general study skills and examination preparation issues in a relatively informal environment. Students are also encouraged to refer to the ***ATAX Study Skills Booklet***, which is included in the package of Study Materials with the ***Student Information Booklet***.

The Academic Support Co-ordinator 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 Co-ordinator is the primary contact person for students seeking access to such services.

Contact the Student Services Office in the first instance to ascertain the name and contact details of this person.

Enrolment Procedures

Enrolment procedures for Distance Education programs differ from conventional mode programs. Students should refer to information distributed by the ATAX Student Services Office (enrolment/re-enrolment forms and instructions, Weekly Bulletin) prior to the commencement of each Session.

Sources of Information

It is important that students familiarise themselves with various documents and sources of information available.

These include:

- the Weekly Bulletin and Emergency Bulletins
- the ATAX Website (www.atax.unsw.edu.au)
- the Student Information Booklet
- HECS and Fees explanatory documents
- the ATAX Student's Guide to Library Resources
- the noticeboards at National Classroom sites

The *Weekly Bulletin* is prepared on Mondays trhoughout Session and distributed to all ATAX students and ATAX Co-ordinators. *Weekly Bulletins* are consecutively numbered (Yr/#) so students should be aware if one is missed.

At appropriate times, policy information is repeated for the benefit of students (for instance reminders of deadlines for changes in enrolment, or the policy regarding late assignments).

Also they are a vital source of up-to-date information about administrative matters (for instance advising examination arrangements, or materials delivery dates). Lecturing staff use the *Weekly Bulletin* to advise on events occurring within each Course.

Where particularly urgent events take place, an *Emergency Bulletin* is issued (which could be at any time). This message is then repeated in the next regular *Weekly Bulletin*. It may be that only particular classes or groups of students are affected.

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 On-Line. The *Weekly Bulletin* is posted each week on the website and the *Student Information Booklet* will also be transferred to the website for 2002. We are constantly updating and expanding the website so it is well worth 'bookmarking' it if you have Internet access.

The development of the *Student Information Booklet* is to facilitate ready access to the basics of ATAX administration and contains other study resource materials. This booklet provides an essential reference point for the ATAX student, with contact lists, administration information, calendar of events, a Study Skills Manual and Library guide. The intention of this resource is to create a concise, one-stop source of information for the majority of your needs as an ATAX student. Information will be updated either by way of the Weekly Bulletin or via the ATAX website.

The Orientation visits by ATAX staff take place twice-yearly immediately prior to the commencement of each Session. All new students should attend Orientation to learn about ATAX's unique delivery mode. The occasion is used to distribute Study Materials to students for the coming Session. These visits serve both academic and administrative purposes, as well as giving a human face to this decentralised program. This exercise is valuable for obtaining feedback from students about problems and successes with all aspects of the program.

It is expected that all students will attend their local Orientation to collect their Study Materials in person. If you are unable to attend the Orientation, you must arrange for someone else to collect your Study Materials. A letter of authorisation, signed by the student, must be presented before collection and the person collecting the materials must sign for the package of materials.

Uncollected materials will be returned to ATAX. It is then the student's responsibility to obtain materials at their own cost. Failure to collect materials from Orientation (and/or late collection of materials) is unacceptable as a basis for requesting remission of penalties imposed for late submission of assignments.

Delivery through the National Classroom

With our unique National Classroom structure, students can study from anywhere in Australia or overseas without attending campus lectures. All ATAX students are supported with comprehensive, high quality written Study Materials. Utilising the National Classroom's learning facilities in 23 sites, our distance education framework incorporates Web Course Tools (WebCT), local library and study facilities, regular Audio Conferences with your lecturer and other students, and face-to-face Intensive Regional Classes.

Students enrolling in the ATAX Program may find the learning environment differs significantly from traditional campus-based study. The following sections are designed to introduce new students to some aspects of this learning environment which may not be familiar.

National Classroom Facilities

The learning facilities provided as part of the National Classroom are an integral part of how ATAX delivers its programs. There are currently 23 National Classroom sites in locations around Australia. Each site is equipped to facilitate Audio Conferences with ATAX staff and to provide support in the form of computers with Internet access, photocopiers, facsimile machines and private study facilities.
Current National Classroom sites are located on the premises of various Australian Taxation Offices and are available to all students.
Each of the locations has an **ATAX Co-ordinator**, whose role is to ensure the effective operation of the Learning Facility. Broadly the role envisages development and maintenance of effective communication channels between students and ATAX. Normal academic and administrative enquiries should be made to the ATAX Student Services Office in the first instance.

National Classroom sites are for study purposes only. They are *not* mailing addresses. They are usually open from 8.00am to 6.00pm, Monday to Friday.
Maintaining communication with the ATAX Co-ordinator at your National Classroom site is essential. Addresses for the current sites and the contact details of their ATAX Co-ordinators are listed in the ***Student Information Booklet***.

Access to Australian Tax Office Premises by Non-ATO Students

ATAX is committed to ensuring Non-ATO students have the same opportunity for academic success as those ATO students who in many cases will be working at the same location as the Learning Facility. working at the the same location as the National Classroom site. As the National Classroom sites are established within Australian Tax Offices for the time being, normal security arrangements have to be observed by all students for access to the particular office(s) where the National Classroom's facilities are located

The principle of access to a National Classroom site for Non-ATO students is crucial to the success of the overall Program. Accordingly, the following access arrangements have been negotiated with the Australian Taxation Office. *It should be noted these are the normal procedures where a person, not being a staff member of the ATO, requires regular access to ATO premises:*
1. Conditional building passes should be issued to Non-ATO students in the ATAX Program. This will allow the students access to the National Classroom site without having to be escorted by an ATO staff member. The building pass will be a photo identification card, with the only personal information being the student's name.

2. On leaving the ATO building, the students will be required to hand in the building passes to the guard at the security desk. When students wish to re-enter the National Classroom site, they will have to collect the pass from the guard.

3. Prior to a building pass being issued to a Non-ATO student, it will be necessary for the student to sign a confidentiality agreement with the ATO and for a security check to be made on the person. Non-ATO students should complete a Consent to Obtain Personal Information (police check) form to give the security staff authority to complete the check, available from ATAX Co-ordinators.

4. Should any student be refused a building pass due to a criminal history, the student would need to gain access on each occasion by following normal procedures.

Students are advised to contact ATAX Co-ordinators upon accepting their offer of a place on an ATAX program to make arrangements regarding security passes.

Note that, on ceasing to be an ATAX student, Non-ATO students who have been issued with a 'conditional photographic' building pass, are to notify the ATAX Co-ordinator so that the pass can be cancelled.

Study Materials

At the beginning of each Session students will receive a batch of Study Materials for the Course(s) in which they are enrolled. Distribution will normally take place during the Orientation period at the student's National Classroom site. All students are *expected* to collect their materials at this time. Some Courses will have additional material prepared and dispatched during the Session. Each batch of materials will be individually labelled for each student, and on receiving materials, students should check to ensure that all items ordered are included. Students are required to sign for receipt of the materials. If for some reason they are unable to personally attend the Orientation session to collect the materials, they must designate (in writing to ATAX) another person to collect the material on their behalf.

The **Study Materials** are made up of introductory materials, including a Course profile, designed to provide the student with an overview of the Course content and how to approach it. In addition, the Study Materials contains a series of modules, or units, together with readings, activities and exercises to allow the student to check understanding and progress. Solutions to most of the activities are provided at the end of each module.

At a minimum the student should be able to pass the Course using only the Study Materials. However it is strongly recommended that students participate in the various other educational opportunities made available.

Whilst ATAX accepts the **cost** to courier the materials to standard locations (principally National Classroom sites), certain charges may apply if special arrangements incur greater costs and/or communication problems arise, which is the responsibility of the student. Every effort is made to distribute materials in a timely and cost-effective manner. Queries concerning missing or incomplete Study Materials should be referred to the ATAX Production Centre on (02) 9385 9310.

A ***Student Data Sheet*** is used to confirm enrolment particulars for Session 2 of each year.

Return of Study Materials on Discontinuation of a Course

Withdrawing or discontinuing students are *expected to return* Study Materials (unless specially purchased) on cessation of enrolment. If a student varies his/her enrolment to discontinue a Course, the student must return the Study Muide to ATAX **within fourteen (14) days** of the date of discontinuation / withdrawal. It is the sole responsibility of the student to ensure that the material is received at the ATAX office within the allocated time and the student should *not* leave any materials with ATAX Co-ordinators. If a student neglects to return or wishes to retain a Study Materials, an invoice for $150 will be raised. ***Where Study Materials are not returned, and/or monies remain outstanding, results will be Withheld (Code WF)***. Please note that once an invoice has been issued, the return of Study Materials will not be accepted. Only payment of the invoice will remove the financial block imposed by the Student Information System.

Audio Conferences

Academic staff of ATAX hold Audio Conferences with students at the at the National Classroom sites. *These are not compulsory, but it is strongly recommended that students attend such conferences.*

What is an Audio Conference?

An Audio Conference is a 'conference' telephone call linking students and lecturers. The duration is usually 1.5 hours, and most students find them a useful aspect of their study. These are not lectures. They are an opportunity for discussion of the topics covered in the Courses undertaken by students.

An Audio Conference is the linking of a number of telephones, enabling each person to hear and speak to the others. The phones at ATAX National Classroom sites where groups of students can gather at a specific time, and/or the home/work phones of individual students can all be linked by ATAX audio conferencing equipment to the lecturer at ATAX in Sydney. Each ATAX National Classroom site has loudspeaker phones. At each site only one line is utilised per conference and the audio conferencing equipment can accommodate a number of locations, each servicing a group of students.

Functions of Audio Conferences

Skills of analysis, dicussion and debate are a critical aspect of study. On-campus students enjoy many opportunities, formal and informal, for such dialogue.

Students will already have the Course content through the printed Study Materials. As such the primary function of an Audio Conference is to provide an opportunity for dialogue between the lecturer and students and between students themselves, and not to present content which tradiutional lectures attempt to do.

ATAX Students can use Audio Conferences to reinforce their grasp and understanding of basic concepts, share problems and obtain advice.

Audio Conferences offer the following benefits for students:

- guide students
- deal with learning difficulties
- develop required verbal communication skills
- make lecturers more approachable for students
- provide motivation and support
- confirm that learning is taking place
- clarify any difficulties with the learning materials
- identify and deal with issues in program administration
- offer a personalised learning experience, reducing students' sense of isolation
- present an opportunity for students to assess progress
- deliver immediate feedback to questions and problems, and can instantly clarify complex issues and concepts
- promote motivation by stimulating interest
- develop skills in expressing ideas and justifying them
- enable the lecturer to reinforce key concepts in a Course
- link students to available support mechanisms, including the opportunity to meet other students at Learning Facilities and develop study groups.

What Preparation is Required?

This will be advised in the Study Materials for the Course and/or through the ***Weekly Bulletin*** closer to the time of each Audio Conference. It is important that students prepare thoroughly, as the benefits of the Audio Conferences are considerably reduced if participants have not read up on the subject to be covered beforehand.

Tutorials

A Tutorial is a supplementary form of education delivery where matters already covered elsewhere in a Course are discussed, clarified or elaborated. A Tutorial is conducted in a small group to enable effective student participation. A Tutorial is conducted in accordance with guidelines issued by the lecturer in charge of the Course. Responsibility for the Course rests with the lecturer in charge, not the tutor.

Tutors are arranged for some **Graduate Diploma in Taxation Studies** Courses in regional centres where there are a sufficient number of students.

Tutorials are offered in a limited number of Courses, subject to resources and demand. Details are advised through the ***Weekly Bulletin*** each Session.

Normally 3 Tutorials would be held each Session for approximately 1.5 hours each. Tutorials may be face-to-face where there are sufficient students and tutors available, or are run by Audio Conference where numbers are less than ten. Information on Tutorial dates, times, locations and format is published in the ***Weekly Bulletin.***

Tutors prepare and deliver a Tutorial on the topic provided under the direction of Course lecturer responsible.

All students in the Course should participate in the Tutorial if possible. To facilitate proceedings, it is desirable for students to familiarise themselves with the topic(s) to be covered prior to the Tutorial.

Intensive Regional Classes

In most postgraduate Courses students will be invited to participate in **Intensive Regional Classes** (IRCs), which are usually held at major centres (*eg:* Sydney, Melbourne). Subject to the discretion of the Director, it is ATAX policy to provide an Intensive Regional Class in any regional centre in which there are at least 12 students enrolled in a Course. Typically these would run over one day, using a problem based format. Attendance at these classes is *strongly recommended but not compulsory*, and the proceedings would normally be recorded, with the resulting video available at National Classroom sites. Students unable to attend the Intensive Regional Class may subsequently be invited to participate in an Audio Conference link up.

Administrative matters in relation to Intensive Regional Classes will be communicated to students via the **Weekly Bulletin**.

Web Course Tools (WebCT)

A web-based support strategy known as Web Course Tools (Web CT) is also being developed to complement existing study resources. The student website can be found at www.atax.unsw.edu.au/webct.

Library Services

Information may be found under Library Facilities at UNSW and in the *ATAX Library Guide*. This guide is included in the *Student Information Booklet*. Also refer to ATAX Library On-Line at www.atax.unsw.edu.au/library or contact the ATAX Library directly:

Colin Fong or Roy McCrindle
Librarian
Tel: (02) 9385 9327 / 9312

Program and Course Information

Information on Programs and Codes

Program Titles and Codes

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: 6894
Program Title: Postgraduate Qualifying

Code No: 9250
Program Title: Master of Taxation
Qualification Abbreviation: MTax

Code No: 1730
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 ATAX03** mostly parallel Master of Taxation ATAX04** Courses
ATAX04**	Master of Taxation Course

Course Descriptions

Course descriptions offered in 2002 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 contact NewSouth Student or visit www.student.unsw.edu.au.

Course Availability in Respect of All Programs

Prior to the commencement of each Session, Course availability is included as part of the enrolment/re-enrolment information pack. All scheduling is subject to teacher availability, student demand, and the progress of writing. Schedules and Course content are regularly reviewed and updated in line with changes in the law and student feedback.

Program Completion

There is no University-wide rule requiring students to complete a program of Courses within a specified period of time. It is however, the accepted practice for the Assessment Committee of the Board of Studies to notify students if they are not progressing satisfactorily.

The ever changing nature of taxation law and policy means many Courses become outdated with the passage of time. Therefore it is in a student's best interests to complete programs as soon as possible.

The "Academic Standing" system monitors student progress by regular review of marks and academic records. The Assessment Committee may request that an Academic Advisor consults with students who are not progressing satisfactorily – to identify academic issues that are affecting progress and trigger communication with support units (academic or otherwise). The "Academic Standing" system operates by students with unsatisfactory progress moving down (or up) a series of probationary levels under the supervision of the Academic Advisor. For further details please refer to the Student Information Booklet.

Postgraduate Study

Program Information

The postgraduate programs offered by ATAX are the Master of Taxation, Graduate Diploma in Advanced Taxation and Graduate Diploma in Taxation Studies. They commenced in 1992. A PhD program is also available and requires completion of a supervised thesis (approximately 100,000 words).

The Australian Taxation Studies Program 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 which have been denied access to higher level university tax education, and provides mobility advantages for the many students who move around Australia in their jobs.

The postgraduate tax program builds on the work of the Bachelor of Taxation and offers advanced education to graduates with other degrees. It offers an advanced postgraduate tax program 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.

Master of Taxation

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 degree takes one full-time year with four Courses per Session or two years part-time with two Courses per Session.

The Master of Taxation program comprises eight Courses. Note that ATAX0401 Tax Policy is compulsory. The other seven Courses are elective and can be chosen from the prescribed list of Courses. Assessment in at least four of those Courses (designated **ATAX04****) includes a project 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 Courses, but this is a standard). Assessment in 'mainstream' Masters by coursework, 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.

The Master of Taxation offers a limited number of Courses that have a content similar to advanced Courses offered in the Bachelor of Taxation degree. Broadly, these deal with the structure of core taxation areas which have been the subject of recent sweeping reform and to which graduates may not have been adequately exposed. These parallel Courses are separately designated to give teachers the option of more onerous assessment. In due course, as the knowledge base of students changes at entry, the content of graduate Courses may diverge from those offered at the undergraduate level or separately designed Courses or custom designed modules included in advanced Masters Courses are likely to take over this function.

Assessment Policy

The Board of Studies in Taxation has resolved that, in order to pass a Course, candidates for the Master of Taxation should obtain:

1 50% or more of the total marks available in the Course and

2 Attempt the final examination in the Course

3 A pass grade in any component assessed on a Pass/Fail basis where that component is deemed to be an Essential Component.

Note that ruling (1) above is not absolute as the Assessment Committee is empowered to approve concessional pass grades (Pass Conceded) below this standard of 50% in certain circumstances.

In respect of ruling (2), where the Course has a formal examination prescribed (all except ATAX0416 Current Research Problems in Taxation), this is regarded as an essential component of the Course and hence must be attempted in order to complete assessment requirements for the Course.

Please refer to the section on **Assessment** later in the Handbook.

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 such postgraduate qualifying Courses as the Board of Studies in Taxation shall determine. 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.

Program Requirements

Candidates admitted to the Master of Taxation program are required to complete at least eight Courses designated ATAX04** .

The Master of Taxation consists of:

- 1 compulsory Course
- 7 elective Courses (from the ATAX04** range of Courses).

Exemptions or credit may be granted for up to 12 Units of Credit (two Courses). Refer to the section on Exemptions Policy for further details.

Selection of Courses

Complete the **single compulsory** Course:

ATAX0401 Tax Policy

Select **seven elective** Courses:

ATAX0403 Taxation of Entities
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
ATAX0417	International Financial Centres
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

Graduate Diploma in Advanced Taxation

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. It is scheduled to take one full-time year with three Courses per Session or 1.5 years part-time duration with two Courses per Session.

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.

The Graduate Diploma in Advanced Taxation offers a limited number of Courses which are similar to those offered in the Bachelor of Taxation degree. These parallel Courses are separately designated to take into account the possibility of more onerous assessment. In due course, their content may diverge from those offered at the undergraduate level.

Courses for the Graduate Diploma in Advanced Taxation, though similar in content to Master of Taxation Courses, are separately designated (designated with 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.

Assessment Policy

The Board of Studies in Taxation has resolved that, in order to pass a Course, candidates for the Graduate Diploma in Advanced Taxation should obtain:

1 50% or more of the total marks available in the Course and

2 attempt the final examination in the Course.

Note that ruling (1) above is not absolute as the Assessment Committee is empowered to approve concessional pass grades (Pass Conceded) below this standard of 50% in certain circumstances.

In respect of ruling (2), as each Course has a formal examination prescribed, this is regarded as an essential component of the Course and hence must be attempted in order to complete assessment requirements for the Course.

Please refer to the section on **Assessment** later in the Handbook.

Admission Requirements

Direct entry to the Graduate Diploma in Advanced Taxation is normally open to graduates in Taxation, Law or Commerce of equivalent standing and content to corresponding UNSW qualifications.

Candidates for the Graduate Diploma in Advanced Taxation with Commerce or Law qualifications which are not at the required level, standard or content, shall complete such postgraduate qualifying program as the Board of Studies in Taxation shall determine. 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.

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 Entities
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
ATAX0317	International Financial Centres
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

Articulation of Studies from the Graduate Diploma in Advanced Taxation to the Master of Taxation

1. Students who have who have commenced but not completed the Graduate Diploma in Advanced Taxation and wish to convert to the Master of Taxation, are required to:
   - complete a minimum of two Courses in Graduate Diploma in Advanced Taxation mode;
   - 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 of Courses. 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 (ie graduated) and wish to credit completed Courses to the Master of Taxation, are required to:
   - have achieved an acceptable academic standard as determined by the Board of Studies; this will normally be a mark of at least 65% on average in the Courses completed but it may vary to suit individual circumstances.
   - 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 (ie: 31 March 2002 for Session 1 and 31 August 2002 for Session 2) for the

Session 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 laywers 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.

Exemptions Policy for Master of 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 form SA25 Course Exemptions/Advanced Standing should be used. Such applications must be accompanied by documentary evidence which supports the application and allows each case to be considered on its own merits. Note that faxed documents will not be acceptable – certified copies of documents (as appropriate) will be required.

Students claiming exemptions should not adopt a 'shotgun' approach in claiming exemption for Courses with a remotely similar title or content to something already studied. A focused and well documented case will facilitate the process of evaluating the claim for exemption in particular instances.

Students who have queries on any aspect of exemptions or advanced standing should first contact the Student Services Office, or the appropriate Program Convenor.

General Policy

1. Exemption may be granted for Courses which have already received credit for another degree or qualification.

2. Applicants who are successful in gaining admission can apply for Course exemptions after receipt of their University acceptances. An exemptions claim form Course Exemptions/Advanced Standing is included in the Application Pack.

3. Exemptions are granted by the Board of Studies in Taxation. The claims for exemptions are administered by the relevant Course Authorities.

4. A flexible policy is applied to taxation and law Courses. Where there has been extensive change in the law in a particular area since completion, exemption will not be granted.

5. Applications must be made on the appropriate form and supported by relevant documentary evidence. Documentary evidence should include:

- relevant transcripts of results
- courses syllabi or evidence of content
- in the case of overseas qualifications, evidence that the courses completed are equivalent to the standard and content of the elected program in which the applicants have successfully gained admission.

Specific Policy for the Master of Taxation and the Graduate Diploma in Advanced Taxation

1. The Board of Studies in Taxation has determined that exemption shall be available for not more than two Courses for the Master of Taxation or Graduate Diploma in Advanced Taxation.

2. Exemptions are granted only if Courses are of a standard and content equivalent to corresponding Courses in the ATAX Program. Course authorities do not normally grant exemption for Courses completed other than in Universities or Colleges of Advanced Education with high standing in the relevant area. In order to gain exemption, students will require a pass in Courses of equivalent standard to the corresponding Courses in UNSW and with substantially the same content as relevant postgraduate Courses in the ATAX Program. Whilst relevant to admission, the passing of TAFE Courses will not normally generate exemptions.

3. The Board of Studies in Taxation has determined that exemption shall not be granted for any of the Courses formerly designated ATAX02** (refer 2000 Handbook) and that candidates who have completed similar Courses shall not be permitted to enrol in the equivalent Courses in the Master of Taxation or Graduate Diploma in Advanced Taxation. These Courses are designed to give detailed exposure to key areas of taxation and the policy is designed to encourage more experienced students to extend such exposure to a higher level.

4. Exemptions for the Graduate Diploma in Advanced Taxation or Master of Taxation will not be granted for any Course completed for the Bachelor of Taxation or Graduate Diploma in Taxation Studies. Exemptions for postgraduate Courses completed in other institutions or University of New South Wales Courses shall be granted only if the Courses are of a standard and content equivalent to Courses in the Program.

5. The Board of Studies in Taxation has determined students who are currently enrolled in or enrol in future in the Graduate Diploma of Advanced Taxation or Master of Taxation degrees and who successfully complete the ICAA Professional Year (PY) Examinations may be granted 6 unspecified Units of Credit towards the Graduate Diploma in Advanced Taxation or Master of Taxation degree and a further 6 unspecified Units of Credit towards these degrees if they have passed the Advanced Tax Module as part of the ICAA Professional Year. Chartered Accountants may be granted 6 unspecified units of credit if they have studied Taxation and Financial Reporting as part of the CA Program.

6. The Board of Studies in Taxation has determined that students who are currently enrolled in or enrol in future in the Graduate Diploma of Advanced Taxation or Master of Taxation degrees and who successfully complete CPA Australia's CA Program (having passed the elective CPA105 – Taxation examination) may be granted 6 unspecified Units of Credit towards the Graduate Diploma in Advanced Taxation or Master of Taxation degree.

7. Nothing in this policy shall be read as relaxing the general policy stated in the rules for articulation from the Graduate Diploma in Advanced Taxation to the Master of Taxation - that students must complete a minimum of four Courses at the ATAX04** level in order to be eligible for the award of the Master of Taxation.

Note: *Master of Taxation Courses are prefixed ATAX04**; Graduate Diploma in Advanced Taxation Courses are ATAX03**. Unless otherwise noted, the description given for the Course applies to both programs. Some Courses may only be offered in the one stream.*

Graduate Diploma in Taxation Studies

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 (approximating the Bachelor of Taxation in shorter compass). 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 to be taken 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.

Assessment Policy

The Board of Studies in Taxation has resolved that, in order to pass a Course, candidates for the Graduate Diploma in Taxation Studies should obtain:

1. 50% or more of the total marks available in the Course ***and***

2. at least 40% of the marks available for the final examination in the Course.

Note that ruling (1) above is not absolute as the Assessment Committee is empowered to approve concessional pass grades (Pass Conceded) below this standard of 50% in certain circumstances.

Where the Course has a formal examination prescribed, this is regarded as an essential component of the Course and hence must be attempted in order to complete assessment requirements for the Course.

Please refer to the section on **Assessment** later in the Handbook.

Program Structure

Restructured Program Effective From Session 1 2001

The Graduate Diploma in Taxation Studies has been restructured with effect from Session 1 2001. Students commencing enrolment from that date onwards should complete the following 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	The 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 subjects 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.

Transitional Arrangements for Students Enrolled Prior to Session 1 2001

The Board of Studies in Taxation has approved the following transitional arrangements:

Students who enrolled in the Graduate Diploma in Taxation Studies prior to Session 1 2001 may:

- Complete their studies under the pre-2001 program structure, by completing the following 10 Courses:

ATAX0101	Basic Tax Law and Process
ATAX0103	Microeconomics and the Australian Tax System
ATAX0104	Framework of Commercial Law
ATAX0105	Accounting 1 (formerly known as Wealth and Income: Introduction to Accounting)
ATAX0106	Tax Administration
ATAX0108	Principles of Capital Gains Tax
ATAX0109	The Law of Companies Trusts and Partnerships
ATAX0110	Accounting 2 (formerly known as Contemporary Accounting Practice)
ATAX0116	Critical Perspectives and Ethics
ATAX0117	Tax Accounting Systems

OR

- Complete their studies in the program under the revised post-2001 program structure, by completing the following 10 compulsory Courses:

ATAX0100	Principles of Australian Taxation Law (or ATAX0101 Basic Tax Law and Process)
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	The Taxation of Companies Trusts and Partnerships
ATAX0116	Critical Perspectives and Ethics
ATAX0117	Tax Accounting Systems
ATAX0123	Principles of Goods and Services Tax Law

OR

- Complete their studies under the pre-2001 program structure, but may undertake ATAX0123 Principles of GST Law in substitution for ATAX0110 Accounting 2 (formerly known as Contemporary Accounting Practice)

OR

- In the case of a student who has already completed ATAX0110 Accounting 2 (formerly known as Contemporary Accounting Practice), another Course to be identified by the Board of Studies in Taxation, on application to the Graduate Diploma in Taxation Studies Convenor.

Exemptions 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 form SA25 Course Exemptions/Advanced Standing must be used. Such applications must be accompanied by documentary evidence which supports the application and allows each case to be considered on its own merits. Note that faxed documents will not be acceptable – certified copies of documents (as appropriate) will be required.

Students claiming exemptions should not adopt a 'shotgun' approach in claiming exemption for Courses with a remotely similar title or content to something already studied. A focused and well documented case will facilitate the process of evaluating the claim for exemption in particular instances.

Students who have queries on any aspect of exemptions/advanced standing should contact the Associate Director (Student Affairs).

General Policy

1. Exemption may be granted for Courses which have already received credit for another degree or qualification.

2. Applicants who are successful in gaining admission can apply for Course exemptions after receipt of their University acceptance. An exemptions claim form Course Exemptions/Advanced Standing is included in the Student Information Booklet.

3. Exemptions are granted by the Board of Studies in Taxation. The claims for exemptions are administered by the relevant Course Authorities.

4. The Faculty of Commerce and Economics does not normally take into account Courses completed more than 5 to 7 years before the application. A flexible policy is applied to Taxation and Law Courses. Where there has been extensive change in the law in a particular area since completion, exemption will not be granted.

5. Applications must be made on the appropriate form and supported by relevant documentary evidence. Documentary evidence should include:

- relevant transcripts of results
- Course syllabi or evidence of content
- in the case of overseas qualifications, evidence that the Courses completed are equivalent to the standard and content of the elected program in which the applicants have successfully gained admission.

Specific Policy for the Graduate Diploma in Taxation Studies

1. The Board of Studies in Taxation has determined that in no case shall a student gain a Graduate Diploma in Taxation Studies by completing less than eight Courses.

2. Where a student is granted three or more credits for Courses completed as part of the work for other degrees (whether granted credit for another degree or not), the student shall enjoy two exemptions and, in lieu of the remaining Courses shall be permitted to choose additional Courses, as approved by the Board of Studies in Taxation, from a list of Bachelor of Taxation and Graduate Diploma in Advanced Taxation Courses.

3. Exemptions are granted only if Courses are of a standard and content equivalent to corresponding Courses in the ATAX Program. Course authorities do not normally grant exemption for Courses completed other than in Universities or Colleges of Advanced Education with high standing in the relevant area. In order to gain exemption, students will require a pass in Courses of equivalent standard to the relevant Courses in UNSW and with substantially the same content as relevant postgraduate Courses in the ATAX Program. While relevant to admission, the passing of TAFE Courses will not normally generate exemptions.

Non-Award (Single Course), Cross-Institutional and Cross-Group (Faculty) Enrolments

Introduction and Overview

The term *non-award enrolment* refers to all enrolments in Courses or a sequence of Courses, which do not lead to or count towards a formal award 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.

Four scenarios can be identified:

1 A **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 A **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 It may also be the case that a student from another Group (Faculty) of The University of New South Wales applies to study an ATAX Course. Written confirmation is required from the other Group to the effect the Course will be credited towards the award. This is described as **Cross-Group enrolment.**

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. In these circumstances UNSW students would not normally pay HECS or Tuition Fees to UNSW, but to the host institution. Students would, however, be charged the Miscellaneous Annual Fund Fee. Students would also 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. Forward your Enrolment Form to ATAX for processing (NB: you will probably have to complete enrolment procedures with your host institution also).

5. Pay fees as assessed by each institution. If you feel there is a discrepancy, contact the Student Services Office at ATAX in the first instance.

6. Forward a certified copy of results (from the Course studied at the host institution) to ATAX once the Course assessment has been finalised.

Cross-Group Enrolment Procedures

These are processed using the *Variation of Enrolment in Courses* form.

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. For instance, students must ascertain the availability of particular Courses and the Sessions in which they will be offered. Also arrangements as to collection of the Study Materials and associated support need to be communicated.

Students based in the Law School (Law Faculty) in UNSW are regarded as falling within these arrangements.

Tuition Fees for Postgraduate Students

Level of Fees and Basis of Calculation

Local Students other than employees of the Australian Taxation Office will be charged Tuition Fees for each Course. The prospective level of Tuition Fees for Local Students for 2002 is **$1,500** per Course. **International Students** are charged Tuition Fees of **$1,950** per Course.

Tuition Fees and ATO Students

Postgraduate students who are employed by the Australian Taxation Office are exempted from paying Tuition Fees pursuant to the Agreement between the Commonwealth and The University of New South Wales which established ATAX. Such students need to be approved to study by their manager. Any questions about study support and HECS exemption should in the first instance be addressed to the manager or to the relevant business line study support contact officer.
Only the Miscellaneous Annual Fund Fee should be charged to ATO students.

For this purpose it is vitally important *students leaving or joining the ATO notify ATAX immediately.* The ***Enrolment Form*** completed each year will confirm status. It is also a requirement that students who are ATO employees provide their AGS number for verification. The ***Student Data Sheet*** for Session 2 enrolment confirmation should also be used to confirm continuing employment status.

Non-Award and Cross-Institutional Enrolments: Special Provisions

Voluntary Course Enrolments

Tuition Fees of $1,500 per Course are levied for Voluntary Course Enrolments for Non-ATO students. These are set by the Management Committee and are revised annually. Voluntary Course enrolments do not attract HECS liability. Applicants who are employed by the Australian Taxation Office may be exempted from paying Tuition Fees pursuant to the Agreement between the Commonwealth and The University of New South Wales which established ATAX, providing this study is approved by their manager. Any questions about study support and Tuition Fees exemption should in the first instance be addressed to the manager or to the relevant business line study support contact officer.

Cross-Institutional Enrolments

Cross-institutional students will incur a HECS liability for their enrolment, *except* where such students are permitted to enrol in a Course for which a Tuition Fee is charged, they will be required to pay the Tuition Fee in lieu of a charge under HECS.

Where an ATAX student wishes to enrol in a Course at another institution for credit towards their UNSW award, UNSW students would not normally pay HECS or Tuition Fees to UNSW, but to the host institution. Students would, however, be charged the Miscellaneous Annual Fund Fee. If you feel there is a discrepancy contact Student Services Office at ATAX on (02) 9385 9333 in the first instance.

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 by Medical Research and Health Care. The finances in Tertiary Education, Bio-Medical, 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 post-graduate 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

Contents

Faculty Information and Assistance

Some people who can help 151
Course Descriptions 151
The Faculty 151
Goals of the Faculty 151
Committees of the Faculty 151

Schools of the Faculty

Community Medicine, Health Services Management and Medical Education 151
Medical Sciences 151
Women's and Children's Health 151
Psychiatry 151

Clinical Schools

St George Clinical School 152
St Vincent's Clinical School 152
South Western Sydney Clinical School 152
The Prince Henry/Prince of Wales Clinical School 152
School of Rural Health 152

Faculty Units, Centres and Affiliated Institutes

The Ray Williams Biomedical Mass Spectrometry Facility 152
The Centre for Health Informatics 152
The Centre for Public Health 152
The Centre for Thrombosis and Vascular Research 152
Children's Cancer Institute Australia for Medical Research 152
Garvan Institute of Medical Research 152
Medical Illustration Unit 153
National Centre in HIV Epidemiology and Clinical Research 153
National Perinatal Statistics Unit (Australian Institute of Health and Welfare) 153
National Drug and Alcohol Research Centre 153
Prince of Wales Medical Research Institute 153
The Simpson Centre for Health Service Innovation 153
Skin and Cancer Foundation 153
Victor Chang Cardiac Research Institute 153

Admission into Faculty of Medicine

Admission into Coursework Programs 153
Admission into Research Programs – Doctor of Philosophy, Masters 154
Admission into Research programs - Doctor of Medicine, Masters of Surgery 154
Postgraduate Enrolment Procedures 154
Advice to Students on Computing Requirements 154
Criminal Record Checks 154
Immunisation for Medical Students 154

Program and Course Information

Postgraduate Programs

School of Community Medicine, Health Services Management and Medical Education 155
School of Women's and Children's Health 161
School of Medical Sciences 161
Higher Degrees 164

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
Bernadette Walker
Administrative Office, Postgraduate Student Programs
Office of the Dean
Faculty of Medicine
Tel: (02) 9385 2457
Fax: (02) 9385 1874
E-mail: bernadette.walker@unsw.edu.au

General Enquiries

Office of Dean
Faculty of Medicine
Tel: (02) 9385 8765
Fax: (02) 9385 1874
E-mail: info@notes.med.unsw.edu.au.
Webpage: http://www.med.unsw.edu.au.

Course Descriptions

Course descriptions offered in 2002 can be found in alphabetical order by the course code at the back of this handbook. For full list of courses offered by the University contact New South Student or 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, listed below, some of which perform administrative tasks, while many assist in maintaining a constant review of the curriculum and the objectives of medical education.

Schools in the Faculty of Medicine are Anatomy, Community Medicine, Health Services Management and Medical Education, Women's and Children's Health, Pathology, Physiology and Pharmacology, Psychiatry and Clinical Schools at Greater Murray, the Prince Henry/Prince of Wales Hospitals, St George Hospital, St Vincent's Hospital and South Western Sydney. Each of these Clinical Schools contains Departments of Medicine, Surgery, and Anaesthetics, Emergency Medicine and Intensive Care. The Faculty is supported in its operations by the Centres for Immunology, Health Informatics, National Drug and Alcohol Research, Public Health, Simpson Centre for Health Service Innovation, Thrombosis and Vascular Research as well as the Ray Williams Mass Spectrometry Facility, the Medical Illustration Unit, the National Perinatal Statistics Unit, the Rural Health Unit and the National Centre in HIV Epidemiology and Clinical Research. The Faculty is also affiliated with the Garvan Institute of Medical Research at St Vincent's Hospital, the Prince of Wales Medical Research Institute at the Prince of Wales Hospital, the Children's Cancer Institute Australia for Medical Research at the Sydney Children's Hospital, the Victor Chang Cardiac Research Institute, and the Skin and Cancer Foundation.

Goals of the Faculty

The current major goals for the Faculty are to excel in the quality of the undergraduate teaching and the postgraduate research and teaching.

Committees of the Faculty

Faculty Board
Faculty Standing Committee
Higher Degree Committee
Medical Admissions and Re-enrolment Committee
Medical Education Committee
Pre-clinical Medical Education Sub-Committee
Clinical Medical Education Sub-Committee
Assessment Review Group
Research Management Committee
Research Resources Sub-Committee
Research Student Sub-Committee
BSc (Med) Hons Committee
Rural Health Education Committee
Medical Program Evaluation Committee
Hospital Boards of Medical Studies
Biomedical Library Advisory Committee
Teaching Hospital Library Advisory Committee
UNSW Oncology Advisory Committee
Faculty Academic Promotions Committees
Centre for Immunology Advisory Committee
National Centre in HIV Epidemiology and Clinical Research Management Committee
Centre for Public Health Management Committee
Children's Cancer Research Institute Advisory Committee
National Drug and Alcohol Research Centre Board of Management
National Perinatal Statistics Unit Management Committee
Curriculum Development Committee

Schools of the Faculty

School of Community Medicine, Health Services Management and Medical Education

This newly merged School brings together the research and teaching resources of the School's of Community Medicine, Health Services Management and Medical Education under the Faculty of Medicine. Established in January 2001 the School now has a greater depth of expertise in a number of areas. While encompassing a broad range of interests the School's have demonstrated a history of collaboration through ventures such as the Centre for Public Health and through natural synergies in both the teaching and research programs.

School of Medical Sciences

This newly merged School brings together the research and teaching resources of the School's of Anatomy, Pathology and Physiology & Pharmacology. The school enjoys a reputation as one of Australia's leading medical and research facilities. The School's outstanding reputation for academic excellence is testimony to the dynamic and highly productive academic culture. Links with other institutes ensure the School's position at the forefront of international and national research efforts.

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 co-located at the Sydney Children's Hospital and The Royal Hospital for Women, which are adjacent to the campus of The University of New South Wales. The School has links with other teaching hospitals of the University as well as with community centres in Sydney, 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 University's teaching hospitals at Prince Henry/Prince of Wales, St Vincent's, St George and Liverpool. The Foundation Professor of Psychiatry, Leslie Kiloh established a strong research presence within the school at its inception more than thirty years ago. His interests in biological psychiatry, neuropsychiatry and in sub-typing the depressive disorders remain important research interest. Senior academic staff in the School also have interests in anxiety and depressive disorders, neuropsychiatry, psychogeriatrics, child and adolescent psychiatry, psychopharmacology, schizophrenia, liaison psychiatry, post-natal disorders, community psychiatry, psycho-immunology, social psychiatry, and epidemiology and psychiatry in primary practice.

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 research.

St. Vincent's Clinical School

St. Vincent's Clinical School is part of the integrated campus of the Sisters of Charity, which comprises St Vincent's Private Hospital, the Garvan Institute of Medical Research, the Victor Chang Cardiac Research Institute and St Vincent's Clinic and the Centre for Immunology. St Vincent's Hospital is an acute general hospital with highly developed specialist units in adult medicine and surgery and diagnostic services. The Hospital provides referral services for New South Wales and Australia and services for the local community. Specialty services at the Hospital include cardiac transplantation, bone marrow transplantation, a Cancer Care Centre which provides an integrated approach to the management of malignancy and a comprehensive AIDS service and a specialist Palliative Care Institute (Sacred Heart Hospice). Sophisticated diagnostic departments, which include radiology, all branches of pathology and nuclear medicine, support the clinicians of the Hospital. Extensive primary and secondary services are also provided to meet the needs of the local community and these include medical, surgical, geriatric and drug and alcohol services. Research is undertaken in the Garvan Institute of Medical Research, Professorial Departments, the Department of Clinical Pharmacology and the Anxiety Disorders Unit.

The South Western Sydney Clinical School

The South Western Sydney Clinical School opened in 1990 and is centred at Liverpool hospital, the tertiary referral hospital for Sydney's fastest growing areae of population. The School has access to hospital and community health centres serving approximately three-quarters of a million people living in the south west of Sydney. The Clinical School has a presence in the fields of adolescent and mental health, medicine, surgery, obstetrics, pathology and microbiology, community paediatrics, anaesthetics and intensive care, community medicine, general practice, public health, health promotion, rehabilitation, geriatrics, drug and alcohol services, epidemiology and nursing research.

The Prince Henry/Prince of Wales Clinical School

The Prince Henry/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 Henry/Prince of Wales Hospitals 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 established by the University of New South Wales and is funded by the Commonwealth Department of Health and Aged Care. It consists of the Divisions of Greater Murray and Mid North Coast. The School aims to provide a community-based learning environment, offering diversified educational experiences in rural health and medical practices, whilst also serving to provide an active, supportive medical academic environment.

Faculty Units, Centres and Affiliated Institutes

The Ray Williams Biomedical Mass Spectrometry Facility

The Ray Williams Biomedical Mass Spectrometry Facility (RWBMSF) is a UNSW beach-head facility providing research support to investigators on this campus and affiliated teaching hospitals. The RWBMSF is a major facility for molecular characterisation for the faculties of Medicine and Life Sciences, 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 RWBMSF was evaluated as a major research facility following a recent survey commissioned by the Commonwealth Department of Industry, Science and Resources. The RWBMSF is both a research and research-support facility engaged in several areas of study. The RWBMSF has developed several approaches to monitoring damage, repair and the cellular changes associated with aging and inflammatory disease and these are applied to a diverse array of research projects.

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. CHI focuses on four core research themes: Evidence-based Decision Support, Clinical Communications, Evaluation and Home Telecare:

- Evidence-based Decision Support examines methods and technologies for providing clinicians with up-to-date information on-line.
- Clinical Communications seeks to understand how information is disseminated, and how communication, and communication pathways, may be improved.
- The Informatics Evaluation Group (IEG) offers evaluation services for information and communication technology projects in health
- Home Telecare develops ways to monitor patients in their home, with information passed to their primary care giver.

The Centre for Public Health

The Centre for Public Health was established in 1988 to bring together multi-disciplinary resources to conduct educational programs and undertake research in public health. The three Schools of Community Medicine, Health Services Management and Medical Education formally merged in 2000 to create a school provisionally entitled The School of Public Health and Community Medicine. The Centre is also a partner in the Sydney Public Health Consortium with the Department of Public Health and Community Medicine at the University of Sydney, where candidates may undertake cross institutional enrolment in courses.

The Centre for Thrombosis and Vascular Research

The Centre for Thrombosis and Vascular Research was formed in 1992 with the purpose of bringing together scientists and physicians based in the Prince Henry/Prince of Wales Hospitals Group, whose research and clinical practice was focused on the causation and treatment of the blockage of blood vessels. The majority of heart attacks, strokes and gangrene of the legs are brought about by blockage of the arteries supplying respectively, the heart muscle, the brain and the lower limbs. Despite real advances these processes still account for a massive cost in premature death and suffering.

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 1984 and occupies a four-storey complex at the southern end of the Sydney Children's Hospital. Our staff work in close collaboration with members of the Division of Haematology/Oncology in the Hospital. With a staff of over 50, including honours and postgraduate scholars of the University, the Institute undertakes laboratory research on malignant disease in children. Research work is organised into five programs: experimental therapeutics, molecular diagnostics, molecular carcinogenesis, leukaemia biology and stem cell biology. The focus of the Institute involves investigation into the nature, origin, cause and treatment of childhood cancers (particularly leukaemia and neuroblastoma) making this facility the only one of its type in Australia.

Garvan Institute of Medical Research

The Garvan Institute of Medical Research has a staff of 200 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 a Centre grant 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.

Medical Illustration Unit

Located in the Edmund Blacket Building at the Prince of Wales Hospital, the Medical Illustration Unit (MIU) provides centralised photography, graphics and digital imaging services to the Faculty of Medicine and its teaching hospitals.

The Unit incorporates well-equipped facilities for clinical, scientific and general photography in the studio or location, operates a high-resolution computer slide imaging service and a large-format printing facility for scientific posters.

MIU's eight staff annually produce around 60,000 slides, prints and digitised images for lectures and publications, 1,000 items of finished artwork and 300 scientific posters, thereby supporting the teaching, research and patient care commitments of the Faculty and its hospitals.

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.

National Perinatal Statistics Unit (Australian Institute of Health and Welfare)

The National Perinatal Statistics Unit is a collaborating unit of the Australian Institute of Health and Welfare within the Faculty of Medicine of the University of New South Wales. Located on the Prince of Wales Hospital Campus, the Unit is linked with the School of Paediatrics, Sydney Children's Hospital and other groups in the Faculty. The Unit collaborates with State and Territory perinatal groups and various professional groups in developing national perinatal data systems. The Unit's objectives are to monitor and interpret national perinatal mortality and morbidity; to provide a limited perinatal epidemiology service; and to conduct epidemiological research.

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 Community Medicine and Psychology in the University, with collaborating 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 the largest aggregate of research nationally on the functions and disorders of the brain and nervous system. It has a staff of 80, including six at professor or associate professor level, and attracts almost $3m p.a. in peer-reviewed funding. Major lines of research include human sensation, balance and movement; autonomic nervous system; neuro-pathology; and clinical neurophysiology, nerve and spinal cord injury, pain.

The Simpson Centre for Health Service Innovation

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 to link with community based health care delivery. The principal objectives of the Simpson Centre are to: innovate, evaluate research and develop health service systems; disseminate research results and facilitate implementation of validated service innovation. This approach also incorporates examination of cultural and psychosocial factors influencing service delivery and utilisation.

Skin and Cancer Foundation

The Skin and Cancer Foundation was established in 1978 and is affiliated with St. Vincent's Hospital. The Foundation has four 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 is active in community education relevant to skin disease. It has also established a second clinical and teaching facility at Westmead.

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 New South Wales 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.

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 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 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 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 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 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. 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 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. 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.

(a) Candidates with an Honours degree (at least class 2 division 1) in a relevant discipline, or with an MBBS 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. However, first authorship on a publication is not an absolute prerequisite and the eligibility of all such candidates is determined on a case-by-case basis.

(c) Candidates with an MBBS or other medical degree from another country need to demonstrate outstanding academic performance, relevant experience or other qualifications. Enrolment in a qualifying program may be recommended and those applying for a PhD may be advised to enrol for an MSc, with later upgrade to a PhD if appropriate. Direct enrolment for a PhD may be approved on the basis of strong support from the proposed supervisor and the relevant Head of School.

(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. However, exemption from a qualifying program and direct enrolment for a Masters by research may be approved on the basis of evidence of the candidate's capacity to make an intellectual contribution to research. Uncommonly, direct enrolment for a PhD may be approved on the basis of strong support from the proposed supervisor and the relevant Head of School.

(e) Authority to admit to a research program is delegated to the Head of School (or the Postgraduate Co-ordinator of the School as nominee), the Faculty Co-ordinator of Postgraduate Studies, and the Registrar for:

(i) admission to a Masters by research or to a PhD, for candidates with an Honours degree (at least class 2 division 1) in a relevant discipline, or with an MBBS from an Australian or New Zealand university, or who have completed a qualifying program previously approved by the Faculty of Medicine Higher Degree Committee

(ii) admission to a Masters by research, for candidates with an MBBS or other medical degree from another country

(iii) admission to a PhD, for candidates who have completed a relevant Masters degree that includes a significant research component.

Admission to Research Programs – Doctor of Medicine, Masters of Surgery

For detailed information about individual programs, please refer to the section on Conditions for the Award of Degrees.

The requirements as listed in this handbook are strictly enforced. For candidates with an MBBS from an Australian or New Zealand university, authority to admit to an MD is delegated to the Head of School (or the Postgraduate Co-ordinator of the School as nominee), the Faculty Co-ordinator of Postgraduate Studies, and the Registrar.

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]

As computers remain expensive items, UNSW will provide limited on-campus computer facilities that meet these standards for students who are unable to obtain access to off-campus access to such resources.

[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.

Criminal Record Checks

The NSW Department of Health has a duty of care to all patients and clients receiving services from NSW Health. To meet this duty it has been determined that criminal record checks will be carried out on all persons, including university staff and students, who require access to facilities operated by the Department of Health. Staff within the NSW Department of Health will conduct the checks and all information will be held confidentially by it.

Criminal record checks are completed at enrolment. The NSW Department of Health will provide a Clearance letter, which will cover students for the duration of their program. For further information please consult the appropriate Course Co-ordinator or the Postgraduate Administrative Officer, Office of the Dean.

Immunisation for Medical Students

The Faculty's policy on the immunisation of medical students is as follows:

All students should be aware of their immunity or lack of immunity to common infectious diseases which they will encounter during clinical training and later in practice. Students without a history of past illness or immunisation will be at risk of acquiring certain infections and subsequently at risk of transmitting those infections to patients.

In the absence of a reliable history of immunity, students are advised to be immunised against the following infections: rubella, measles, mumps, hepatitis B (HBV) and tuberculosis (TB). A personal history of mumps, HBV and TB or a history of past immunisation against rubella, measles, mumps and HBV are reliable in predicting immunity. It is not necessary to have pre-immunisation antibody testing performed if you are uncertain of your immunity. Skin testing (Mantoux test) for TB should be performed before immunisation for TB.

It is also advisable that students are aware of their immune status to chickenpox (varicella). A blood test for antibodies can be performed if there is not a personal history of chickenpox.

If students require any of the above immunisations, or are uncertain of their immune status, they should see their local general practitioner or, if preferred, may attend the UNSW Health Service. The UNSW Health Service is located on the ground floor of the East Wing of the Quadrangle Building.

The Office of the Dean can provide students with information on the names and locations of medically qualified staff of the Faculty with appropriate expertise in infectious diseases who have agreed to be available to offer confidential advice on these matters, but students may prefer to consult their own medical practitioner or other medical adviser.

It is strongly recommended that documentation of past illnesses, immunisation history and results of blood test be kept for future reference. A form is available from the Office of the Dean for this purpose. It is advisable that the information on this form be verified by students' own doctors or the UNSW Health Service. Students who object to being tested or immunised should discuss their objections with their doctor.

The Medical Board of NSW has determined that while mandatory testing for Human Immunodeficiency Virus (HIV) and HBV is not required, any medical practitioner or student has a professional responsibility to take appropriate steps to know that his/her HIV and HBV status is negative before undertaking an 'exposure-prone procedure'.

Such procedures are characterised by the potential for direct contact between the skin of the health care worker and sharp surgical instruments, needles or sharp tissues (spicules of bone or teeth) in body cavities or in poorly visualised or confined body sites (including the mouth).

Matters relating to infectious diseases are constantly under review and the Faculty policy may be amended as the policies of the NSW Health Department or Medical Board or other relevant government bodies change.

Students who are infected with any blood-borne infections (ie. HIV, HBV or Hepatitis C) should seek advice on their future professional development. A medical practitioner infected with HIV and/or HBV who is not impaired may be able to continue to practice medicine that does not involve exposure-prone procedures.

Medical practitioners who knowingly do not take appropriate measures to reduce their risk of transmitting infections may be liable to charges of professional misconduct if they are responsible for transmitting an infection. Students and medical practitioners in this position may be vulnerable to legal action.

Students should be aware that this policy is being reviewed at the time of print. Any significant changes will be communicated to students and staff in relevant schools.

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 (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 (GradDipPaed)
Graduate Diploma in Public Health (GradDipPH)
Graduate Diploma in Sports Medicine (GradDipSpMed)

Graduate Certificates

Graduate Certificate in Clinical Education (GradCertClinEd)
Graduate Certificate in Drug Development (GradCertDD)
Graduate Certificate in Geriatric Medicine (GradCertGeri)
Graduate Certificate in Health Services Management (GradCertHSM)
Graduate Certificate in Public Health (GradCertPH)
Graduate Certificate in Sports Medicine (GradCertSpMed)

Full details of the conditions of the award of research degrees are shown in this handbook under Conditions for the Award of Higher 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

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. Generally, candidates must have at least three years' experience of surgical training and there should be a lapse of five years before the thesis is submitted from the date of the award of the undergraduate medical degree.

Other research degrees are offered by Schools of the Faculty.

School of Community Medicine, Health Services Management and Medical Education

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
- Masters 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
- Graduate Certificate in Higher Education
- Graduate Diploma in Higher Education
- Master in Higher Education
- Master of Public Health, by Coursework and by Research
- Graduate Diploma of Public Health
- Graduate Certificate of Public Health

9025 Master of Medicine in Geriatrics by Coursework

MMed

The Master of Medicine (Geriatrics) program is designed for medical practitioners who wish to upgrade their skills and knowledge in the area of aged care medicine and who have at least one year of clinical experience. Candidates require basic computer skills. The program is offered by means of a distance/flexible education package. In order to undertake the program, 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 one day seminar (non-compulsory) held in association with the biomedical library, UNSW. During this seminar, students will learn the necessary skills to use the Internet effectively, and to access a number of medical databases, on-line medical journals and document delivery systems.

The Master of Medicine (Geriatrics) degree requires completion of one year full-time coursework, plus a further six months for a major project and supervised clinical experience. The degree 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 liase 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**

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 1 year of clinical experience.

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 program is offered by means of a distance education package. In order to undertake the program, 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 one day seminar (non-compulsory) held in association with the biomedical library, UNSW. During this seminar, candidates will learn the necessary skills to use the Internet effectively, and to access a number of medical data bases, on-line medical journals and document delivery systems.

The bulk of the coursework is supplied to candidates, by mail, in printed form. Some courses have an accompanying CD-ROM. Students liase 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**

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 (Geriatrics) by coursework.

7364 Graduate Certificate in Geriatric Medicine

GradCert

Prerequisites: MB BS (or equivalent) and 1 year of clinical experience. Candidates require basic computer skills.

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 program is offered by means of a distance education package. In order to undertake the program, 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 one day seminar (non-compulsory) held in association with the biomedical librarians, UNSW. During this seminar, candidates will learn the necessary skills to use the Internet effectively, and to access a number of medical data bases, on-line medical journals and document delivery systems.

The bulk of the coursework is supplied to candidates, by mail, in printed form. Some courses have an accompanying CD-ROM. Students liase 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**

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 Certificate in Geriatric Medicine are eligible to undertake further study for the Graduate Diploma in Geriatric Medicine or the Master of Medicine (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 Studies Co-ordinator, Dr Mary-Louise McLaws, Tel: (02) 9385 2591, e-mail: m.mclaws@unsw.edu.au.

8900 Master of Health Administration by Formal Course Work

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 (eg 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. Exceptions can only be granted by the relevant Director of Graduate Programs 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 Head of the School of Health Services Management (or nominee) from graduate courses offered within the University or by another tertiary institution. The approval of the relevant Director of Graduate Programs is required to undertake an elective offered outside the School of Health Services Management. Requests for exemption and substitution for previous postgraduate courses taken will be considered subject to approval of the relevant 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 (eg Health Policy and Management) and/or can take elective courses 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. Exceptions 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
HEAL9371	Research and Evaluation Methods	4
HEAL9381	Policy Studies	4
HEAL9811	Sociology, Ethics and Health	4
MEED9010	Community Development	4
MEED9108	Program Evaluation and Planned Change	4
MEED9111	The Consultation Process	4
MEED9140	Project Design Monitoring in International Health	4

8404 Master of Commerce – Health Informatics

MCom

A joint program between the School of Health Services Management and the School of Information Systems, Technology and Management in the Faculty of Commerce. This special program leads to the award of a Master of Commerce with a stream in Health Informatics. Further details are available from Dr Connie Wilson 61 2 9385 5283, or email: SISTM@unsw.edu.au, web www.fce.unsw.edu.au.

The convergence of information and telecommunications technologies has ushered in the era of digital information management. The use of intranets, extranets and proprietary information sources has transformed the work of many professional groups. The work of practitioners in many areas has become increasingly information dependent, and the provision of timely, accurate, up-to-date and authoritative information to the desktop is now the expectation. In addition the work practices of these professional groups has become more flexible as practitioners/professionals are increasingly mobile but still require access to information and technology. Arising from this change is the development of a new kind of professional, the Information Management and Technology Specialist. This person combines knowledge of information systems and technology with knowledge of information sources and management. They have an understanding of technology developments and the issues of managing information systems, but more importantly they have the skills and knowledge to create, acquire, maintain and disseminate appropriate information to support operational processes of the organisation.

Health Informatics is concerned with the development, dissemination and use of information in the field of health care. This stream in the Master of Commerce program is aimed at providing Information Management and Technology professionals with a program that will

prepare them for work within the health care environment. Issues covered will include: problems of classification that are inherent in establishing more financially driven and output-oriented approaches to service delivery; identifying and developing systems for more evidenced based and outcomes approaches to service delivery; involving clinicians in information systems development and implementation particularly with respect to casemix applications and clinical pathways.

Compulsory Core Subjects

INFS5988	Business Information Systems
ACCT5901	Accounting: A User Perspective
ECON5103	Business Economics
ECON5203	Statistics for Business

In addition to the four Master of Commerce core subjects listed above, students must complete:

INFS5992	Data Management
IMGT5430	Health Sciences Information: Sources,Retrieval and Issues
HEAL9041	Health Care Systems

Plus five units from:

INFS5848	Information Systems Project Management
INFS5953	Information Systems Management
INFS5983	Business Data Communication
INFS5989	Information Systems Design
IMGT5110	Information Retrieval Systems
IMGT5120	Intellectional Organisation of Information and Records
IMGT5550	Advanced Information Retrieval Systems
ACCT5933	Issues in Public Sector Financial Administration
ACCT5988	Innovative Organisations
HEAL9301	Health Services Planning 1
HEAL9351	Health Economics 1
HEAL9381	Policy Studies
HEAL9391	Health Services Strategic Management and Planning
HEAL9421	Public Health and Epidemiology
HEAL9442	Health Resources Planning and Development
HEAL9711	Management of Organisations
HEAL9744	Casemix Accounting and Funding

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 Masters degree.

The Graduate Certificate program may be taken on a full-time or part-time basis, internal or external basis (including compulsory residential schools). External Studies are not generally offered to students resident in the Sydney metropolitan region. 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 Health Services Management.

For candidates interested in particular streams the following are offered:

Casemix		**UOC**
HEAL9743	Introduction to Casemix	4
HEAL9744	Casemix Accounting and Funding	4
HEAL9748	Clinical Governance	6
HEAL9911/ HEAL9921	Projects	6

Clinical Management		**UOC**
HEAL9091	Health Care Economics and Financial Management	4
HEAL9747	Clinical Work Process Control	6
HEAL9748	Clinical Governance	6
HEAL9781	Evidence Based Clinical Management	4

Facilities Planning		**UOC**
HEAL9361	Physical Planning and Design	4
HEAL9442	Health Resources Planning and Development	6
HEAL9471	Comparative Health Care Systems	6
HEALXXXX	Free Elective	4

Health Outcomes Measurement and Improvement		**UOC**
HEAL9121	Measurement of Quality of Life, Health Status and Patient Satisfaction	4
HEAL9781	Evidence-based Clinical Management	4
HEAL9974	Project	12

Hospital Epidemiology for Infection Control		**UOC**
HEAL9011	Statistics and Epidemiology	6
HEAL9411	Epidemiology	4
HEAL9412	Project-Clinical Practices in Infection Control	4
HEAL9921	Project-Recent Developments and Trends in Infection Control	4

Social Determinants of Health **UOC**

A minimum of five subject or equivalent to 20 units of credit from the following key disciplines:

PAED8103	Child Health Services	4
MEED9010	Community Development	4
MEED9136	Culture, Health and Illness	4
CMED9519	Demography	4
HEAL9041	Health Care Systems	6
MEED9012	Health Promotion	4
CMED9626	Inequalities and Health	4
MEED9013	Influencing Health Beliefs and Behaviours	4
CMED9515	Introduction to Public Health	4
MEED9129	Primary health Care Issues	4
MEED9120	Qualitative Research Methods	4
HEAL9811	Sociology, Ethics and Health	4

Strategy and Change		**UOC**
HEAL9108	Program Evaluation and Planned Change	4
HEAL9111	The Consultation Process	4
HEAL9391	Health Services Strategic Management and Planning	4
HEAL9741	Management of Health Services	4
HEAL9921	Project	4

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 School Admission 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 practicing 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 action 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
MEED9313	Planning Educational Programs*	4
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

* due to the similarity of content students can take only one of these courses

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

GradCertClinEd

The Graduate Certificate program aims to provide a multidisciplinary program of study of clinical education for practicing 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 Graduated 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
MEED9313	Planning Educational Programs	4
MEED9314	The Ward (or office) as a Social and Learning Environment	4
Total		**20**

7375 Graduate Certificate in University Learning and Teaching

GradCertULT

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.

8911 Master in Higher Education

MHEd

This program is aimed at teachers who wish to increase their understanding of student learning in higher education and improve their own teaching through development of their professional expertise.

Study in this program can help you to:

- Help your students by teaching effectively
- Increase research productivity by publishing on teaching
- Respond to pressures to improve teaching quality
- Improve your career prospects

Substantial flexibility in the approach to study, projects and assessment enables the program to cater for a diversity of clientele. It can meet basic training and support needs of staff in their early years after appointment as well as the need for professional refreshment and intellectual stimulation on the part of more experienced staff. A common curriculum is offered regardless of the subject disciplines taught, but disciplinary specialisation is encouraged in choice of project work and of readings undertaken.

Rigorous study of the latest in research and theoretical perspectives on the processes of teaching and learning in higher education characterises every course. Each is designed to focus attention, within boundaries set by the course's description, on practical issues that will result in the improvement of teaching and learning in students' own classes and within their teaching departments.

Completion of the program offers an outstanding means to demonstrate commitment to and improvement of teaching – for tenure, promotion and other career purposes.

Applicants should be qualified for employment in a teaching capacity in higher education in any discipline. It is highly desirable that participants have at least part-time employment as assessment tasks are normally based on participants' own teaching.

The degree of Master of Higher Education will be awarded after satisfactory completion of a program of advanced study of 64 units of credit which includes submission of a satisfactory major project.

The program articulates with the Graduate Diploma in Higher Education (GradDipHEd 5561) and the Graduate Certificate in Higher Education (GradCertHEd 7300). Credit for courses completed as part of the GradDipHEd and the GradCertHEd may be transferred to the Master's program.

Courses to be offered within the higher education programs are:

PDCS1002	Communication and Knowledge	8
PDCS2001	Designing and Developing Curricula	8
PDCS2002	Assessment and Feedback	8
PDCS2005	Information Technology in Teaching and Learning	8
PDCS2006	Researching Educational Practice	8
PDCS2007	Professional Expertise	8

Subject to the discretion of the program coordinator, Masters level students may substitute up to two of their electives from appropriate courses at Masters level offered by other Schools, faculties or universities

5561Graduate Diploma in Higher Education

GradDipHEd

The Graduate Diploma will be awarded after satisfactory completion of two one-level courses (a total of 16 units of credit) plus two additional courses (a total of 32 units of credit).

7300 Graduate Certificate in Higher Education

GradCertHEd

The Graduate Certificate will be awarded after satisfactory completion of two one-level courses (a total of 16 units of credit).

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 degree in a health-related discipline and to have 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
Project	12 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 Master's 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	Introduction to Management and Policy for Public Health	4
#MEED9131	Formulating Academic Proposals and Projects	4
	Electives	20
	Project	12
	Total	**60**

Candidates who can demonstrate competence in preparation of academic proposals and projects may be granted exemption from this course, but will be required to substitute another elective.

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 the University of New South Wales, 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 2002:

		UOC
CMED9517	Advanced Biostatistics and Statistical Computing	4
*CMED9604	Alcohol and Other Drug Issues	4
CMED9513	Applied Epidemiology	4
*MEED9309	Assessing Clinical Performance	4
*CMED9627	Audit and Quality Assurance in Primary Care	8
CMED9518	Case Studies in Epidemiology	4
HEAL9748	Clinical Governance	4
*MEED9010	Community Development	4
HEAL9471	Comparative health care systems	4
*HEAL9501	Computing techniques for postgraduate students	4
*MEED9111	The Consultation Process	4
MEED9136	Culture, health and illness	4
*HEAL9661	Current Issues in Nursing	4
CMED9519	Demography	4
MEED9125	Designing Short Courses and Workshops	4
*CMED9612	Environmental Health	4
MEED9113	Evaluation of Instructors	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	Management of Work of Health Professionals	6
*HEAL9121	Measurement of Quality of Life, Health Status and Patient Satisfaction	4
*MEED9313	Planning Educational Programs	4
*HEAL9381	Policy Studies	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
*HEAL9371	Research & Evaluation Methods	4
*CMED9608	Rural Health	4
*HEAL9811	Sociology, Ethics and Health	4
*CMED9606	Women and Health	4
PAED8103	Child Health Services	4
PAED8104	The Effect of Social Adversity in Childhood	4
PAED8203	Infant Feeding and Nutrition 1	4
PAED8204	Infant Feeding and Nutrition 2	4
PAED9617	Community Paediatrics	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. Provisional topics for the project will be determined in consultation with an academic adviser early in the program, and refined in MEED9131 Formulating Academic Proposals and Projects.

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	Introduction to Management and Policy 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

GradDipPaed

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.

It must be noted that 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 of Paediatrics 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.

		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**

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 Medical Science in Drug Development delivered by Course work delivered by Distance Education
- Master of Science in Biopharmaceuticals (in conjunction with the School of Biotechnology) by Coursework or by Distance Education
- Master of Sports Medicine by course work delivered by Course work delivered by Distance Education
- Graduate Diploma in Drug Development by Distance Education
- Graduate Diploma Sports Medicine by Course work delivered by Distance Education
- Graduate Certificate in Drug Development by Distance Education
- Graduate Certificate in Sports Medicine by Course work delivered 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 compulsory courses.

6 units of credit will accrue from the completion of a Research Project and Report.

Completion is also required of a Sports Medicine Practicum requiring attendance at two 4 day clinical training weekends. For overseas students special arrangements will be made.

Satisfactory completion of a final clinical examination is also required.

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**

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 compulsory courses.

Other requirements will be the completion of a Sports Medicine Practicum requiring attendance at two 4 day clinical training weekends (for overseas students special arrangements will be made) and 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**

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 compulsory courses.

Other requirements will be the completion of a Sports Medicine Practicum requiring attendance at two 4 day clinical training weekends (for overseas students special arrangements will be made) and satisfactory completion of a final clinical examination.

Courses 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 Medicine Practicum	-
	Total	**24**

8049.1000 Master of Science in Biopharmaceuticals by coursework

MSc (Biopharmaceuticals)

This is an interdisciplinary program designed principally for postgraduates with backgrounds in either pharmacology or biotechnology who wish to obtain advanced training in both areas in ordzer 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 postgraduates 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 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.

Choice of units is dependent on the background of the student. Pharmacology Principles (PHPH5461) must be taken by students who have not completed an approved Pharmacology program, while Biotechnology Principles (BIOT7040) must be taken by students who have not completed an approved Biotechnology course program.

Course details are as follows:

		UOC
PHPH5461	Pharmacology Principles	
	or	12
BIOT7040	Biotechnology Principles	
PHPH5471	Advanced Pharmacology	12
BIOT7030	Advanced Biotechnology	12
PHPH5491	Advanced Pharmacology - Project	12
	Total	**48**

Pharmacology Principles (PHPH5461) must be taken by students who have not completed an approved Pharmacology course, while Biotechnology Principles (BIOT7040 must be taken by students who have not completed an approved Biotechnology course program. All students must pass Advanced Pharmacology (PHPH5471) and Advanced Biotechnology (BIOT7030).

Each individual program must be approved by the Higher Degree Committee of the Faculty of Applied Science and would comprise: (i) a major strand of related material comprising approximately 75% of the total program including a project comprising not less than 15% of the program (ii) a minor strand of broader based material comprising up to 25% of the total program.

8049.2000 Master of Science in Biopharmaceuticals by coursework Distance Education

MSc (Biopharmaceuticals)

The CRC for Biopharmaceutical Research has developed this strongly interdisciplinary Master of Science in Biopharmaceuticals course. The course teaches the scientific basis underscoring the development of recombinant biopharmaceuticals, combined with aspects of clinical trials, regulatory considerations, patent issues, and licensing. The program content is incorporated in 8 distance education modules comprised of written text and video/audio tapes containing course material, demonstrations and self-testing exercises. Access to the Course Co-ordinators will be by phone, fax, electronic mail and teleconferencing facilities.

The Master's Program can be completed in a minimum of 2 years. The minimum time option would entail the completion of two modules per session. These are offered concurrently. A maximum time for completion has been set at 8 years.

Modules consist of printed notes containing course material, readings, assessment questions and exercises. Some modules also include audio and video taped material so access to audio equipment is essential.

The Master's Program calls for the completion of 8 modules which is equivalent to 48 units of credit (exemptions may be allowed in exceptional circumstances).

There will be two tutorials per module. These will be conducted via a multiple telephone link and will be structured and interactive.

Each module will be assessed separately at module completion and a certificate awarded. The assessment of modules will be flexible and will be based on two pieces of submitted work. This may be in the form of written assignments or as a timed, faxed examination subject to university approval.

Course details are as follows:

		UOC
PHPH5501	Basic Principles of Drug Actions	6
PHPH5511	Selected Topics in Pharmacology	6
PHPH5521	Techniques for Drug Development	6
PHPH5531	Discovery and Development of New Medicines	6
BIOT7070	Production of Recombinant Products	6
BIOT7080	Principles of Fermentation and Downstream Processing	6
BIOT7090	Monoclonal Antibody Technology	6
BIOT7120	Regulatory Considerations, Patent Issues and Licensing	6
	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 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 200-250 pages of lecture notes plus 200-250 pages of attachments from the literature (relevant chapters from textbooks, published papers, etc., 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 pre-requisite 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 specialist in particular areas such as the discovery of new medicines, regulatory affairs, clinical trials, 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 students proceeding in the minimum time. In special cases, students may replace core courses with electives.

The structure of the Masters 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
Year 2		
Session 2		
Elective		6
Elective		6
Year 3		
Session 1		
Elective		6
Elective		6
Year 3		
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
PHPH9120	Clinical Development of Medicines	6
PHPH9121	Postmarketing Development of Medicines	6
PHPH9122	Quality Use of Medicines-Best Practice in Prescribing	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.

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
PHPH9120	Clinical Development of Medicines	6
PHPH9121	Postmarketing Development of Medicines	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.

Year 1		
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

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 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' if 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, save that 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' if 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 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 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 cosupervisor 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 lited 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 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.

(2) A candidate shall have had at least 3 years full-time experience in the practice of medicine and be currently so engaged.

(3) 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:

Fees

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

(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.

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 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 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 cosupervisor 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 lited 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 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' if 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.

(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 enrolled under (1) 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.

(5) A candidate enrolled under (2) 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

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 undertake, or have undertaken prior to enrolment for the degree, a broad postgraduate training in the principles and practice of surgery over a period of at least three full-time years of a kind acceptable to the Committee.

(5) 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.

(6) 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 cosupervisor at that institution.

(7) Either the original work embodied in the thesis or the broad postgraduate training in the principles and practice of surgery shall have been undertaken at the University or at one of its teaching hospitals.

(8) 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.

(9) 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 lited 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 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

Welcome to Science at UNSW

There has never been a more exciting time to undertake Science studies. Governments around the world are recognising the fundamental importance of Science for the health of their nation's economies in the future. This means that a starting point in Science will be the basis for a wide range of career opportunities, from those that involve hands-on technical or research activities, to those that use the skills and knowledge of Science training to work within a profession or to make management and investment decisions.

The distinctions that once existed between basic discovery Science, application of knowledge, development and use of technology and commercial implementation have all but disappeared. The integration of all of these aspects has always been a feature of Science@UNSW. As you explore the possibilities outlined in this handbook, I know that you will be impressed by the breadth of opportunities offered. A special feature is the flexibility of most Science programs which allow you to build a progression of courses that best support your career aspirations as an undergraduate, or your needs for advanced level training in specialised skills at a postgraduate level.

Material on Science programs in the handbook outlines the basic rules for different degree and diploma programs, and the courses available for study. However, it can only indicate the full range of possibilities. Schools of the Faculty are available to provide assistance on administrative matters, course selection and career directions, and to help you overcome any difficulties you may be encountering in your studies. You are encouraged to approach Faculty Staff to discuss your progress and any concerns you may have.

The staff of the Faculty of Science wish you every success in your studies at UNSW. We hope that the time you spend with us as valued members of the UNSW community will be happy, stimulating, productive and rewarding and that in future years you will look back on ' the UNSW experience' as one which set you on the path to fulfilling your career and lifestyle aspirations.

Dean
Faculty of Science

Faculty of Science

Contents

Faculty Information and Assistance

Postgraduate Study at UNSW 174
Admission Requirements 174
Course Descriptions 174
Enrolment procedures 174

Program and Course Information

Postgraduate Programs in Life Sciences 174

Graduate Certificate 175
School of Applied Bioscience 175
Department of Food Science and Technology 175
Graduate Diplomas 175
School of Applied Bioscience 175
Department of Biotechnology 175
Department of Food Science and Technology 175
School of Biochemistry and Molecular Genetics 176
School of Biological Science 176
School of Microbiology and Immunology 176
School of Psychology 176
Masters Degrees
Department of Biotechnology 176
Department of Food Science and Technology 178
Centre for Marine and Coastal Studies 179
School of Psychology 180

Postgraduate Programs in Science and Technology 182

Graduate Certificates 182
Faculty of Science 182
School of Chemistry 182
School of Optometry and Vision Science 183
School of Physics 183
School of Safety Science 183
Department of Aviation 184
Graduate Diplomas
Faculty of Science 185
School of Chemistry 185
School of Geography 185
School of Mathematics 186
School of Optometry and Vision Science 186
School of Physics 187
School of Safety Science 187
Department of Aviation 188
Masters Degrees
Faculty of Science 189
School of Chemistry 189
School of Geography 190
School of Geology 190
School of Materials Science and Engineering 191
School of Mathematics 191
School of Optometry and Vision Science 192
School of Physics 192
School of Safety Science 193
Department of Aviation 195
Institute of Environmental Studies 195
8619 Master of Environmental Management MEM 195
5499 Graduate Diploma in Environmental Management 195
7339 Graduate Certificate in Environmental Management 195
Higher Degrees 196
Doctor of Philosophy (PhD) 196
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)) 196
Master of Science by coursework (MSc) – Biotechnology/Biopharmaceuticals/Food Science and Technology 197
Master of Engineering (ME) and Master of Science (MSc) 197

Master of Engineering (ME), Master of Science (MSc) and Master of Surveying (MSurv) without supervision 198
Master of Science and Technology (MScTech) 198
Master of Optometry (MOptom) 199
Master of Psychology (Clinical) (MPsychol(Clin)), Master of Psychology (Forensic) (MPsychol(For)) and Master of Psychology (Organisational) (MPsychol(Org)) 199
Master of Safety Science (MSafetySc) 199
Master of Science (MSc), Master of Science (MSc) *without supervision* 200
Master of Statistics (MStats) 200
Graduate Diploma 200
Graduate Certificate 201
Graduate Diploma by Research 201

Faculty Information and Assistance

Postgraduate Study at UNSW

Coursework and research postgraduate programs in this section are divided into two main sections: Programs in Life Sciences and Programs in Science and Technology. All are programs offered within the Faculty of Science. Life Sciences programs incorporate the School of Applied Bioscience: Department of Biotechnology and Department of Food Science and Technology; School of Biochemistry and Molecular Genetics; School of Biological Science; School of Microbiology and Immunology; School of Psychology; and Centre for Marine and Coastal Studies. Science and Technology programs incorporate School of Chemistry; School of Geography; School of Geology; School of Materials Science and Engineering; School of Mathematics; School of Optometry; School of Physics; School of Safety Science; and Department of Aviation.

Admission Requirements

Graduates are advised to consult the Program Authority or Head of School or Department before making formal application for registration in any of the above programs.

For admission to all degree programs of Master (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 Research 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.

Course Descriptions

All course descriptions can be found in alphabetical order by the course code in the general section of this handbook. For a full list of courses offered by the University contact New South Student or www.student.unsw.edu.au

Enrolment Procedures

Students are advised to consult with the program authority or relevant school for enrolment information and procedures.

Program and Course Information

Postgraduate Programs in Life Sciences

Graduate Diplomas are offered in Biochemistry and Molecular Genetics (5345), Biotechnology (5015), Food Science and Technology (5020), Biological Science (5350), Microbiology and Immunology (5355) and Psychology (5330).

The award of Masters degree by coursework is offered in Psychology (8256 – Clinical; 8257 – Forensic; 8258 – Organisational). Coursework Masters programs are also available in Food Science and Technology (8033), Biotechnology (8048), Biopharmaceuticals (8049) and Marine Science (8265).

Programs leading to degrees of masters 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.

Higher Degree Qualifying Program

Students without a BSc Honours degree wishing to register as higher degree candidates must usually complete a qualifying program, admission to which is subject to the approval of the Faculty Higher Degree Committee.

Applicants must normally have a degree or diploma in an appropriate field of study from an approved university or institution, and in the case of a diploma, appropriate professional experience.

Undergraduates of this University may be admitted to the full-time or part-time Honours undergraduate program. Other applicants may be admitted to a full-time, part-time or external qualifying program. The duration of the qualifying program is a minimum of one year for full-time and two years for part-time or external students.

Content of Qualifying Program

The qualifying program consists of the whole of the usual program for the final Honours year of the undergraduate program, the following being the prescribed Level IV courses:

BIOC4318	Biochemistry Honours (Full-time)
BIOC4618	Biochemistry Honours (Part-time)
BIOC4428	Molecular Biology Honours (Full-time)
BIOC4629	Molecular Biology Honours (Part-time)
BIOS4517	Biological Science Honours (Full-time)
BIOS4527	Biological Science Honours (Part-time)
BIOT4073	Biotechnology Honours (Full-time)
BIOT4083	Biotechnology Honours (Part-time)
BSSM4103	Genetics Honours (Full-time)
BSSM4109	Genetics Honours (Part-time)
MICR4013	Microbiology and Immunology Honours (Full-time)
MICR4023	Microbiology and Immunology Honours (Part-time)
PSYC4053	Psychology 4A and PSYC4063 Psychology 4B

The qualifying program is graded in the usual way, and in appropriate cases the results are expressed as a grading equivalent to Honours.

Students undertaking a qualifying program in the Department of Food Science and Technology will enrol in Program 6138 Postgraduate Qualifying in Food Science and Technology and undertake such courses as approved by the Head of Department.

Alternative Qualifying Program

Applicants who cannot attend the University regularly for the above programs may be admitted as external qualifying students to a program similar to a standard Honours year. The following are the alternative qualifying programs:

BIOC6308	Biochemistry
BIOS9917	Biological Science
MICR6043	Microbiology
PSYC6000	Psychology

The results in alternative qualifying programs are graded *Pass* or *Fail* only.

Fees

Candidates enrolled in the Alternative Qualifying Program are exempt from student service fees.

Graduate Certificate

The Graduate Certificate Program is designed as a one session full-time or two sessions part-time period of study for graduates who wish to obtain specialised training in a particular area of life sciences.

School of Applied Bioscience

Department of Food Science and Technology

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 units of credit. Generally, this will require three courses, each 6 units of credit. 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 Department/School, those with less formal tertiary qualifications but with relevant work experience, may be admitted. Please refer to our website for further details (www.foodscience.unsw.edu.au).

Graduate Diplomas

The Graduate Diploma is designed as a one year full-time period of study and research in all Schools except Applied Bioscience. It is intended primarily as an advanced training program for graduates from overseas universities who wish to obtain specialised training in particular areas of life sciences. The expectation is that for suitably qualified students, the program would allow entrance to a higher degree program (MSc or PhD) provided suitable supervision and facilities were available. The program is also available to graduates of Australian universities who have not done an Honours program and who wish to pursue graduate study in a discipline other than that in which they obtained their first degree.

At the successful conclusion of the program the students would be provided with a Diploma Certificate showing their Higher Degree Qualifying status by the University and a statement of their proficiency from the relevant School.

Entrance for students for whom English is the second language would be dependent on achieving an adequate standard of written and spoken English.

The academic year for the University of New South Wales 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 be oriented prior to the commencement of formal teaching.

The Graduate Diplomas in Biotechnology and Food Technology are coursework programs that offer retraining for graduates of other disciplines.

Brief descriptions of the programs currently offered within Life Sciences follow.

School of Applied Bioscience

Comprises the Departments of Biotechnology and Food Science and Technology.

Department of Biotechnology

5015 Biotechnology Graduate Diploma Program
Full-time or Part-time

Graduate Diploma
GradDip

Staff Contact: Prof P Rogers

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 of the listed elective courses to meet the units of credit 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.

5015 Graduate Diploma in Biotechnology

Compulsory courses		**UOC**
BIOT5013	Practical Biotechnology	12

Elective courses		**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

Combinations of Compulsory and Elective courses to be 36 units of credit.

Graduate Certificate in Biotechnology

The Department of Biotechnology offers a Graduate Certificate qualification which will be awarded on the successful completion of postgraduate courses totalling 18 units of credit.

The Graduate Certificate enables students with a related science degree to gain specific knowledge in areas of biotechnology.

Department of Food Science and Technology

5020 Food Technology Graduate Diploma Program
Full time or Part time

Graduate Diploma
GradDip

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 Head of Department.

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 units of credit) or two years of part time study (at least 18 units of credit per year). It involves the following program:

Compulsory courses		**UOC**
FOOD1577	Food Processing Principles	6
FOOD1587	Food Processing Laboratory	6
FOOD1597	Food Processing and Packaging	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 Head of Department 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 Applied Bioscience, or from those offered by other Schools in the University subject to approval by the Head of Department. Only graduate courses will count towards units of credit.

School of Biochemistry and Molecular Genetics

5345 Biochemistry Graduate Diploma Program
Full-time or Part-time

Graduate Diploma
GradDip
UOC 48

Staff Contact: Dr D Lee

The 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 Biochemistry and Molecular Genetics 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.

School of Biological Science

5350 Biological Science Graduate Diploma Program
Full-time or Part-time

Graduate Diploma
GradDip
UOC 21 S1 S2

Staff Contact: School Office
Note/s: Plus BIOS9011

The program is designed to meet the needs and objectives of individual students building on that 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, ultrastructure, comparative physiology, mammalian studies. supervision of a member of the academic staff.

School of Microbiology and Immunology

5355 Microbiology and Immunology Graduate Diploma Program
Full-time or Part-time

Graduate Diploma
GradDip
UOC 48

Staff Contact: School Office

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.

The School of Microbiology and Immunology 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.

School of Psychology

5330 Psychology Graduate Diploma Program
Full-time

Graduate Diploma
GradDip
UOC 48

Staff Contact: Dr B Hayes

This one year 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 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 Degrees

Department of Biotechnology

Master of Science Coursework Degree Programs

The Department of Biotechnology offers three formal coursework masters programs, the Master of Science in Biotechnology 8048, the Master of Science in Biopharmaceuticals 8049.1000, and the Master of Science in Biopharmaceuticals by distance education 8049.2000.

8048 Master of Science in Biotechnology by Coursework
MSc

The 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 Higher Degree 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.

8048 Master of Science in Biotechnology

		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 units of credit) with an equivalent size course in another Department or School.

Elective components

Elective courses may be selected from those offered by the School of Applied Bioscience, 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 the Department of Biotechnology unless otherwise approved by the Head of School. The remainder, subject to approval and availability, may be undertaken elsewhere in the University.

8049.1000 Master of Science by Coursework in Biopharmaceuticals

MSc

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 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. The program is also offered through distance education. Choice of courses is dependent on the background of the student.

Principles of Pharmacology (PHPH5461) must be taken by students who have not completed an approved Pharmacology course, while Principles of Biotechnology (BIOT7040)) must be taken by students who have not completed an approved Biotechnology course.

All students must pass Advanced Pharmacology (PHPH5471) and Advanced Biotechnology (BIOT7030) and Biotechnology Principles (BIOT7040) and/or Pharmacology Principles (PHPH5461) whichever is applicable. Program details are as follows:

8049.1000 Master of Science by Coursework in Biopharmaceuticals

		UOC
PHPH5461	Pharmacology Principles	12
OR		
BIOT7040	Biotechnology Principles	12
PHPH5471	Advanced Pharmacology	12
BIOT7030	Advanced Biotechnology	12
BIOT7060	Biotechnology Project	12
or		
PHPH5491	Pharmacology Project	12
Total		**48**

Pharmacology Principles (PHPH5461) must be taken by students who have not completed an approved Pharmacology course, while Biotechnology Principles (BIOT7040) must be taken by students who have not completed an approved Biotechnology course program.

All students must pass Advanced Pharmacology (PHPH5471) and Advanced Biotechnology (BIOT7030).

Elective Components

Each individual program would comprise: (i) a major strand of related material comprising approximately 75% of the total program including a project comprising not less that 15% of the program (ii) a minor strand of broader based material comprising up to 25% of the total program.

8049.2000 Master of Science by Coursework in Biopharmaceuticals
Distance Education

The CRC for Biopharmaceutical Research has developed this strongly interdisciplinary Master of Science in Biopharmaceuticals program. The program teaches the scientific basis underscoring the development of recombinant biopharmaceuticals, combined with aspects of clinical trials, regulatory considerations, patent issues, and licencing. The program content is incorporated in 8 distance education modules comprised of written text and video/audio tapes containing program material, demonstrations and self-testing exercises. Access to the Course Co-ordinators will be by phone, fax, electronic mail and teleconferencing facilities.

The Master's Program can be completed in a minimum of 2 years. The minimum time option would entail the completion of two modules per session. These are offered concurrently. A maximum time for completion has been set at 8 years.

Modules consist of printed notes containing course material, readings, assessment questions and exercises. Some modules also include audio and video taped material so access to audio equipment is essential.

The Master's Program calls for the completion of 8 modules, which is equivalent to 48 units of credit (exemptions may be allowed in exceptional circumstances).

There will be two tutorials per session per module. These will be conducted via a multiple telephone link and will be structured and interactive.

Each module will be assessed separately at module completion and a certificate awarded. The assessment of modules will be flexible and will be based on two pieces of submitted work. This may be in the form of written assignments *or* as a timed, faxed examination.

Students' module choices are from the following:

8049.2000 Master of Science by Coursework in Biopharmaceuticals

		UOC
PHPH5501	Basic Principles of Drug Action	6
PHPH5511	Selected Topics in Pharmacology	6
PHPH5521	Techniques for Drug Development	6
PHPH5531	Discovery and Development of New Medicines	6
BIOT7070	Production of Recombinant Products	6
BIOT7080	Principles of Fermentation and Downstream Processing	6
BIOT7090	Monoclonal Antibody Technology	6
BIOT7120	Regulatory Considerations, Patent Issues and Licensing	6
Total		**48**

Module 1 UOC 6
PHPH5501 Basic Principles of Drug Actions

This module covers general principles of pharmaco-dynamics and pharmacokinetics. Pharmacodynamics (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 pharmacokinetics (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 in your understanding of this material.

Module 2 UOC 6
PHPH5511 Selected Topics in Pharmacology

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.

Module 3 UOC 6
PHPH5521 Techniques for Drug Development

This module extends the concepts raised and discussed in the Basic Pharmacokinetics section of Module 1. More advanced pharmacokinetic problems, such as compartmentation, kinetics of effects and problem solving are included. The technique of measuring receptor binding is shown in some detail on video, with explanation of how the technique is set up, and how and why it is much used in new drug development. Also included in this module is a section on techniques used in the assay of drugs. The determination of molecular structure, and quantitation of drugs in the body are vital areas of drug development, and indeed pharmacokinetics depends upon such quantitation.

Module 4 UOC 6
PHPH5531 Discovery and Development of New Medicines

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) followed by a section on the necessary toxicological testing in animals (also Phase 0) before a drug can 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.

Module 5 UOC 6
BIOT7070 Production of Recombinant Products

In this module, the topics deal with some basic recombinant DNA techniques and then heterologous protein expression in prokaryotes and eukaryotes are discussed in greater details. 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 protein genes are also described and illustrated. Cloning of genes into the vectors, production and subsequent characteris-ation of the recombinant protein 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.

Module 6 UOC 6
BIOT7080 Principles of Fermentation and Downstream Processing

The units in this module were selected to give the students a good understanding of the fundamental principles associated with biopharmaceuticals manufacture. The module begins by discussing basic fermentation principles for the large-scale culture of bacterial and mammalian cells to produce recombinant protein biopharmaceuticals. 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 Manufacturing 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 into the context of biopharmaceutical manufacture. The last unit covers modern methods of product characterisation, which forms a critical component of the regulatory procedure.

Module 7 UOC 6
BIOT7090 Monoclonal Antibody Technology

This module is made up of 4 units covering techniques for the production of monoclonal antibodies and discussing their therapeutic applications. Unit 1 is designed as an introduction to immunology, emphasising the areas of immunology relevant to antibody production. In addition the structure of antibody molecules is studied in detail. Unit 2 describes the processes in the production of hybridomas, the specialised cells which produce monoclonal antibodies. This unit includes information on immunisation protocols, methods of cell fusion and selection, and the production of human monoclonal antibodies by EBV-transformed B cells. Unit 3 is associated with the more recent developments in antibody engineering techniques. The phage display system, and genetic manipulations for the production of humanised antibodies and antibody fragments are described in details. Unit 4 covers the applications of monoclonal antibodies both for *in vivo* diagnostics and for therapy. Also, some of the more recent innovations such as the production of recombinant immunotoxins are described.

Module 8 UOC 6
BIOT7120 Regulatory Considerations, Patent Issues and Licensing

The first unit of this module looks at the code of Good Manufacturing Practice (GMP) for the production of recombinant biopharmaceuticals and the establishment of Standard Operating Procedures (SOPs) for a production process. This is especially relevant as many of the M.App.Sc. (Biopharmaceuticals) graduates will take up positions in industry. The international biopharmaceutical industry is a vigorous, rapidly growing industry. Compared to the pharmaceutical industry it is still at a fairly early stage of development and undergoing some interesting changes. The second unit provides an understanding of the nature of the biopharmaceutical industry at this stage of its evolution. It includes the concept of licensing as an important factor in its development as well as an appreciation of the basics of licensing activity. The final unit introduces the student to the concept of intellectual property as it relates to biopharmaceuticals and provides some guidelines on its management. Intellectual property is the collection of statute and common law principles giving ownership of inventions, trade secrets, trade marks, designs and copyright in literary and artistic works to their creators. The creation and protection of intellectual property is the basis on which development and commercialisation of biopharmaceuticals is built and as such is of vital concern to the industry. This unit will provide a detailed consideration of patents and trade secrets and touch briefly on the course of trade mark registrations, industrial design registrations and copyright. Special issues relating to patents and trade secrets in biopharmaceuticals will also be examined.

Department of Food Science and Technology

8033 Master of Science by Coursework

The MSc coursework degree programs 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 Department has developed special expertise. Intending candidates are invited to contact the Head of Department for advice and recommendation.

Graduate programs are available for Master of Science by Coursework degrees in the following areas:

Food Technology Program	8033.1000
Food Microbiology Program	8033.2000
Food Engineering Program	8033.3000
Food Science and Nutrition Program	8033.4000

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 units of credit 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 Department 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 units of credit each), or two years of part-time study (normally four sessions of 12 units of credit 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 Applied Bioscience unless otherwise approved by the Head of Department. The remainder, subject to approval and availability, may be undertaken elsewhere in the University.

8033.1000 Food Technology

Master of Science by Coursework in Food Technology
MSc

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 Processing Laboratory	6
FOOD1597	Food Processing and Packaging	6
FOOD1677	Product Design and Development	6
either		
FOOD5117	Minor Project	6
or		

FOOD5127	Research Project	12
Total		**30/36**

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 Head of Department to a total of 48 units of credit.

*Units of credit may be concentrated in one session

8033.2000 Food Microbiology

Master of Science by Coursework in Food Microbiology
MSc

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

FOOD1787	Forensic Food Science	6
FOOD2647	Food Safety	6
FOOD1567	Food Preservation	6

or other courses as approved by the Head of Department to a total of 48 units of credit.

*Units of credit may be concentrated in one session

8033.3000 Food Engineering

Master of Science by Coursework in Food Engineering
MSc

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 Processing Laboratory	6
FOOD1597	Food Processing and Packaging	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 Head of Department to a total of 48 units of credit.

*Units of credit may be concentrated in one session.

8033.4000 Food Science and Nutrition

Master of Science by Coursework in Food Science and Nutrition
MSc

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***
FOOD1567	Food Preservation	6
FOOD1697	Advanced Food Chemistry	6
or		
FOOD2647	Food Safety	6
FOOD3567	Nutrition	6
FOOD3577	Advanced and Applied Nutrition	6
EITHER		
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 Head of Department to a total of 48units of credit.

*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

8265 Master of Marine Science Degree Program (MMarSc)
UOC 48

The Master of Marine Science is intended primarily as an advanced training program for:

- Graduates from overseas universities 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).
- Australian 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 appropriate Faculty and/or Higher Degree Committee. Applicants with other qualifications may be admitted after completion of a qualifying program approved by the appropriate faculty.

Program Structure

The program is multi disciplinary in approach and includes advanced treatments of all areas of marine science with provision for specialisation. It consists of lectures, turtorials, practical sessions, case history and a supervised project.

The program is as follows:

MSC15001	Marine Environmental Monitoring and Assessment	6
MSC15002	Management of Marine Resources	3
MSC15003	Experimental Design and Analysis	3
MSC15004	Oceanographic Processes	6
MSC15005	Topics in Marine Science	12
MSC15006	Graduate Seminars in Marine Science	6
MSC15007	Marine Science Project	12
MSC15008	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 Psychology

Head of School: Associate Professor SM Andrews

Senior Administrative Officer: Mr T Clulow

The School offers programs leading to the award of the combined degrees of PhD/Master of Psychology (Clinical), PhD/Master of Psychology (Forensic), and PhD/Master of Psychology (Organisational), and the degrees of Master of Psychology (Clinical), Master of Psychology (Forensic) and Master of Psychology (Organisational).

1404 Combined Doctor of Philosophy/Master of Psychology (Clinical) Degree Program
Full-time
Doctor of Philosophy Master of Psychology (Clinical)
PhD MPsychol(Clin)

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 New South Wales.

The normal entrance requirements are (1) completion of an honours Class 1 degree in Psychology from the University of New South Wales 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(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) Degree Program
Full-time
Doctor of Philosophy Master of Psychology (Forensic)
PhD MPsychol(For)

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 New South Wales.

The normal entrance requirements are (1) completion of an honours Class 1 degree in Psychology from the University of New South Wales 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, and 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) Degree Program
Full-time
Doctor of Philosophy Master of Psychology (Organisational)
PhD MPsychol(Org)

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 New South Wales.

The normal entrance requirements are (1) completion of an honours Class 1 degree in Psychology from the University of New South Wales 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(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

8256 Master of Psychology (Clinical) Degree Program
Full-time or Part-time
Master of Psychology (Clinical)
MPsychol(Clin)

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 New South Wales.

The normal entrance requirement is completion of an honours Class 1 or Class 2 degree in Psychology from the University of New South Wales 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 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) Degree Program
Full-time or Part-time
Master of Psychology (Forensic)
MPsychol(For)

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 New South Wales.

The normal entrance requirement is completion of an honours Class 1 or Class 2 degree in Psychology from the University of New South Wales 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 shortlisted 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
PSYC7401	Interventions in Forensic Psychology 2
PSYC7409	Professional and Ethical Practice (Forensic) 1
PSYC7410	Professional and Ethical Practice (Forensic) 2

Stage 2

PSYC7402	Applications of Forensic Psychology
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 Degree Program
Full-time or Part-time
Master of Psychology (Organisational)
MPsychol(Org)

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 New South Wales.

The normal entrance requirement is completion of an honours Class 1 or Class 2 degree in Psychology from the University of New South Wales 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 shortlisted 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
PSYC7123	Professional and Ethical Practice (Organisational) 1
PSYC7122	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.

Institute of Environmental Studies

For Graduate Certificate, Graduate Diploma and Masters degree programs in Environmental Management, refer to contents page at the start of this section for the Faculty of Science.

Postgraduate Programs in Science and Technology

The following formal coursework programs lead to graduate awards are offered:

- Graduate Certificate (in Environmental Science, Chemical Analysis and Laboratory Management, Optometry, Photonics and Optoelectronics, Safety Science, Risk Management, Ergonomics, Industrial Safety, Occupational Rehabilitation, Occupational Health and Safety Management, Aviation Management)
- Graduate Diploma (in Chemical Analysis and Laboratory Management, Remote Sensing, Computation, Statistics, Optometry, Physics Research Techniques, Photonics and Optoelectronics, Medical Physics, Safety Science, Risk Management, Ergonomics, Occupational Medicine, Aviation Management, Flying, Environmental Science)
- Graduate Diploma by research (in Physical Oceanography, Physics)
- Master of Science and Technology (in Chemical Analysis and Laboratory Management, Remote Sensing, Geographical Information Systems, Geological Data Processing, Groundwater Studies, Corrosion Engineering, Engineering Materials, Mathematics, Computation, Optometry, Photonics and Optoelectronics, Ergonomics, Industrial Safety, Occupational Health and Safety, Occupational Medicine, Risk Management, Aviation, Environmental Science)
- Master (of Optometry, Statistics, Safety Science)

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 masters by research and PhD are available in all Schools.

Graduate Certificates

Faculty of Science

Administered by the School of Safety Science
Program Coordinator: Dr B Markovic

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. The 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 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.

Program requirements

Candidates are required to complete a program of study totalling 18 units of credit where 6 units of credit are a core course and the remaining 12 units of credit include courses from the Master of Science and Technology in Environmental Science elective streams.

Compulsory Course

SESC9751 Introduction to Environmental Science (6 units of credit)

Elective Courses

Students are required to select up to 12 units of credit of electives from specialist streams of courses presented for the MScTech in Environmental Science program.

School of Chemistry

Head of School: Professor R Lamb
Director of Graduate Studies: Professor DB Hibbert *(contactable via Chemistry Academic Office)*
Coordinator of Postgraduate Coursework degrees: Associate Professor Peter Southwell-Keely

For further details of information contact ***chemistry@unsw.edu.au***

7345.3002 Graduate Certificate in Chemical Analysis and Laboratory Management

This program offers training in advanced chemical analysis techniques and associated management issues. It allows students to select from a series of courses covering all aspects of modern chemical analysis, safety and occupational health issues, and people management. The program will normally be completed within one year on a part time basis. It is particularly suited to new graduates or laboratory chemists and managers who wish to upgrade their qualifications in and knowledge of chemical analysis and related topics. 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 units of credit selected from the following offerings with at least 6 units of credit being selected from the analysis courses and at least 6 units of credit 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		**UOC**	**HPW**	**S1/S2**
CHEM7111	Quality Assurance and Laboratory Practice	6	3	2
IROB5700	Management, Work and Organisation	6	3	1or2
SESC9020	Occupational Health and Safety Law 1	3	2	2
SESC9030	Occupational Health and Safety Law 2	3	2	2
SESC9820	Chemical Safety and Toxicology	3	3	1or2
SESC9850	Management of Dangerous Materials	3	3	1or2

School of Optometry and Vision Science

Head of School: Associate Professor S Dain
Postgraduate Studies Coordinator: Dr C Suttle

7435 Graduate Certificate in Optometry

The Graduate Certificate in Optometry program consists of a selection of courses from the electives listed below. Up to 6 units of credit may be taken from elsewhere in the University, subject to the approval of the Head of School. 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. Courses comprise 3, 6 or 12 units of credit, which count towards the total of 18 units of credit required for this graduate award. A number of the courses have pre-requisites, co-requisites 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. The program provides advanced training in clinical and theoretical aspects of optometry, with opportunities for specialisation in fields such as contact lenses, occupational optometry and behavioural optometry.

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.

All courses offered will only be conducted if there is sufficient demand. For information on which courses are being run refer to www.optom.unsw.edu.au.

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

School of Physics

7432 Graduate Certificate in Photonics and Optoelectronics

This Graduate Certificate provides students with the opportunity to study the fundamentals of optoelectronics. The names 'optoelectronics' and 'photonics' typically cover areas such as optical communications and various applications of lasers and optics in modern industrial and medical settings. 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.

Entry Requirements: BSc degree with a major in physics or equivalent qualifications. Advanced standing or substitution of up to 6 units of credit may be granted where prior knowledge can be demonstrated on consultation with the program authority.

Course requirements include a total of 18 units of credit from the following:

PHYS9720 Optoelectronics (6 UOC)
PHYS9710 Lasers and Applications (6 UOC)
PHYS9761 Optoelectronics Laboratory I (6 UOC) **or**
PHYS9762 Optoelectronics Laboratory II (6 UOC)

School of Safety Science

Head of School: Associate Professor C Winder
Postgraduate Studies Coordinator: Dr K Kothiyal

7437 Graduate Certificate in Industrial Safety

Students enrolled in the Graduate Certificate in Industrial Safety must complete a program totalling 18 units of credit. 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 units of credit of compulsory core courses, and 9 units of credit 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 units of credit. Elective courses may be taken from any school at UNSW or from other Universities subject to the approval of the program co-ordinator 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.

7438 Graduate Certificate in Risk Management

The Graduate Certificate in Risk Management provides students with the opportunity to study risk management related courses to meet specific vocational needs or individual interests. The program requires 24 units of credit 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**	**UOC**
SESC9211	Risk Management	6

Elective Courses – 12 UOC

12 units of credit of other courses from the core or electives listed for the MScTech in Risk Management. Students may be proscribed from taking courses that would duplicate prior studies.

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 & Technology programs in ergonomics. The program requires 24 units of credit 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		**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.

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 units of credit 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 units of credit, 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 units of credit, depending on student background and the need for fundamental knowledge courses.

		UOC
SESC6120	Physical Principles of Safety 2	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	Introduction to Occupational Health	3
SESC9810	Introduction to 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 units of credit of other courses offered by the School of Safety Science with the approval of the program authority.

† Requires Fundamental Knowledge course or equivalent knowledge as assumed knowledge.

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 units of credit and is normally completed in six months of full-time (or equivalent part-time) study. It is the first stage in an articulated sequence which can lead into Graduate Diploma and Masters programs in the School of Safety Science

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.

7444 Graduate Certificate in Occupational Rehabilitation

The Graduate Certificate in Occupational Rehabilitation is a graduate program for medical graduates only. The program requires 18 units of credit, 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.

Department of Aviation

Head of Department: Professor J Middleton
Postgraduate Coursework Coordinator: Mr R Robertson

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 http://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
AVIA5021	Aviation Safety Analysis and Research Methods	6
AVIA5022	Aircraft Accident Investigation Techniques	6
AVIA5023	Management of Incidents andAccidents	6
AVIA5028	Airline Marketing Management	6
AVIA5311	Inflight Services Management	3
AVIA5312	Airline Incident Investigation	3
AVIA5313	Aviation Ground Safety Investigation	3
AVIA5314	Aviation System Safety	3

Graduate Diplomas

Faculty of Science

Administered by the School of Safety Science
Program Coordinator: Dr B Markovic

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. The 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 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.

Program requirements

Candidates are required to complete a program of study totalling 36 units of credit where 6 units of credit are a core course and the remaining 30 units of credit 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 units of credit of electives from specialist streams of courses presented for the MScTech in Environmental Science program.

School of Chemistry

Head of School: Professor R Lamb
Director of Graduate Studies: Professor DB Hibbert *(contactable via Chemistry Academic Office)*
Coordinator of Postgraduate Coursework degrees: Associate Professor Peter Southwell-Keely

5648 Graduate Diploma in Chemical Analysis and Laboratory Management

This program offers training in advanced chemical analysis techniques and associated management issues. It allows students to select from a series of modules covering all aspects of modern chemical analysis, safety and occupational health issues, and people management. The program will normally be completed within one year on a full time basis, or over two years part time. It is particularly suited to new graduates or laboratory chemists and managers who wish to upgrade their qualifications in and knowledge of chemical analysis and related topics. 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 units of credit selected from the following offerings with at least 6 units of credit being selected from the analysis courses and at least 6 units of credit 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		UOC	HPW	S1/S2
CHEM7111	Quality Assurance and Laboratory Practice	6	3	2
SESC9020	Occupational Health and Safety Law 1	3	2	2
SESC9030	Occupational Health and Safety Law 2	3	2	2
SESC9820	Chemical Safety and Toxicology	3	3	1or2
SESC9850	Management of Dangerous Materials	3	3	1or2
IROB5700	Management, Work and Organisation	6	3	1or2

School of Geography

Head of School: Professor I Burnley
Director of Postgraduate Studies: Dr J Sammut
Co-ordinator of Postgrduate Coursework degrees: Dr B Parolin

5693 Graduate Diploma in Remote Sensing

The graduate diploma program in Remote Sensing is 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.

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 units of credit made up of 4 compulsory courses (24 units of credit) and 2 elective courses (12 units of credit). 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		UOC
GEOG9012	Remote Sensing Applications	6
GEOG9021	Image Analysis in Remote Sensing	6
GMAT9600	Principles of Remote Sensing	6
GMAT9606	Microwave Remote Sensing	6

Elective courses

From the following (or as approved by the relevant Faculty):

CVEN9861	Environmental and Engineering Geophysics	6
CVEN9875	Hydrological Processes	6
GEOG9013	Directed Problems in Remote Sensing	6
GEOG9014	Computer Mapping and Data Display	6
GEOG9016	Principles of Geographic Information Systems	6
GEOG9017	Advanced Geographic Information Systems	6
GEOG9018	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

School of Mathematics

Head of School: Professor GI Gaudry
Director of Graduate Studies: Associate Professor V Jeyakumar

5530 Graduate Diploma by Research in Physical Oceanography

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 units of credit for completion, consists of a major project OCEA5115 worth 24 units of credit of the total accreditation for the program, the remaining 24 being comprised as indicated below.

Compulsory Courses		**UOC**
OCEA5115	Experimental Project	24
OCEA5125	Geophysical Fluid Dynamics	6
OCEA5145	Applied Time Series Analysis	6

Elective Courses		**UOC**
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.

5645 Graduate Diploma in Computation

Staff Contact: Associate Professor V Jeyakumar

The 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 units of credit. All the courses below are worth 6 units of credit 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 student's proposed program requires the approval of the Director of Graduate Studies.

Compulsory Courses

MATH5305	Computational Mathematics
MATH5315	High Performance Numerical Computing

Elective Courses

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.

5659 Graduate Diploma in Statistics

Staff Contact: Dr S Pener

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 may be selected from those offered by other Departments or Schools within the University.

The program may be taken over one year full-time or on a part-time basis. The total number of units of credit is 48, six for each course.

School of Optometry and Vision Science

Head of School: Associate Professor S Dain
Postgraduate Studies Coordinator: Dr C Suttle

5665 Graduate Diploma in Optometry

The Graduate Diploma in Optometry program consists of a selection of courses from the electives listed below. Up to 12 units of credit may be taken from elsewhere in the University, subject to the approval of the Head of School. 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. Courses comprise 3, 6 or 12 units of credit, which count towards the total of 36 units of credit required for this graduate award. A number of the courses have pre-requisites, co-requisites 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. The program provides advanced training in clinical and theoretical aspects of optometry, with opportunities for specialisation in fields such as contact lenses, occupational optometry and behavioural optometry.

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 units of credit towards an MOptom degree. Alternatively, if the GradDip is awarded, 30 units of credit 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.

All courses offered will only be conducted if there is sufficient demand. For information on which courses are being run refer to www.optom.unsw.edu.au.

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

School of Physics

Head of School: Professor J Storey
Postgraduate Studies Coordinator: Associate Professor RJ Stening

5533 Graduate Diploma by Research in Physics

Staff Contact: Associate Professor RJ Stening

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 units of credit, 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 units of credit). 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

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.

The Diploma 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

5662 Graduate Diploma in Photonics and Optoelectronics

This Graduate Diploma provides students with the opportunity to study the basic sciences and technologies that underlie the field of optoelectronics. The names 'optoelectronics' and 'photonics' typically cover areas such as optical communications and various applications of lasers and optics in modern industrial and medical settings. This program offers theoretical and practical training in the areas that form the foundation of these strongly growing and fast changing technologies.

This program may be completed in two sessions full time, or longer as a part time student.

Entry Requirements: BSc degree with a major in physics or equivalent qualifications. Advanced standing or substitution of up to 12 units of credit may be granted where prior knowledge can be demonstrated on consultation with the program authority.

Program requirements include a total of 36 units of credit from a combination of core (24 units of credit) and elective (12 units of credit) courses.

24 units of credit from the following core courses:

PHYS9710	Lasers and Applications (6UOC)
ELEC9350	Theory of Optical Fibres and Optical Signal Processing (6UOC)
PHYS9761	Optoelectronics Laboratory I (6UOC) **or**
PHYS9762	Optoelectronics Laboratory II (6UOC)
PHYS9310	Physics of Semiconductor Devices (6UOC)

12 units of credit from the following electives:

PHYS9761	Optoelectronics Laboratory I (6UOC)
PHYS9762	Optoelectronics Laboratory II (6UOC)
PHYS9060	Advanced Optics (6UOC)
ELEC9502	VLSI Technology (6UOC)
ELEC9505	Micro-systems Technology (6UOC)
ELEC9355	Optical Communications Systems (6UOC)

5663 Graduate Diploma in Physics Research Techniques

Staff Contact: Associate Professor 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 units of credit and a research project (18 units of credit). 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.

School of Safety Science

Head of School: Associate Professor C Winder
Postgraduate Studies Coordinator: Dr K Kothiyal

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 units of credit 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 during previous studies.

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 – 24 UOC		
SESC9351	Risk Management	6
SESC9352	Risk Analysis	6
FINS5531	Risk and Insurance	6

Elective courses – 12 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.

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 units of credit 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.

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 units of credit, 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 – 27 UOC		UOC
SESC6120	Physical Principles of Safety 2†	3
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	Introduction to Occupational Health	3
SESC9810	Introduction to 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.

† Requires fundamental course knowledge or equivalent knowledge as assumed knowledge.

Elective courses – 9 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.

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 units of credit 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.

5676 Graduate Diploma in Fire and Explosion Safety Management

The Graduate Diploma 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 program allows students to specialise in one or more areas. Elective courses for the program can be chosen from those offered by the Faculties of Science and Technology, Engineering, Commerce and the AGSM. Students may select either a managment or a technical focus. Candidates are required to complete 36 units of credit 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
SESC8150	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.

Department of Aviation

Head of School: Professor J Middleton
Postgraduate Coursework Coordinator: Mr R Robertson

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 units of credit. A credit average must be achieved to continue on to the Masters level. 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		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
AVIA5021	Aviation Safety Analysis and Research Methods	6
AVIA5022	Aircraft Accident Investigation Techniques	6
AVIA5023	Management of Incidents andAccidents	6
AVIA5028	Airline Marketing Management	6
AVIA5311	Inflight Services Management	3
AVIA5312	Airline Incident Investigation	3
AVIA5313	Aviation Ground Safety Investigation	3
AVIA5314	Aviation System Safety	3

5538 Graduate Diploma in Flying

The Graduate Diploma in Flying is a program designed for students with a Bachelor degree from a recognised institution or equivalent qualifications as determined by UNSW and with an ambition towards an aviation career as a pilot. Taken over 3 to 4 sessions part-time, the program has both yearly and mid-yearly intakes with a combination of academic courses offered by distance mode and an intensive flight training practicum. Students are required to complete a total of 36 units of credit

consisting of a minimum of 18 units of credit from the flying practicum and a minimum of 12 units of credit from the academic selection.

Flying Practicum Components		UOC
AVIA5010	Flight Training PPL	12
AVIA5011	Flight Training CPL	12
AVIA5012	Flight Training CIR	6
AVIA5013	Flight Training QFI	6
AVIA5014	Flight Training ATPL	6
Academic Components		
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
AVIA5021	Aviation Safety Analysis and Research Methods	6
AVIA5022	Aircraft Accident Investigation Techniques	6
AVIA5023	Management of Incidents andAccidents	6
AVIA5028	Airline Marketing Management	6
AVIA5311	Inflight Services Management	3
AVIA5312	Airline Incident Investigation	3
AVIA5313	Aviation Ground Safety Investigation	3
AVIA5314	Aviation System Safety	3

Masters Degrees

Faculty of Science

Administered by the School of Safety Science
Program Coordinator: Dr B Markovic

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. The 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 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.

Program requirements

Candidates are required to complete a program of study totalling 48 units of credit 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 units of credit 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
BIOT7081	Environmental Technology	6
GEOG9022	Vegetation Management	6
GEOL9053	Hydrogeochemistry	3
GEOL9111	Groundwater Environments	3
GEOL9060	Environmental Geology	6
MSCI5004	Oceanographic Processes	6
Pollution Issues		
CEIC5630	Industrial Water and Wastewater Engineering	6
CVEN9872	Solid Waste Management	6
GEOG9024	Soil Degraedation 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		
GEOG9015	Population, Health and Environment	6
MATH5826	Statistical Methods in Epidemiology	6
SESC9130	Noise Management	3
SESC9140	Radiation Protection	3
SESC9150	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		
GEOG9012	Remote Sensing Applications	6
GEOG9016	Principles of Geographic Information Systems	6
GEOG9021	Image Analysis of Remote Sensing	6
GEOL9100	Remote Sensing of Groundwater Resources	6
Environmental Assessment and Modelling		
GEOG9011	Environmental Impact Assessment	6
GEOG9016	Principles of Geographic Information Systems	6
GEOG9017	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	Waves	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		
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
GEOL0350	Exploration and Environmental Geochemical Data Processing	6
GEOL9054	Analysis & Interpretation of Hydrogeochemical Data	3
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.

School of Chemistry

Head of School: Professor R Lamb
Director of Graduate Studies: Prof DB Hibbert *(contactable via Chemistry Academic Office)*
Coordinator of Postgraduate Coursework degrees: Associate Professor Peter Southwell-Keely

8720.3002 Master of Science and Technology in Chemical Analysis and Laboratory Management

This program offers training in advanced chemical analysis techniques and associated management issues. It allows students to select from a

series of modules covering all aspects of modern chemical analysis, safety and occupational health issues, and people management. The program will normally be completed within one year on a full time basis, or over two years part time. It is particularly suited to new graduates or laboratory chemists and managers who wish to upgrade their qualifications in and knowledge of chemical analysis and related topics.

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 MsciTech will normally be granted 30 units of credit advanced standing in the MsciTech program. Students applying to return after completing and being awarded the Graduate Certificate can apply for advanced standing of up to 12 units of credit in the MsciTech.

Program Requirements

Candidates are required to complete a total of 48 units of credit selected from the following offerings with at least 6 units of credit being selected from the management courses and at least 6 units of credit from the analysis courses:

Analysis Courses		**UOC**	**HPW**	**Sess**
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		**UOC**	**HPW**	**S1/S2**
CHEM7111	Quality Assurance and Laboratory Practice	6	3	2
IROB5700	Management, Work and Organisation	6	3	1or2
SESC9020	Occupational Health and Safety Law 1	3	2	2
SESC9030	Occupational Health and Safety Law 2	3	2	2
SESC9820	Chemical Safety and Toxicology	3	3	1or2
SESC9850	Management of Dangerous Materials	3	3	1or2

School of Geography

Head of School: Professor I Burnley
Director of Graduate Studies: Dr J Sammut
Co-ordinator of Postgraduate Coursework degrees: Dr B Parolin

8720.4001 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 units of credit 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**
GEOG9016	Principles of Geographic Information Systems	6
GEOG9017	Advanced Geographical Information Systems	6
GEOG9530	Project	12
AND EITHER		
GEOG9020*	Applications and Management of GIS	6
OR		
GMAT9604*	Land Information Systems	6
Elective courses – 18 UOC		**UOC**
COMP9311	Introduction to Data Base Systems	6
GEOG9012	Remote Sensing Applications	6
GEOG9014	Computer Mapping and Data Display	6
GEOG9018	Transportation Applications of Geographical Information Systems	6
GEOG9019	Special Topic	6
GEOG9021	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.

8713 Master of Science and Technology in Remote Sensing

Masters degree 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.

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**
GEOG9012	Remote Sensing Applications	6
GEOG9021	Image Analysis in Remote Sensing	6
GMAT9600	Principles of Remote Sensing	6
and either		
GEOG9530	Project	12
or		
GEOL0114	Project	12
Elective courses – 18 UOC		
GEOG9011	Environmental Impact Assessment	6
GEOG9013	Directed Problems in Remote Sensing	6
GEOG9014	Computer Mapping and Data Display	6
GEOG9016	Principles of Geographic Information Systems	6
GEOG9017	Advanced Geographical Information Systems	6
GEOG9019	Special Topic	6
GEOG9020	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.

School of Geology

Head of School: Associate Professor CR Ward
Director of Graduate Studies: Dr AC Dunlop

The Master of Science and Technology programs in Geology are designed to give advanced training in developing specialisations within the geological profession. Programs are structured specifically for candidates from industry to take on a part-time basis. Specialist programs are currently offered in the fields of Groundwater Studies and Geological Data Processing.

Alternative coursework programs in association with the School of Geology are available in the following areas:

School of Safety Science

8735 MScTech in Environmental Science

School of Geography

5693 Graduate Diploma in Remote Sensing
8713 MScTech in Remote Sensing

8720.1002 Master of Science and Technology in Groundwater Studies

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. The Program Director is Dr J Jankowski.

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

8703 Master of Science and Technology in Geological Data Processing

This program is intended for industry-based geologists who wish to enhance their skills in the computer processing of geological data. It is delivered as a series of separate academic courses, each consisting of an intensive short course with additional assignment material. An industry-based project is also included in the program. The short courses are scheduled to allow the degree to be completed on a part-time basis over two years.

The program allows an emphasis to be placed on data processing in mineral exploration, exploration geochemistry, ore reserve estimation, image processing and remote sensing, exploration geophysics or fossil fuel deposits. Optional courses are also available to provide complementary training in topics such as environmental management and project evaluation.

Candidates are required to complete a program of 48 units of credit and may include a 12 units of credit project. Intending students should discuss their choice of courses with the Program Director, Dr A C Dunlop.

Elective courses (each 6 units of credit)	
GEOL0310	Image Processing of Spatial Data Sets
GEOL0320	Geostatistical Ore Reserve Estimation
GEOL0330	Conceptual Models for Exploration Geology
GEOL0340	Geochemical Exploration Techniques
GEOL0350	Exploration and Environmental Geochemical Data Processing
GEOL0355	Environmental Assessment
GEOL0360	Remote Sensing Applications in Geoscience
GEOL1110	Geographical Information Systems in Applied Geology
GEOL0370	Fundamentals of Exploration Geophysics
GEOL0380	Electrical Methods in Geophysical Exploration
GEOL0390	Data Processing for Fossil Fuel Resources
GEOL9060	Environmental Geology

or such other courses as the program authority may deem to be appropriate and equivalent.

Project	
GEOL0304	Data Processing Project (12 UOC)
or	
GEOL0114	Project in Geological Remote Sensing (12 UOC)

School of Materials Science and Engineering

Head of School: Professor DJ Young
Postgraduate Coordinator: Professor CC Sorrell

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 8715), although the latter is not offered in 2001.

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 units of credit of formal coursework plus 12 units of credit of experimental andlor 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 units of credit), MATS6695 Materials Project (12 units of credit), plus a balance of 30 units of credit of formal coursework, consisting of five of the above remaining eight courses (and selected offerings from the School of Materials Science and Engineering andlor other Schools if desired).

School of Mathematics

Head of School: Professor GI Gaudry
Director of Graduate Studies: Associate Professor V Jeyakumar

The School offers graduate programs leading to the award of the degrees of Master of Science and Technology in Mathematics and Master of Statistics (MStats). The School also offers an articulated program in computational mathematics, consisting of the Graduate Diploma in Computation and the Master of Science and Technology in Computation.

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 course work and a focussed project in your 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 units of credit, two compulsory courses and four elective courses, chosen from the list below. A total of 48 units of credit are required for the completion of the degree. All the courses below are worth 6 units of credit 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.

Compulsory Courses

MATH5305 Computational Techniques
MATH5315 High Performance Numerical Computing

Elective Courses

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

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 six units of credit, and a compulsory project also worth six units of credit. The total number of units of credit required for the program is 48 units of credit. With the approval of the Head of the School of Mathematics a student may substitute for one or more of the lecture courses 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 2002 will be described on the School's web site, http://www.maths.unsw.edu.au. Each candidate's proposed program of study requires the approval of the Head of the School of Mathematics.

8750 Master of Statistics
MStats

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 units of credit.

The academic requirement for the degree is 72 units of credit. Unless otherwise noted, all courses listed below are 6 units of credit each, while courses offered by other schools may vary in value. A project, worth 12 units of credit, is a compulsory component of the program.

Each candidate's program of study must be approved by the Head of the School.

Compulsory Courses (offered every year)

MATH5835 Stochastic Processes
MATH5905 Statistical Inference
MATH5925 Project (12 UOC)
MATH5935 Statistical Consultancy

Elective Courses (offered every second year)

MATH5806 Applied Regression Analysis
MATH5815 Experimental Design 1
MATH5816 Mathematics of Security Markets 2 (*Prerequisite:* MATH5965)
MATH5826 Statistical Methods in Epidemiology
MATH5845 Time Series
MATH5855 Multivariate Analysis 1
MATH5865 Multivariate Analysis 2
MATH5875 Sample Survey Design
MATH5895 Nonparametric Methods
MATH5915 Medical Statistics
MATH5945 Categorical Data Analysis
MATH5955 Statistical Quality Control
MATH5965 Mathematics of Security Markets 1

Up to 24 units of credit may be taken in graduate courses offered by other Departments or Schools within the University, subject to the approval of the Head of School.

School of Optometry and Vision Science

Head of School: Associate Professor S Dain
Postgraduate Studies Coordinator: Dr C Suttle

8760 Master of Optometry
MOptom

The Master of Optometry program consists of a selection of courses from the electives listed below. Up to 15 units of credit may be taken elsewhere in the University subject to the approval of the Head of School. Each course comprises 3, 6 or 12 units of credit, which count towards the total of 48 units of credit required for this degree. A number of the courses have pre-requisites, co-requisites 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. The program provides advanced training in clinical and theoretical aspects of optometry, with opportunities for specialisation in fields such as contact lenses, occupational optometry, and behavioural optometry.

All courses offered will only be conducted if there is sufficient demand. For information on which courses are being run refer to www.optom.unsw.edu.au.

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

School of Physics

8722 Master of Science and Technology in Photonics and Optoelectronics MScTech

Optoelectronics is a combination of science and technology that covers areas such as optical communications and applications of lasers and optics in modern industrial and medical settings. Optoelectronics is predicted to be a dominant technology in the 21st century. This MScTech by coursework degree program aims to provide a broad, advanced and interdisciplinary education in the field of optoelectronics. The program offers theoretical and practical training in areas that underlie these strongly growing and fast changing technologies. The program may be completed in one year (two sessions of full-time study), or longer as a part-time student.

Entry Requirements

A four year BSc with a major in Physics or equivalent qualifications, or a three year BSc with at least one year of relevant experience in optics, optical communications or semiconductor physics. Advanced standing or substitution of up to 12 units of credit may be granted where prior knowledge can be demonstrated on consultation with the program authority.

Course requirements include a total of 48UOC from a combination of core and elective courses.

36 units of credit from the following core courses:

		UOC
PHYS9710	Lasers and Applications	6
ELEC9350	Theory of Optical Fibres and Optical Signal Processing	6
PHYS9761	Optoelectronics Laboratory I	6
PHYS9762	Optoelectronics Laboratory II	6
PHYS9310	Physics of Semiconductor Devices	6
ELEC9355	Optical Communications Systems	6

12 units of credit from the following electives:

PHYS9060	Advanced Optics	6
ELEC9502	VLSI Technology	6
ELEC9505	Micro-systems Technology	6

School of Safety Science

Head of School: Associate Professor C Winder
Postgraduate Studies Coordinator: Dr K Kothiyal

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's 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 units of credit 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.

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	Buisness 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

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	Introduction to 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
GEOG9015	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
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.

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.

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. It is the third 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 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 – 27 UOC		**UOC**
SESC6120	Physical Principles of Safety 2	3
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	Introduction to Occupational Health	3
SESC9810	Introduction to 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 – 18 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 knowledge as assumed knowledge.

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 units of credit 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 – 15 UOC		**UOC**
SESC9631	Occupational Medicine	6
SESC9640	Occupational Epidemiology	3
SESC9651	Occupational Rehabilitation	6
SESC9912	Project (optional)	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.

Elective courses – to a maximum of 33 units of credit

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.

8736 Master of Science and Technology in Fire and Explosion Safety Management

The Master of Science and Technology 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 program allows students to specialise in one or more areas. Elective courses for the program 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. Candidates are required to complete 48 units of credit 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 – 18UOC

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.

8671 Master of Safety Science
MSafetySc

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 – 27 UOC		**UOC**
SESC6120	Physical Principles of Safety 2	3
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	Introduction to Occupational Health	3
SESC9810	Introduction to 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 – 42 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.

Department of Aviation

Head of Department: Professor J Middleton
Postgraduate Coursework Coordinator: Mr R Robertson

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 from the courses within the MScTech in Aviation program in order to complete the Masters degree. At least 6 courses (36 units of credit) 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		**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
AVIA5021	Aviation Safety Analysis and Research Methods	6
AVIA5022	Aircraft Accident Investigation Techniques	6
AVIA5023	Management of Incidents andAccidents	6
AVIA5028	Airline Marketing Management	6
AVIA5311	Inflight Services Management	3
AVIA5312	Airline Incident Investigation	3
AVIA5313	Aviation Ground Safety Investigation	3
AVIA5314	Aviation System Safety	3

Compulsory Course

AVIA5020	Aviation Research Project	6

Institute of Environmental Studies

The environmental expertise of 7 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 new University-wide programs are co-ordinated 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.

8619 Master of Environmental Management
MEM

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 is made up of core courses (18 units of credit), fundamental knowledge courses (generally 24 units of credit), and electives (generally 30 units of credit). A project (18 units of credit, 12 units of credit or 6 units of credit) 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 6 UOC

Each titled "Fundamental Knowledge in Environmental Management: ....."

BIOS 9001	Ecology
ECON5125	Economics
CVEN9895	Engineering
LAWS3439	Law
CHEM7300	Physical Science
SCTS5317	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.

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:

		UOC
IEST5001	Frameworks for Environmental Management	6
IEST5002	Tools for Environmental Management	6
Four fundamental knowledge courses		24
Electives		12

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 units of credit comprises:

		UOC
IEST5001	Frameworks for Environmental Management	6
	Two fundamental knowledge courses	12
EITHER		
IEST5002	Tools for Environmental Management	6
OR		
One further fundamental knowledge course		6
OR		
One Elective		6

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. Course 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 my 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 my 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 be 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 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 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 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 Engineering (ME), Master of Science (MSc) and Master of Surveying (MSurv) *without supervision*

1. The degree of Master of Engineering or Master of Science or Master of Surveying 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 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 Science (MSc), Master of Science (MSc) *without supervision*

See Master of Engineering above for these degrees.

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 Education or 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 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 Education or 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.

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.

Postgraduate course descriptions

ACCT5901 Accounting: A User Perspective
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S1 S2
Excluded: ACCT5930

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

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.<br
Assumed knowledge: ACCT5901

Note/s: 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 or equivalent

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 S2

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 S2
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.

Assumed knowledge: ACCT5901

ACCT5912 Accounting: A User Perspective
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S1 S2

Note: Enrolment in this course is only available to students undertaking the MBT Programs 8616, 7333, 5457. The focus of this course is on the understanding and use of accounting information by parties, both internal and external to the organisation. It illustrates the analysis and design of a financial accounting system. The preparation and analysis of reports prepared in accordance with the law and contractual arrangements. Management accounting directed towards the effective use of organisational resources is examined. Topics include: Product profitability, costing resource consumption budgetary systems - outcomes and processes, appraisal of projects, decision analysis, targeting performance improvement.

Note/s: Only offered to students in graduate programs in Business and Technology.

ACCT5917 Strategic Management: Systems and Processes
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S1

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.

ACCT5918 Advanced Assurance and Auditing
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ACCT5908 or equivalent

Topics covered in this course include: risk analysis; analytical review; internal control evaluation; internal audit and operational auditing; CAATS; use of computer as an audit tool; going concern prediction; performance indicators and analytical review as an audit tool; auditing in a small business environment; compliance audits in the public sector; and investigating accountants reports.

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 organizations; 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 X1

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
Excluded: ACCT5901

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 not enrol in ACCT5901 and ACCT5930 as both are introductory accounting courses. While ACCT5901 has a strong focus on the user of financial reports, ACCT5930 is more concerned with the technical aspects of financial report preparation. Although ACCT5901 is the normal core accounting unit, students are allowed to substitute ACCT5930 for it.

ACCT5931 Strategic Financial and Resource Management
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S1

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.<br.Assumed knowledge: ACCT5901 or ACCT5930

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

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.

Assumed knowledge: ACCT5901 or ACCT5930

ACCT5934 Issues in Public Sector Financial Administration
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S2

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.

Assumed knowledge: ACCT5901 or ACCT5930

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 organizations. 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 organizations.

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 or equivalent

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 S1 S2

This course will introduce you to emergent thinking on the role of the management accountant. The focus is on adding value to the business rather than emphasising financial control. The new Management Accountant is strategic, proactive, customer focused, team based and change orientated. The link between strategy, resourcing and change is highlighted to ensure the effective use of an organisation's resources in creating value. The course aims to introduce strategic resource management as a new way of thinking about organisational functioning, and develop an understanding of the key drivers of value in organisations from the perspectives of shareholders and customers.

Note/s: Only offered to students in graduate programs in Business and Technology.

ACCT5982 Managing Agile Organisations
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 S1 X1

This course seeks to develop the managerial perspectives and competences 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 ambiquity. It examines how these challenges will be met by managers in agile organisations, as they negotiate time and space, interactions and discourse, politics and culture, diversity and commitment, and innovation and change.

Note/s: Only offered to students in graduate programs in Business and Technology.

ACCT5983 Managing Strategic Change
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 S1 S2 X1

Managing strategic change offers a perspective from state-of-the-art international strategic theory and practice. A vital part of the management accountant s new role in organisations is to act as creators, analysers and communicators of information in strategy formulation processes. Management accountants therefore need to be able to support the strategic re-positioning of their organisations through the use of appropriate investment strategies, participation in team based processes and the application of performance measurement techniques. Management accountants need the skills to become players in the strategy process.

Note/s: Only offered to students in graduate programs in Business and Technology.

ACCT5984 Managing Intangible Resources
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 S2

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, 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 of a 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 contribution of all stakeholders is recognised and rewarded.

Note/s: Only offered to students in graduate programs in Business and Technology.

ACCT5985 The Innovative Organisation
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 S1 S2

Note: Enrolment in this course is only available to students undertaking the MBT Programs 8616, 7333, 5457. New ways of thinking about organisations are introduced. The course explains how organisational systems, structures and processes can support superior organisational performance when underpinned by progressive people management practices. It aims to help you better understand current approaches to managing in innovative ways, and to critically evaluate these approaches in the light of your experience and understanding. It deals with topics such as new forms of work organisation, networks, developing capabilities, organisational learning, employment relations, technology and change.

ACCT5988 Innovative Organisations
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S1

This course examines the nature of innovation and the innovation process. We examine also: the conditions of possibility for innovation (both within organisations and external to them); roles for management, visionaries and champions in the innovation process; organisational structures that are facilitative of innovation; the commercialisation of innovation; and the creation and maintenance of innovative cultures (both within mature organisations and start-ups). Critical thinking about innovation in organisations is encouraged also. The course examines contemporary professional, research and case-based literatures. Course participants will be provided with opportunities to explore work-based issues within the context of the course. The seminars are designed to be highly interactive and draw from the work and everyday life experiences of course participants.

ACCT5996 Business Processes: Analysis and Improvement
School of Accounting
Staff Contact: School Office
UOC6 HPW3 S2

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 subject 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: assumed knowldge: ACCT5901 or ACCT5930 Note: 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
Prerequisite/s: ACCT5930 or equivalent

Note/s: Only offered to students in the International Progressional 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 Progressional Accounting Program Beijing ACCTES8405

ACCT7931 Strategic Financial and Resource Management
School of Accounting
Staff Contact: School Office
UOC6 S1 S2
Prerequisite/s: ACCT5901 or ACCT5930 or equivalent

Note/s: Only offered to students in the International Progressional 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 Progressional 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 Progressional Accounting Program Beijing ACCTES8405

ACCT8908 International Auditing and Assurance Services
School of Accounting
Staff Contact: School Office
UOC6 S1 S2
Prerequisite/s: ACCT5930 or equivalent

Note/s: Only offered to students in the International Progressional 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 Progressional Accounting Program Guangzhou ACCTES8403.

ACCT8931 Strategic Financial and Resource Management
School of Accounting
Staff Contact: School Office
UOC6 S1 S2
Prerequisite/s: ACCT5901 or ACCT5930 or equivalent

Note/s: Only offered to students in the International Progressional Accounting Program Guangzhou ACCTES8403.

ACCT8970 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 Progressional Accounting Program Guangzhou ACCTES8403.

ACCT8996 Business Processes: Analysis and Improvement
School of Accounting
Staff Contact: School Office
UOC6 S1 S2

Note/s: Only offered to students in the International Progressional Accounting Program Guangzhou ACCTES8403.

ACTL5000 Thesis - Actuarial Studies
School of Economics
Staff Contact: School Office

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

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
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON5103, ECON5203

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
School of Economics
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
School of Economics
Staff Contact: School Office
Enrolment requires school approval
UOC12 TBA

Students complete a project under the direction of a supervisor.

ACTL5100 Actuarial Theory and Practice A
School of Economics
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
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1

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.

Assumed knowledge: ECON5203

ACTL5102 Financial Mathematics
School of Economics
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
School of Economics
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
School of Economics
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
School of Economics
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
School of Economics
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
School of Economics
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
School of Economics
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 Aerospace Engineering
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 HPW6 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: MECH9410

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
Department of Anatomy
Staff Contact: K Ashwell
UOC3 HPW3 S1

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
Department of Anatomy
Staff Contact: B Freeman
UOC6 HPW6 S1

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.

ANCE9105 Computational Techniques for Fluid Dynamics
School of Mathematics
Staff Contact: School Office
UOC6 HPW3 TBA

General and specific computational techniques for fluid flow behaviour occurring in industrial, geophysical and chemical processes etc.

Note/s: Please note: Attendance at a 5 day full-time course is required.

ARCH7003 Graduate Research Project
Architecture Program
Staff Contact: P Johnson
UOC12 HPW8 S1 S2
Prerequisite/s: BENV7001
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 and presentation of a graduate seminar. Assessment by written report and seminar.

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.

ARCH7204 Design Computing Theory
Architecture Program
Staff Contact: J Plume
UOC6 HPW3 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 HPW4 S1 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: School Office
UOC6 HPW2 S2

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
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.

ASIA5001 Approaches to Asia
School of History
Staff Contact: D Reeve
UOC8 HPW2 S1

An introduction to a range of approaches to the study of Asia. The seminar topics look at the concept of Asia itself and consider some of the disciplinary, methodological and theoretical problems involved in studying Asia. Topics discussed include: concepts of human rights; concepts of democracy; concepts of the state; the media; regionalism; sub-regionalism.

ASIA5100 Research Project
Department of Chinese & Indonesian
Staff Contact: D Reeve
Enrolment requires school approval
UOC8 S1 S2

A research project of between 12,000 and 15,000 words on a topic approved by the Co-ordinator of the program.

Note/s: This is usually the last course to be completed.

ASIA5200 Reading Program (Asian Studies)
Department of Chinese & Indonesian
Staff Contact: D Reeve
Enrolment requires school approval
UOC8 S1 S2

Reading programs are individually determined. Approval must be obtained from the Co-ordinator 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 principles of the taxation of income and deductions rules, timing issues in taxation, the capital gains tax rules and the principles of international taxation and the taxation of superannuation. The course also gives sudents an understanding of the Goods and Services Tax and of the important state taxes such as stamp duty.

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 understandingof 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 is based largely on a traditional contract theme, designed to develop basic understanding of the concept of a binding agreement (and its limits) as the foundation of an orderly commercial environment. The course examines specialised commercial contracts of particular importance - sale of goods, agency, negotiable instruments and banking. It also examines some legislative responses which have sought to provide protection to the consumer from unscrupulous dealers. Framework of Commercial Law introduces students to the legal environment of commerce. The course is a 'building block' in the understanding of the common law culture and legal concepts used in business. It engenders a thorough understanding of the basic common law concept of the legal enforceability of promises and its limits and provides knowledge of the basic doctrines of misrepresentation, illegality and discharge and a basic introduction to legal and equitable remedies. It imparts sensitivity to the modes by which the common law develops rules and adapts them to business needs and to changing community expectations. Students will develop problem-solving skills through detailed and critical analysis of the way judges have gone about solving practical problems. The knowledge and skills that students acquire in this course will provide them with a solid foundation for further complex legal study.

ATAX0105 Accounting 1
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

This course addresses the related notions of wealth and income, and the ways in which they are defined and realised through accounting practice. Against this background, students are introduced to: * the objectives and characteristics of financial information and reporting * the nature of accounting transactions and the design and functioning of record keeping systems, particularly concentrating on the accounting cycle v's the operating cycle of business * accounting systems maintained by merchandising firms and inventory control methods * modes of processing specific items and transactions affecting cash, receivables and payables, inventory and depreciable 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. This includes rule making and dispute resolution. 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 introduces students to compliance models and compliance costs. It 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

This course is concerned with one of the principal statutory extensions to the concept of income at general law - capital gains taxation. Our study begins with an examination of the background leading to the introduction of the regime. We then examine each of the following topics:* the structure and principal features of Parts 3-1 and 3-3 of the Income Tax Assessment Act, 1997; * particular features of the capital gains tax regime; and* concessions and exemptions (including the main residence exemption).

ATAX0110 Accounting 2
Board of Studies in Taxation
Staff Contact: School Office
UOC6 TBA

This course addresses financial accounting practice in the context of the contemporary Australian institutional and regulatory environment. It builds upon the introduction to accounting provided in ATAX 005 Accounting 1. It examines both traditional accounting rationale and the regulation of accounting practice. Against this background students prepare and analyse accounting reports (including the Profit & Loss Statement, Balance Sheet and Statement of Cash Flows), and are exposed to issues and controversies related to these reports. This course also introduces the student to management practices and the use of computer based spreadsheets.

ATAX0113 Taxation of Companies,Trusts and Partnerships
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

This course deals with the taxation of companies, partnerships and trusts, the key structures for business and investment in Australia. This comparative treatment emphasises a coherent understanding of the tax structures and a critical appreciation of the reasons for them. The Ralph proposals for a unified entities regime highlight the divergences. The course deals with practical problems arising from concepts of legal personality (or the lack of it), dual tax at the entity and member level, including the various distribution rules and operation of company franking mechanisms. Students should have completed or be enrolled in ATAX0009 The Law of Companies, Trusts and Partnerships.

ATAX0116 Critical Perspectives and Ethics
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

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 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

The primary focus of the course is 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

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

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 Entities
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

Companies, trusts and partnerships 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 entities.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.The corporate model is contrasted with taxing models for partnerships and trusts.

ATAX0304 International Comparative Taxation
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

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 and, in particular, the operation of Australia's DTAs with the United States and Singapore.

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 ATAX 0321/0421 Taxation of Innovative Financial Products. This course complements ATAX 0303/0403 Taxation of Entities.

ATAX0308 International Tax: Anti-Avoidance
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

This course exposes students to those aspects of the law which are specifically relevant to anti-avoidance aspects 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 companies ('CFC') rules(ii) foreign investment fund ('FIF') rules (iii) transferor trust rules and (iv)the thin capitalisation and debt creation 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, loan securities, 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

This course is intended to provide students with a comprehensive knowledge of the law relating to the taxation of taxpayers and industries which are subject to 'special' tax rules. The course is also intended to provide a critical understanding of the issues relating to the adoption of these 'special' tax rules. In particular, the course evaluates the desirability and the effectiveness of the tax system as a vehicle for delivering social welfare and other government benefits (including support and assistance to industry) and examines the scope of, and practical issues relating to, the doctrine of tax expenditures. The course includes examination of the taxation of primary production, mining and petroleum, intellectual and industrial property, research and development and superannuation.

ATAX0318 Complex Corporate Structures
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

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 group consolidation and partial consolidation provisions (like losses). It covers 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

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 opitons, 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

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

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.

ATAX0401 Tax Policy
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1 S2

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 Entities
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

Companies, trusts and partnerships 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 entities.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.The corporate model is contrasted with taxing models for partnerships and trusts.

ATAX0404 International Comparative Taxation
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

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 and, in particular, the operation of Australia's DTAs with the United States and Singapore.

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 ATAX 0321/0421 Taxation of Innovative Financial Products. This course complements ATAX 0303/0403 Taxation of Entities.

ATAX0408 International Tax: Anti-Avoidance
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S1

This course exposes students to those aspects of the law which are specifically relevant to anti-avoidance aspects 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 companies ('CFC') rules(ii) foreign investment fund ('FIF') rules (iii) transferor trust rules and (iv)the thin capitalisation and debt creation 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 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.

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, loan securities, 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

This course is intended to provide students with a comprehensive knowledge of the law relating to the taxation of taxpayers and industries which are subject to 'special' tax rules. The course is also intended to provide a critical understanding of the issues relating to the adoption of these 'special' tax rules. In particular, the course evaluates the desirability and the effectiveness of the tax system as a vehicle for delivering social welfare and other government benefits (including support and assistance to industry) and examines the scope of, and practical issues relating to, the doctrine of tax expenditures. The course includes examination of the taxation of primary production, mining and petroleum, intellectual and industrial property, research and development and superannuation.

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.

ATAX0417 International Financial Centres
Board of Studies in Taxation
Staff Contact: School Office
UOC6 TBA

This course examines the use of international financial centres for the purpose of conducting specific transactions such as captive insurance activities, in-house banking functions and in-house royalty arrangements.Countries considered include the USA, UK, Singapore and the Netherlands and more exotic locations such as the Cook Islands, Cayman Islands and the British Virgin Islands.Australian responses such as CFC/FIF measures and the application of Part IVA will be considered.Materials will be provided through an association with the Institute for Advanced Studies based in Europe.

ATAX0418 Complex Corporate Structures
Board of Studies in Taxation
Staff Contact: School Office
UOC6 S2

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 group consolidation and partial consolidation provisions (like losses). It covers 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

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 opitons, 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

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

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.

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: R Armstrong
UOC6 S1 S2 X1

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 TBA

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 X1

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.

AVIA5010 Private Pilot Licence Practical and Theory (PPL)
Department of Aviation
Staff Contact: G Clynick
UOC12 S1 S2

Conducted in two full time blocks of 6 and 12 weeks, this practicum covers the theory required for the issue of a Civil Aviation Safety Authority (CASA) Private Pilots Licence (PPL) qualification. Study areas include Pre Command theory, Basic Aeronautical knowledge, PPL Theory, Introduction and PPL flight training.

AVIA5011 Commercial Pilot Licence
Department of Aviation
Staff Contact: G Clynick
UOC12 S1
Prerequisite/s: AVIA5010

Conducted in a single full time block of 20 weeks, this practicum covers the theory required for the issue of a Civil Aviation Safety Authority (CASA) Commercial Pilots Licence (CPL), Night rating (NVFR) and multi engine type endorsement.

AVIA5012 Instrument Rating & Theory
Department of Aviation
Staff Contact: G Clynick
UOC6 S2
Prerequisite/s: AVIA5011

Conducted in a single full time block of 9 weeks, this practicum covers the theory required for the issue of a Civil Aviation Authority (CASA) Multi Engine Command Instrument Rating (CIR)

AVIA5013 Grade Three Instructor Rating
Department of Aviation
Staff Contact: G Clynick
UOC6 S2
Prerequisite/s: AVIA5011, AVIA5012

Conducted in a single full time block of 9 weeks, this practicum covers the theory required for the issue of a Civil Aviation Authority (CASA) Grade III Instructor Rating (Fixed Wing)

AVIA5014 Airline Transport Pilot Licence Theory
Department of Aviation
Staff Contact: L Sales
UOC6 S1 S2
Prerequisite/s: AVIA5011, AVIA5012

This course addresses the theory requirements for the issue of an Australian Airline Transport Pilot's Licence (ATPL). Conducted on a full time basis over 8 weeks, the course culminates in the sitting of CASA conducted exams.

AVIA5018 Aviation Human Factors
Department of Aviation
Staff Contact: G Braithwaite
UOC6 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

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: G Braithwaite
UOC6 TBA

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: G Braithwaite
UOC6 TBA

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.

AVIA5023 Management of Incidents and Accidents
Department of Aviation
Staff Contact: J Guselli
UOC6 TBA

In any industrial process, incidents and accidents can happen. There severity can range from inconvenient to catastrophic and the aviation industry must deal with these events regularly. This course examines successful contemporary strategies to cope with such occurences. In particular, components of first response, necessary actions and on-site management are explored in detail. Aspects of systems stabilisation and the expeditious return to normal operations are also covered. The course delivers an in-depth analysis of the simultaneous elements of media management, post stress incident management and the development remedial actions that will prevent recurrence.

AVIA5028 Airline Marketing Management
Department of Aviation
Staff Contact: R Robertson
UOC6 X1

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: P Elwin
UOC3 S2

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 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 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: G Braithwaite
UOC3 TBA

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.

BENV7001 Postgraduate Research Design and Methodology
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW2 S1

An introduction to the nature and purpose of research and its role in problem solving and theory in the built environment disciplines. Discussions of various approaches to research. Reliability, validity and other principles of research. A review of the principle research methods and examples of their use. Topic definition, research design, research planning and time management, literature review, data collection and analysis, thesis structure, writing, presentation of research seminars and research papers.

BENV7002 Quantitative Methods in Built Environment
Faculty of the Built Environment
Staff Contact: School Office
UOC6 HPW2 S1

Deals extensively with the methodology of survey research and applications of basic and multi-variate statistical techniques in the analysis of data. Instruction in the uses of the Statistical Package for Social Sciences (SPSS), which aids students in the analysis of data, is also included.

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: J Plume
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: S Peter
UOC6 HPW3 S2
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: M Yip
UOC6 HPW3 S2
Prerequisite/s: BENV7142

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.

BENV7144 Building Virtual Precincts
Faculty of the Built Environment
Staff Contact: S Peter
UOC6 HPW3 S2
Prerequisite/s: BENV7142

This course will allow students who are already competent at building 3D computer models to use those skills to help build a computer model of a "lost" city precinct. Assessment will be based on one major project involving the creation of a computer model of part of the "lost city" precinct.

BENV7145 Advanced Multimedia
Faculty of the Built Environment
Staff Contact: D Utian
UOC6 HPW3 S2
Prerequisite/s: BENV7142

This course explores a range of advanced multimedia concepts and issues. This will include creating interactive 3D environments, exporting information created on the fly, controlling video and animation, and programming. Students are expected to be adept at the material covered in the prerequisite course.

BENV7146 Advanced Webpage Design
Faculty of the Built Environment
Staff Contact: S Peter
UOC6 HPW3 S2
Prerequisite/s: BENV7140

This course explores a range of issues and technologies relating to the creation and maintenance of websites. Topics will include: an analysis of web Search Engines; Cascading Style Sheets (CSS); Dynamic HTML (DHTML); and Active Server Pages (ASP). Students are expected to be adept at the material covered in the prerequisite course.

BENV7190 People and Urban Space
Faculty of the Built Environment
Staff Contact: J Lang
UOC6 HPW2 S2
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.

BENV7605 Research Seminar 1
Planning and Urban Development
Staff Contact: B Judd
UOC3 S1 S2

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: B Judd
UOC3 S1 S2

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: G Argyrous
UOC3 HPW3 S2

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: R Freestone
UOC3 HPW3 S1

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: S Harris
UOC6 HPW4 S1

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: S Thompson
UOC6 HPW6 S2

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: S Thompson
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: P Murphy
UOC6 HPW3 S1 S2

This course introduces how economic processes influence (1) the structure and performance of the economies of regions and urban centres; and (2) the structure and patterns of changes in land uses within urban centres, with specific reference to large urbanised regions. Topics covered include: factors driving regional and urban economic performance; urban hierarchies and inter-urban competition; economics of urban size; land rent, land uses, land prices; regional

population densities; employment and service location. The basic theory will be taught using Australian case studies.

BENV7715 Social Planning
Faculty of the Built Environment
Staff Contact: S Thompson
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: P Williams
UOC3 HPW3 S2

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: P Murphy
UOC6 HPW3 S1

This course examines preoccupations in the management of large urbanised regions and the range of public policy measures available to influence structure and process. It is assumed that metropolitan policy provides a framework within which local government decisions on land use, and the work of agencies which supply urban infrastructure, is framed. Topics include: population densities; commercial centres; industrial land uses; transportation; environmental quality; tools for management of metropolitan growth and change; political and administrative systems and issues. The focus will be on Australian cities - especially Sydney - but some cross-national material will be used.

BENV7719 Planning in Practice
Faculty of the Built Environment
Staff Contact: P Williams
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
UOC3 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.

BIOC5318 Graduate Diploma (Biochemistry)
School of Biochemistry and Molecular Genetics
Staff Contact: School Office
Enrolment requires school approval
UOC36 S1 S2

BIOC5319 Graduate Diploma (Biochemistry)
School of Biochemistry and Molecular Genetics
Staff Contact: School Office
Enrolment requires school approval
UOC18 S1 S2

BIOC6308 Postgraduate Qualifying (Biochemistry) Full-Time
School of Biochemistry and Molecular Genetics
Staff Contact: V Murray
Enrolment requires school approval
UOC48 S1 S2

Similar in content and standard to BIOC4318 Biochemistry Honours and BIOC4428 Molecular Biology Honours but designed specifically for students who cannot regularly attend the University.

BIOC6318 Postgraduate Qualifying (Biochemistry) Part-Time
School of Biochemistry and Molecular Genetics
Staff Contact: V Murray
Enrolment requires school approval
UOC24 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.

BIOM5002 Thesis Part B
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC9 S1 S2

Thesis topic for BE(Mech)/MBiomedE students only.

BIOM9010 Biomedical Engineering Practice
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC3 HPW2 S2

Introduction to clinical situations in hospitals. Presentation of guest lectures by eminent people working in this field. Lecture topics include cardiology, neurology, orthopaedics, rehabilitation.

Note/s: Compulsory for all students.

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.

BIOM9012 Biomedical Statistics
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 HPW3 TBA

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.

BIOM9018 Project Report (18 Credits)
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC36 S1 S2

Projects are undertaken at the Graduate School or other relevant institutions towards the end of the course. Topics are chosen in collaboration with a supervisor from the Graduate School.

BIOM9027 Medical Imaging
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 HPW4 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.

BIOM9027 Medical Imaging
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 HPW4 TBA

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 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.

BIOM9040 Analogue Electronics for Biomedical Engineers
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 HPW3 TBA

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.

BIOM9050 Microprocessors and Circuit Design for Biomedical Engineers
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 HPW4 TBA

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: School Office
UOC6 HPW3 S2

Fluid mechanics of unsteady flow. Fundamentals of biological fluid flow by way of the governing equations. Kinematics and dynamics, viscous and inertial flow, boundary layers, separation, physiological flows (cardiac, vascular, pulmonary, urinary, etc.) and flow in artificial organs. Emphasis on physical rather than mathematical understanding of the relevant phenomena, to allow realistic appraisal of the nature of flow in a given organ.

BIOM9332 Biocompatibility
Graduate School of Biomedical Engineering
Staff Contact: S Sadler
UOC6 HPW3 S2

Interaction of biological fluids and cells with foreign surfaces, in vitro tests to assess biocompatibility and thrombogenicity, current status of biocompatible materials as applied to extracorporeal systems, surgical implants and prosthetic devices.

BIOM9410 Regulatory Requirements of Biomedical Technology
Graduate School of Biomedical Engineering
Staff Contact: 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.

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 laboratories (biochemistry, haematology, immunology, histology). Engineering solutions to the automation of chemical and biochemical assays, design and development of instrumentation, limitations of automated systems. Data recording, tracking and validation. Routes to innovation in a clinical laboratory.

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.

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

Healthcare information and communications, including telemedicine, medical informatics, networks and privacy. Data collection, medical coding and classification. Standards for medical data interchange. Aspects of database design, client/server topologies.

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 standard PASCAL and in Delphi for Windows; object oriented program design; event driven programming in a graphical environment; database structures and interfacing.

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: School Office
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 S1 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.

BIOM9602 Biomedical Applications of Microcomputers 2
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 S2

interview. Data communication; serial and parallel ports; BIOS and DOS interrupts; interfacing to external devices; stepper motor control. Implementation and analysis of a range of microcomputer-based biomedical applications, eg. variable rate infusion pump, physiological reaction-time monitoring system; measurement of coronary sinus flow, temperature control; position control; operation of intra-aortic balloon pump.

Note/s: A reasonably advanced background in microprocessors is required. Entry to course is by.

BIOM9603 Image and Flow Cytometry
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 S2

Technology, techniques and uses of flow and image cytometry. Flow and cytometers (analysis and cell sorting), image analysis and cell counting from slides. Preparation and staining of cells. Data acquisition and analysis. Applications in medical research and diagnosis.

Note/s: Basic electronics/computing background required.

BIOM9612 Medical Instrumentation
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC10 HPW5 S2
Prerequisite/s: BIOM9040

A critical comparative survey 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. Includes laboratory practicals.

BIOM9621 Biological Signal Analysis
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC6 HPW3 S1

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.

BIOM9812 Thesis Part C
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC18 HPW9 S2

For BE(Elec)/MBiomedE students only. This comprises the third session of the thesis component for the BE(Elec)/MBiomedE degree course. Each student is required to submit a final thesis on their overall project (BIOM5910 Thesis A, BIOM5911 Thesis B and BIOM9812 Thesis C) by the Tuesday of the fourteenth week of the session.

BIOM9912 Project Report
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC18 S1 S2

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.

BIOM9922 Masters Thesis
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC12 S1 S2

BIOM9932 Research Project C
Graduate School of Biomedical Engineering
Staff Contact: School Office
UOC12 S1 S2

BIOS9001 Fundamental Knowledge in Environmental Management Ecology
School of Biological Science
Staff Contact: P Banks
UOC6 HPW45 S2 X1

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 Science
Staff Contact: P Adam
UOC3 HPW21 X2

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.

BIOS9011 Essential Skills for Research Students (Post-Graduate Students Only)
School of Biological Science
Staff Contact: School Office
Enrolment requires school approval
UOC6 S1 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 requirments for Honours in biology or other discpline area, is required from enrolment in this course.

BIOS9917 Alternative Higher Degree Qualifying Program (Full-time)
School of Biological Science
Staff Contact: D Sandeman
Enrolment requires school approval
UOC21 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

BIOS9919 Alternative Higher Degree Qualifying Program (Part-time)
School of Biological Science
Staff Contact: D Sandeman
Enrolment requires school approval
UOC10.5 S1 S2

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

BIOT5013 Practical Biotechnology
Department of Biotechnology
Staff Contact: P Rogers
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.

BIOT7010 Reading List Biotechnology (Microbiology)
Department of Biotechnology
Staff Contact: School Office
Enrolment requires school approval
UOC6 S1 S2

BIOT7020 Reading List Biotechnology (Biochemistry)
Department of Biotechnology
Staff Contact: School Office
Enrolment requires school approval
UOC6 S1 S2

BIOT7030 Advanced Biotechnology
Department of Biotechnology
Staff Contact: S Mahler
Enrolment requires school approval
UOC6 HPW3 S1 S2
Corequisite/s: PHPH5471

This course will cover the production and characterisation of biopharmaceuticals. Production involving chemical and enzymatic peptide synthesis, recombinant production in E.coli, yeast, baculovirus and mammalian cells and associated purification processes will be covered. Regulatory considerations important in the validation of fermentation and recovery processes, the purity of final product, and the design of facilities will also be covered. Patent issues relevant to such products and other aspects of licensing business considerations will be addressed, as well as case studies of current production processes.

BIOT7040 Biotechnology Principles
Department of Biotechnology
Staff Contact: S Mahler
Enrolment requires school approval
UOC6 HPW5 S1 S2

This course is designed to provide students who have not previously studied biotechnology with sufficient training in the field to complete the MSc (Biopharmaceuticals). Aspects of the application of gene cloning techniques for the production of recombinant proteins from a range of host cells, growth, product formation and recovery of microbial products, bioreactor design and operation, monoclonal antibody and gene probe technology will be covered.

BIOT7050 Biopharmaceuticals Project (Major)
Department of Biotechnology
Staff Contact: S Mahler
Enrolment requires school approval
UOC12 HPW8 S1 S2

An experimental or technical investigation or design project in the general field of biotechnology.

BIOT7051 Applied Genetics
Department of Biotechnology
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.

BIOT7061 Peptide and Protein Technology
Department of Biotechnology
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 Production of Recombinant Products - Module 5 - Distance Education M.App.Sc. in Biopharmaceuticals
Department of Biotechnology
Staff Contact: School Office
Enrolment requires school approval
UOC6 S1 S2

BIOT7071 Biochemical Engineering
Department of Biotechnology
Staff Contact: P Rogers
Enrolment requires school approval
UOC6 HPW5 S1

Design of reactors; range of biocatalysts from free enzymes to immobilized cells; heat and mass transfer, scale-up, economic feasibility studies as applied to bioprocesses; design of equipment and facilities for sterile operation and to meet recDNA guidelines; downstream processing, design and operation; instrumentation and control; use of computer-linked systems; mathematical modelling and bioprocess optimisation. Detailed examples of bioprocesses including: amino acid production, single cell protein and liquid fuels, antibiotics and secondary metabolites, recombinant protein production, growth and product formation from mammalian and plant tissue cultures. Patent, regulatory and commercial aspects of bioprocesses are reviewed.

BIOT7080 Principles of Fermentation and Downstream Processing - Module 6 - Distance Education M.App.Sc.
Department of Biotechnology
Staff Contact: School Office
Enrolment requires school approval
UOC6 S1 S2

BIOT7081 Environmental Biotechnology
Department of Biotechnology
Staff Contact: L Foster
Enrolment requires school approval
UOC6 HPW5 S2

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.

BIOT7090 Monoclonal Antibody Technology - Module 7- Distance Education M.App.Sc. in Biopharmaceuticals
Department of Biotechnology
Staff Contact: School Office
Enrolment requires school approval
UOC6 S1 S2

BIOT7091 Applied Cell Culture
Department of Biotechnology
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.

BIOT7110 Bioengineering Principles
Department of Biotechnology
Staff Contact: P Doran
Enrolment requires school approval
UOC6 HPW3 S1

A course designed to provide an introduction for students in the MSc Biotech program who have not previously undertaken any bioengineering studies. Introduction to quantitation. Units and dimensions. Steady state and differential balances as a basis for quantification of complex real systems. Concepts in rate processes and kinetic analysis with application to biological systems. Experimental determination of rate data. Correlation of simple lumped rate processes and simultaneous distributed processes and the concepts involved in dimensionless numbers. Laminar and turbulent flow. Mixing theory. Process vessel reactor models. Fluid viscosity, Newtonian and non-Newtonian fluids, convective and molecular transport processes. Heat and mass transport, film coefficients. Quantification of complex systems. Empirical and mechanistic models in biological systems.

BIOT7120 Regulatory Considerations, Patent Issues and Licensing - Module 8 - Distance Education M.App.Sc.
Department of Biotechnology
Staff Contact: School Office
Enrolment requires school approval
UOC6 S1 S2

BIOT7123 Biotechnology Project
Department of Biotechnology
Staff Contact: P Rogers
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.

BIOT7150 Biotechnology Major Project - M.Sc. in Biopharmaceuticals - Distance Education
Department of Biotechnology
Staff Contact: School Office
UOC12 S1

BIOT7210 Food Biotechnology: Principles
Department of Biotechnology
Staff Contact: P Rogers
Enrolment requires school approval
UOC6 S1 S2

The course covers the basic principles in food biotechnology including techniques of genetic manipulation of microorganisms, principles of cell culture, bioreactor design, operation and control for the food industry, the use of bacteria in the production of new and novel foods, the use of yeast and fungi in foods, and the principles involved in developing probiotics and functional foods. Examples are taken from the food industry where the principles of food microbiology and bioprocess engineering are both essential to an understanding of food process and product innovation.

BIOT7220 Food Biotechnology: Applications
Department of Biotechnology
Staff Contact: P Rogers
Enrolment requires school approval
UOC6 S1 S2

The course reviews a range of applications in the food industry where food biotechnology principles are involved. These include: the applications of the principles of biocontrol in food production and the extension of shelf life, the application of enzymes in food production, the use of molecular diagnostic and analytical procedures for food monitoring, new technologies in the treatment and utilization of food processing wastes, the applications of both plant biotechnology and animal biotechnology for enhanced food production and the new developments and implications of transgenic plants and animals.

BIOT7230 Food Biotechnology: Management
Department of Biotechnology
Staff Contact: P Rogers
Enrolment requires school approval
UOC6 S1 S2

The course is designed to develop management skills related to biotechnology-based innovations in the food industry. It provides an overview and analysis of the Australian and international food industry as well as covering the principles of economic feasibility analysis for new opportunities and strategies for effective R&D, marketing and commercialization to exploit these opportunities. Intellectual property and patenting, regulatory aspects (novel foods, applications of gene technology in foods) are also covered as well as a comparative study of food standards in Australia and internationally. A series of case studies on new food biotechnology products and processes is designed to integrate the various concepts developed in the course.

BIOT8010 Graduate Seminars
Department of Biotechnology
Staff Contact: School Office
Enrolment requires school approval
UOC3 HPW2 S1 S2

CEIC5000 Major Project
School of Chemical Eng and Industrial Chemistry
Staff Contact: School Office
UOC12 S1 S2

A substantial project on some aspects of chemical engineering, industrial chemistry, polymer science, fuel technology or biological process engineering.

CEIC5010 Minor Project
School of Chemical Eng and Industrial Chemistry
Staff Contact: School Office
UOC6 S1 S2

A minor investigation on some aspect of chemical engineering, industrial chemistry, polymer science, fuel technology or biological process engineering.

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.

CEIC5890 Graduate Colloquia
School of Chemical Eng and Industrial Chemistry
Staff Contact: School Office
UOC12 S1 S2

Colloquia on research developments in the School of Chemical Engineering and Industrial Chemistry. Students are required to participate actively in the colloquia and give at least one dissertation based on their own investigations.

CEIC5900 Specialist Lectures
School of Chemical Eng and Industrial Chemistry
Staff Contact: School Office
UOC12 S1 S2

CEIC5930 Safety in Laboratories
School of Chemical Eng and Industrial Chemistry
Staff Contact: School Office
UOC2 S2

Storage of hazardous materials. Disposal of hazardous materials. Air pollution and ventilation. Electrical and mechanical aspects of machinery. General laboratory safety. Microbiological safety precautions. Toxicology. Carcinogens and safety. Ionising and non-ionising apparatus. Protective clothing. Precautions against hearing loss. Chemistry and physics of flames. Fire precautions in the laboratories. Fire fighting training.

CEIC7001 The Aluminium Industry
School of Chemical Eng and Industrial Chemistry
Staff Contact: M Skyllas-Kazacos
Enrolment requires school approval
UOC6 S1 S2 X1

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 X1

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 X1

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 X1

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 X1

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 X1

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 X1

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 S1 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 S1 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: T Tran
Enrolment requires school approval
UOC6 HPW3 S1 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 S2

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 S2

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 S2

The aims of this course are to introduce issues which affect business decisions encountered by management in the chemical industry. Topics include domestic and export markets, market growth, the lemming effect and product life cycles. The distinction between issues and problems using PVC and the chlorine debate is discussed. Factors affecting plant life: scale up, retrofitting, competing technologies etc. Environmental and compliance issues including green chemistry. The petrochemical industry and in particular the polymer manufacturing industry is used to illustrate the main areas. Industry speakers and site visits are used to maintain relevance and topicality.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 S2

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 II
School of Chemical Eng and Industrial Chemistry
Staff Contact: F Lucien
Enrolment requires school approval
UOC6 HPW3 S1 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 S2

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 S2

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 S2

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 S2

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: J Stubington
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: R Amal
Enrolment requires school approval
UOC6 HPW3 S1

This course deals with conventional and advanced separation processes for water and air pollution control, effluent treatment and waste minimisation in the Process Industries. Topic areas covered will be selected from: Gravity Separations, Filtration Processes, Sorption Processes, Extraction Processes, Membrane TEchnology, Biological Processes, Design, Control and Monitoring, Clean Production Technologies.Management Issues: Sustainability, decision making, environmental management system (ISO14001), life cycle analysis, material and flux analysis.

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 S2

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: R Amal
Enrolment requires school approval
UOC6 HPW3 S1 S2

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.

CEIC8342 Energy Management in the Process Industries
School of Chemical Eng and Industrial Chemistry
Staff Contact: J Stubington
Enrolment requires school approval
UOC6 HPW3 S1 S2

Examination of all aspects of the energy management process engineering plants and the impact on environmental emissions. Topics to be covered include: combustion of solid, liquid and gaseous fuels, energy balances around, furnaces, energy audits, heat return and heat recovery in process plants.

CEIC8350 Industrial Water & Wastewater Engineering
School of Chemical Eng and Industrial Chemistry
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S1 S2

Environmental consequences of water pollution. Water quality criteria and regulations related to industrial use and disposal. Water sources and requirements of industry. Theoretical and practical aspects of treatment methods, including screening, sedimentation, oil separation, coagulation and flocculation, filtration, biological treatment, adsorption, ion exchange, membrane processes. Strategies for industry including waste surveys, prevention at source, correction before discharge water reuse. Economic aspects. Seminars. Factory visits/laboratory.

CHEM5003 Special Program (Chemistry Postgraduate Qualifying)
School of Chemistry
Staff Contact: P Southwell Keely
UOC48 S1 S2

CHEM7023 Master of Chemistry (Food and Drug) Project
School of Chemistry
Staff Contact: P Southwell Keely
UOC12 S1 S2

CHEM7111 Quality Assurance and Laboratory Practice
School of Chemistry
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 Chemistry
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 Chemistry
Staff Contact: School Office
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 Chemistry
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 Chemistry
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 Chemistry
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 Chemistry
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 Chemistry
Staff Contact: School Office
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 Chemistry
Staff Contact: I Dance
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
Staff Contact: H Hendrischke
UOC8 HPW2 S2

Introduces students to the variety of cultures and society within China, particularly under the impact of economic growth and the policies of the reform era. The size and scale of China, and the inherent variation in social, political, cultural and economic circumstances and development across its thirty-one provincial-level units (including provinces, autonomous regions and municipalities) means that China can be regarded as a continental system rather than a single, homogenous entity. Students will explore the theoretical and practical implications of this regional diversity.

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
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
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
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.

CHIN5009 Chinese for Commercial Use
Department of Chinese & Indonesian
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.

CHIN5900 Chinese-English Translation Project
Department of Chinese & Indonesian
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 Program
Department of Chinese & Indonesian
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, legal and technical. 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
Staff Contact: Y Zhong
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
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.

CHIN5905 Issues in Chinese Sociolinguistics
Department of Chinese & Indonesian
Staff Contact: Y Fang
UOC8 HPW2 S2

Examines a diverse range of issues in Chinese sociolinguistics, including such topics as language planning in China and Taiwan, language variations, bilingualism, Chinese dialectology, Chinese discourse and textual analysis. Students will be expected to complete a project addressing specific issues and applying theories introduced in this course.

CHIN5906 Chinese Business and Management
Department of Chinese & Indonesian
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-Language Management Case Studies
Department of Chinese & Indonesian
Staff Contact: H Hendrischke
UOC8 HPW2 S1
Excluded: CHIN5008

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 and to complete individual projects.

Assumed knowledge: Third-year level proficiency in Chinese.

CHIN5909 Chinese for Commercial Use
Department of Chinese & Indonesian
Staff Contact: H Hendrischke
UOC8 HPW2 S2
Excluded: CHIN5009

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. Requires completion of individual projects by all students.

Assumed knowledge: Third-year level proficiency in Chinese.

CHIN5910 Chinese Poetry and Poetics: Theories of Translation
Department of Chinese & Indonesian
Staff Contact: J Von Kowallis
UOC8 HPW2 S1

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.

CMED9500 Epidemiology
School of Community Medicine
Staff Contact: J Kaldor
UOC6 HPW3 S1 S2

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. Application of these topics in areas such as questionnaire design, conducting and managing studies, problems relating to research grants will be covered in CMED9513 Applied Epidemiology.

CMED9502 Statistics for Public Health
School of 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.

CMED9513 Applied Epidemiology
School of Community Medicine
Staff Contact: R Richmond
UOC4 HPW2 S2
Prerequisite/s: CMED9500

This courses builds on CMED9500 Epidemiology, using practical examples of the application of epidemiology in field settings. Themes will include the development and validation of measures for epidemiological studies, the conduct of research in practice, evaluation methods and the application of study designs in the real world, ethics of research, and acute epidemiological investigation.

CMED9516 Introduction to Public Health
School of Community Medicine
Staff Contact: A Bauman
UOC4 HPW2 S1

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.

CMED9517 Advanced Biostatistics and Statistical Computing
School of Community Medicine
Staff Contact: D Black
UOC4 HPW2 S2
Prerequisite/s: CMED9502

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.

CMED9518 Case Studies in Epidemiology
School of Community Medicine
Staff Contact: A Grulich
UOC4 HPW2 S2
Prerequisite/s: CMED9500

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.

CMED9519 Demography
School of 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.

CMED9539 Psychiatry of Old Age
School of Community Medicine
Staff Contact: B Draper
UOC6 TBA

This course deals with the major psychiatric disorders encountred 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.

CMED9540 Pharmacology
School of Community Medicine
Staff Contact: R Poulos
UOC6 TBA

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.

CMED9541 Rehabilitation
School of Community Medicine
Staff Contact: School Office
UOC6 TBA

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.

CMED9542 Healthy Aging
School of Community Medicine
Staff Contact: G Stathers
UOC6 TBA

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.

CMED9543 Organisation and Delivery of Services for Older People
School of Community Medicine
Staff Contact: C Poulos
UOC6 TBA

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.

CMED9544 Gerontology
School of Community Medicine
Staff Contact: R Poulos
UOC6 TBA

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.

CMED9546 Major Project
School of 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

CMED9547 Supervised Clinical Experience
School of 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 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.

CMED9548 Clinical Geriatrics 1
School of Community Medicine
Staff Contact: N Brennan
UOC6 TBA

Presentation of disease - specific features of presentation in old age; nonspecific syndromes: eg: immobility, falls. System disorders: eg haematological, renal. Also special senses: hearing, vision.

CMED9549 Clinical Geriatrics 2
School of Community Medicine
Staff Contact: P Gonski
UOC6 TBA

Presentation of disease - specific features of presentation in old age: nonspecific syndromes: eg incontinence, confusional states. System disorders: eg cardiac, respiratory, neuroloical, vascular, metabolic, bone, endocrine.

CMED9550 Clinical Examination
School of Community Medicine
Staff Contact: P Gonski
UOC0 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 Degree.

CMED9604 Alcohol and Other Drug Issues
School of Community Medicine
Staff Contact: R Richmond
UOC4 HPW2 TBA

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.

CMED9605 Health in Developing Countries
School of 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.

CMED9606 Women and Health
School of Community Medicine
Staff Contact: School Office
UOC4 HPW2 S2

Current issues relevant to the health of women, both consumer and provider perspectives. Common health risks facing women. Special needs in health and health care for particular populations of women. Traditional role of women as health carers, and the impact this has on health and health services. Short lectures, group discussions and student presentations. Assessment is a combination of marks given in written tutorial papers, end of session essay and group facilitation and class participation.

CMED9608 Rural Health Studies 1
School of Community Medicine
Staff Contact: D Sutherland
UOC4 S1 S2

Examine roles, needs, and particular health and welfare issues of rural general practitioner services; explore methods for professional development of rural GPs; study public health issues of particular relevance to rural general practice; study data collection and analysis to help identify rural health problems, their management and prevention; plan and evaluate the promotion of health, and prevention of disease through individual and community health education programs in rural communities.

Note/s: External course, 4 tele-conferences, one 2-day workshop mid-term.

CMED9610 Food and Nutrition Policy Studies
School of Medical Education
Staff Contact: L Bloomfield
UOC4 HPW2 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.

CMED9612 Environmental Health
School of Community Medicine
Staff Contact: J Frith
UOC4 HPW2 S2
Prerequisite/s: CMED9502

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.

CMED9618 Public Health Law and Ethics
School of Community Medicine
Staff Contact: P McNeill
UOC4 HPW2 TBA

The aim of this course is to consider the role of law and ethics and their appropriateness in responding to public health issues. There is a general discussion of the role of law and an exploration of ethics in the public domain rather than ethics as an individual issue (as it is usually conceptualised). The appropriateness of law, as an instrument to achieve public health goals, is then considered in relation to some key issues in public health. These issues are explored in their 'real-politic' situation: 'What are the political realities in giving effect to public health goals?'

CMED9619 Evaluation of Primary Health Care Services
School of Community Medicine
Staff Contact: G Therin
UOC4 S1 S2

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.

CMED9621 Hiv/Aids: Challenging and Changing Health Care Systems
School of 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.

CMED9626 Inequalities and Health
School of Community Medicine
Staff Contact: E Harris
UOC4 HPW2 S2 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 three 1 day workshops with teleconferences after each workshop.

CMED9627 Audit and Quality Assurance in Primary Care
School of Community Medicine
Staff Contact: J Frith
UOC4 S1 S2

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.

CMED9633 International Tobacco Control
School of Community Medicine
Staff Contact: R Richmond
UOC4 HPW2 TBA

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.

COMP4001 Object-Oriented Software Development
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: COMP9024

Assumed knowledge: Competancy in C. Note/s: Quota Applies. 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. Assessment will involve two short assignments and one substantial programming project to be carried out in small groups.

COMP4011 Web Applications Engineering
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 S1 S2
Prerequisite/s: 30 units of credit in level 3 COMP courses and an average of 75 over all COMP courses.

Web technologies and architectures. Design of Web-based applications: usability, scalability, security issues. Technologies for Web-based applications: web servers, databases, ACS toolkit. Lab: design and implementation of a substantial Web service.

COMP4111 Distributed Object Systems and Technology
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW6 TBA

Assumed knowledge: Programming skills in C++/JavaThis subject provides a comprehensive introduction to the underlying technologies and architectures used in real-life distributed object systems. The topics covered include object request brokers (CORBA), directory services, security services, distributed transaction processing, common application architectures, performance implications and reliability and fault tolerances.

COMP4131 Programming Language Semantics
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 TBA

COMP4141 Theory of Computation
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW4 S1
Prerequisite/s: 30 units of credit in level 3 COMP courses and an average of 75 over all COMP courses.

Computability: primitive recursive functions, computable functions, universal programs, undecidability, Church-Turing thesis, Turing machines, recursively enume rable sets and elementary recursive function theory; Complexity: the sets P and NP, NP-completeness and Cooks theorem. Logic: predicate logic and its unsatisfiability problem.

COMP4411 Experimental Robotics
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW5 S1
Prerequisite/s: 12 units of credit from COMP3### or 12 units of credit from COMP9###.

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: School Office
Enrolment requires approval
UOC6 HPW5 S2

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: School Office
Enrolment requires approval
UOC6 HPW4 S1
Excluded: COMP4412

Note/s: Permission of Instructor required. 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.

COMP9008 Software Engineering
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW4 S1
Excluded: COMP3111

Assumed knowledge: COMP9024Informal 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.

COMP9018 Advanced Graphics
School of Computer Science and Engineering
Staff Contact: School Office
Enrolment requires school approval
UOC6 S2

Assumed knowledge: Experience with OpenGL and Java.This course covers advanced topics in graphics and related technologies with a strong hands-on and interactive focus. Topics include: advanced features of OpenGL; 2D and 3D still, interactive and animated file formats; advanced modelling and animation techniques; detailed surface models; performance optimisation; radiosity; ray tracing and optimisations; Monte Carlo and metropolis rendering; volumetric rendering; image based rendering; interactivity; collision detection and 3D graphics hardware design. Students will be given the opportunity to present seminars on research areas of interest to them, as well as experiment with 3D graphics software.This course will be extremely interactive. You'll be expected to be involved.

COMP9020 Foundations of Computer Science
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW3 S1 S2

Sets, relations, function. Discrete probability. Combinatorics. Propositional logic, first-order predicate logic. Reasoning about programs: axiomatic semantics, pre/post-conditions, loop invariants. Order statistics. Recurrence relations. Application to searching and sorting. Probability. Programming in Haskell.

COMP9021 Principles of Programming
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW3 S1 S2
Excluded: COMP1811, COMP1021

This is a first programming subject. It provides an introduction to procedural programming in an object-oriented language (Java). Algorithmic processes: state, sequence, selection, iteration/recursion. Data modelling: atomic types, arrays, objects, inheritance. Introduction to fundamental data structures and algorithms. A brief introduction to Unix is also included. Lab: programming exercises and assignments.

COMP9022 Digital Systems Structures
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW3 S1 S2
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: G Whale
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.

COMP9101 Design and Analysis of Algorithms
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: COMP9024;
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 Compiling Techniques and Programming Languages
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW3 S2
Corequisite/s: COMP9024
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: School Office
UOC6 HPW3 S2
Prerequisite/s: COMP3111 or COMP9008

The B-Method is a rigorous mathematically based method for the development of reliable software. The method covers the complete software cycle from requirements analysis through specification, design, implementation, testing, maintenance, and re-use. The B-Method is supported by the B-Toolkit: a collection of tools that provide for specification animation, proof obligation generation, theorem proving, configuration management, code generation, and documentation. The B-method uses similar mathematical notation to Z, but does not use Z. Specifications are given in AMN (Abstract Machine Notation), which is a small abstract programming language. The B-Method is object based in the sense that systems of machines use a number of different forms of inheritance to control visibility and inherit operations. There is no dependence on a particular programming language, but the current code generator generates C. This course will explore the use of the B-Method and the B-Toolkit. The topics covered will include: The Abstract Machine Notation; Machine Composition; refinement; Implementation; The method of presentation will use case studies to present the method; laboratory exercises to use the Tools; a major project to apply all aspects of the method, and use of the tools.

COMP9151 Foundations of Concurrency
Staff Contact: Dr. K. Engelhardt
UC 6 HPW 5 S2
Prerequisites: COMP9024

Concurrency = processes + communication. Communication via shared variables vs message passing. Models of concurrency: true concurrency vs interleaving. Abstrations: atomicity, locks and barriers, semaphores, monitors, threads, RPC, rendezvous. Classical problems: mutual exclusion, dining philosophers, sleeping barber, termination detection, gravitational N-body problem

COMP9201 Operating Systems
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: COMP9024, COMP9022
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 systesm. Case studies drawn from UNIX, MS-DOS, Mach. Lab. programming assignments.

COMP9211 Computer Architecture
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: COMP9022
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: School Office
UOC6 HPW4 S1
Prerequisite/s: COMP9022
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 involing an MC68HC11-based target system, where both the hardware and the software divers for additional subsystems are designed, implemented, and tested.

COMP9231 Integrated Digital Systems
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW4 S2
Prerequisite/s: COMP2021 or COMP9022
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: School Office
UOC12 HPW4 TBA
Prerequisite/s: WA of 65 in COMP9201 or WA of 65 in COMP3231
Corequisite/s: COMP9211 or COMP3211

Note/s: Quota Applies (50). 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.

COMP9242 Advanced Operating Systems
School of Computer Science and Engineering
Staff Contact: School Office
UOC12 HPW4 TBA
Prerequisite/s: WA of 65 in COMP9201 or WA of 65 in COMP3231;
Corequisite/s: COMP9211 or COMP3211.

Note/s: Quota Applies (50). 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.

COMP9243 Distributed Systems
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: COMP3231 or COMP9201, COMP3331 or COMP9331

A detailed coverage of distributed systems, with a particular focus on operating systems issues: client-server paradigm, remote-procedure call as OS support for client-server; distributed shared memory, distributed memory coherency; distributed file systems; distributed process management, including load sharing and process migration; concurrency control; fault tolerance, recoverability and distributed transactions; naming; industry standards; case studies.

COMP9311 Database Systems
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW3 S1 S2
Corequisite/s: COMP9021

A first subject on data base management systems. Relational and ER data models; principles in database design; high level database languages such as relational algebra and SQL; procedural languages for interacting with databases; query processing; transaction management and a brief introduction to various advanced databases. This course may be offered in distance mode from 2001, depending on resources.

COMP9314 Next Generation Database Systems
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: COMP9024, COMP9311 or enrolment in program 8685

Detailed examination of current developments and future trends in database management systems and languages. The emphasis is on object-oriented database systems. Other topics are drawn from: deductive databases, temporal databases, multimedia databases, data warehousing, data mining, client/server systems, Web-based databases.

COMP9315 Database Systems Implementation
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: COMP9024, COMP9311 or enrolment in program 8685

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: School Office
UOC6 S2
Prerequisite/s: COMP9021 or COMP1021 or COMP1711 or COMP2811; and COMP9311 or COMP3311 or INFS5926 or INFS3608

Assumed knowledge: Programming skill to at lease the level of COMP9021/COMP1021.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.Workflows and eCommerce. Agents and eCommerce. eMarketplaces. Commercial Products and Architectures.

COMP9331 Computer Networks and Applications
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: COMP9021
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: School Office
UOC6 HPW3 S2
Prerequisite/s: COMP3331 or COMP9331

This subject 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). Advance Internet addressing: CIDR, VPN, NAT. In depth discussion of interior and exterior routing protocols, such BGP, OSPF. IP over ATM solutions: such as LANE, Classical IP over ATM. IP switching and MPLS. Mobile IP. Internet Multicasting. Overview of emerging switching and routing technologies, such as optical routing and Qos routing. There is a substantial network programming component in the assessable material, for which C programming knowledge is assumed.

COMP9333 Advanced Computer Networks
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: COMP9332

Note/s: Quota Applies (50).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.

COMP9414 Artificial Intelligence
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW4 S1
Corequisite/s: COMP9021
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: School Office
UOC6 HPW3 S1
Corequisite/s: COMP9024
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.

COMP9416 Knowledge Based Systems
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW3 TBA
Prerequisite/s: COMP9414 or COMP3411

Assumed knowledge: COMP9414 or COMP3411.This course introduces students to the basic concepts in knowledge-based systems and provides practical experience through project work. The topics covered include: knowledge representation and problem solving; knowledge acquisition and machine learning; knowledge level modelling, expert systems lifecycles and expert system shells. A major component of this subject is a project in which students work in 3 teams to build expert systems that act as agents in a competitive simulation game.

COMP9417 Machine Learning
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW3 TBA
Prerequisite/s: COMP9414 or COMP3411

Note/s: Excluded: COMP4416 (1996).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: School Office
UOC6 HPW3 S2
Excluded: COMP4444

Note/s: Assumed knowledge: COMP9024. 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: School Office
UOC6 HPW3 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.

COMP9517 Image Processing and Applications
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: 12 units of credit from COMP3### or 12 units of credit from COMP9###.

Note/s: Assummed Knowledge: COMP9024. Undergraduates need 2 level 3 courses or equivalent.Fundamental principles for visual representation and image processing. Techniques in image transform, enhancement, compression and segmentation, feature extraction, pattern recognition, multimedia processing and authoring, and scientific visualisation. Applications in communications, consumer electronics, medicine, management, entertainment, defence, robotics, and geophysics.

COMP9518 Pattern Recognition and Computer Vision
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: COMP9517

Principles of pattern recognition and computer vision; review of early processing. Pattern Recognition: classification techniques; structural and syntactic pattern recognition; document image analysis and character recognition; statistical pattern recognition. Computer Vision: 2D and 3D representation; model-based vision and image understanding; motion analysis and active vision; applications in medical imaging, robot vision, satellite imaging, multimedia.

COMP9519 Multimedia Authoring and Cooperative Agents
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW4 TBA
Prerequisite/s: COMP3331 or COMP9331
Excluded: COMP4012

Provides an introduction to multimedia computing and distributed multimedia systems. The subject includes multimedia and agent fundamentals; multimedia application, structures and organization; interactive multimedia software authoring basics; information management issues; and dynamic agent and distributed processing.

COMP9790 Principles of GNSS Positioning
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW5 TBA
Prerequisite/s: 18 units of credit of Level 3 Computer Science courses; Exclusion: GMAT4900

Note/s: This course is equivalent to GMAT4900 and is only available to students in stage 4. This course will introduce the student to reference coordinate systems and time systems, satellite orbital motion, signal propagation and satellite tracking observables. The principles of positioning using the current two Global Navigation Satellite Systems (GNSS) will be studied: the U.S. developed Global Positioning System (GPS) and Russia's Global Navigation Satellite System (GLONASS). The mathematical models for pseudo-range and carrier phase-based modes of positioning, for both single receiver (absolute) positioning and relative positioning implementations, will be developed. These principles will be illustrated using the Matlab GNSS toolkit, which allows the student to develop algorithms for real and simulated data processing. Local, regional and wide area differential positioning will also be considered. Land, marine and airborne positioning applications will be discussed.

COMP9791 Modern Navigation & Positioning Technologies
School of Computer Science and Engineering
Staff Contact: School Office
UOC6 HPW5 TBA
Prerequisite/s: Complete 18 units of credit of Level 3 Computer Science courses
Exclusion: GMAT4910

Note/s: This course is equivalent to GMAT4910. This course presents an overview of the various satellite-based and non-satellite navigation technologies and some of their applications. Various user receiver configutations, system augmentations an implementation issues will be analysed. These include: differential GPS (DGPS) schemes and services, real-time systems and their communciation links, pseudo-range and carrier phase-based techniques, pseudolites, and combined GPS/GLONASS positioning. In addition, the role of other sensors (such as gyros, accelerometers and inertial navigation systems (INS)) and ancillary data (such as digital maps) can play in navigation will be discussed. Data fusion techniques for integrating GPS (or GLONASS) with INS, such as Kalman Filtering, will be presented. Particular emphasis will be placed on the role such positioning technologies will play in Intelligent Transport Systems (ITS) and future L-Commerce applications. Students will gain hands-on experience with a variety of navigation technology.

COMP9910 Research & Management Skills
Staff Contact: Associate Professor A Nymeyer
Pam Mort

COMP9912 Project (24 Units of Credit)
School of Computer Science and Engineering
Staff Contact: School Office
UOC24 S1 S2

Students undertake a supervised research project equivalent to 4 lecture courses worth 6 UC 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 session to the School Office. A receipt will be issued.

Note/s: Available only to MCompSc students.

COMP9930 Readings in Computer Science & Engineering
Staff Contact: School Office
UC 6 S1 or S2

A seminar course analysing topical research papers in computer science and engineering.

Each participating student will be assigned a small number of related recent research paper.

These papers will be in the general area of the students' PhD research topic. The student will do a critical analysis of the papers and present it in a report and a seminar. At the seminar the student's analysis are discussed with peers and academic staff. The purpose is to help the student get started in the field, and learn to analyse and constructively criticise others' research. project.

COMP9945 Project Report (18 Units of Credit)
School of Computer Science and Engineering
Staff Contact: School Office
UOC18 S1 S2

Students undertake a supervised research project equivalent to 3 lecture courses worth 6 UC 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 session to the School Office. A receipt will be issued.

Note/s: Available only to MEngSc and MinfSc students.

CONS0001 Project Finance
Building Construction Management Program
Staff Contact: T Uher
UOC6 HPW3 S1

Selected techniques of investment analysis, mainly using the discounted cash flow method. Quantitative methods applying statistical and regression analysis techniques for the purpose of forecasting time series and investigating other data series. Sources of finance.

CONS0002 Human Resources Management
Building Construction Management Program
Staff Contact: M Loosemore
UOC6 HPW3 S1

Job design, specialisation and decentralisation, basis of grouping, span of control and liaison devices. Self-directing work groups and flexible manufacture. Reward policies, motivation and commitment. Personal development and group skills. Parties to industrial relations in Australia. History of industrial relations in the building industry. Statutory responsibilities of employers. Restructuring and reform in Australian industrial relations. Development and management of conflict. Human resource management theories.

CONS0003 Project Quality Management
Building Construction Management Program
Staff Contact: M Marosszeky
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: T Uher
UOC6 HPW3 S1

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: O Greste
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.

CONS0006 Property Management
Building Construction Management Program
Staff Contact: T Uher
UOC6 HPW3 S2

Property development process: evaluation, feasibility study; preparation, life cycle cost in building; disposal, marketing; property investment analysis. Building management: tenancy management; building maintenance; obsolescence; economics of refurbishment; commercial property management; strata title management; taxation in property management. Principles of sustainable development and their application.

CONS0007 Principles and Practice of Management
Building Construction Management Program
Staff Contact: J Kim
UOC6 HPW3 S1

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.

CONS0008 International Construction Practice
Building Construction Management Program
Staff Contact: T Uher
UOC6 HPW3 S2

A comparison of construction practices in various nations. The impact of local economic, labour and technical parameters on construction management. Staffing for international projects. International best practice.

CONS0009 Construction Planning and Control
Building Construction Management Program
Staff Contact: T Uher
UOC6 HPW3 S2

The concept of construction planning and control; planning and control techniques barchart, CPM, PERT, line of balance, multiple activity chart; computer based planning and control; applications of work study risk management. 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; contract administration of different phases of construction projects; options for project delivery; subcontracting; analysis of selected contracts; contract disputes, arbitration, mediation, litigation; contract claims; risk allocation in construction contracts; international contracting. Comparison of Australian and international construction contracts.

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: T Uher
UOC6 HPW3 S1

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 a large construction project. Detailed analysis of each stage of the project case study: Feasibility, Design and Documentation, Pre-construction, Construction and Commissioning. Case studies of major construction projects.

CONS0014 Project Management
Building Construction Management Program
Staff Contact: T Uher
UOC6 HPW3 S2

Introduction to the concept of project management; Project delivery strategies; Organisation of projects from design to commissioning; Project planning strategies; Quality management; Management of information. Project management theory. Role of project manager in sustainable construction.

CVEN7800 Urban Hydrology and Stormwater
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21 TBA
Corequisite/s: CVEN7819
Excluded: CVEN9832

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 TBA
Excluded: CVEN9832

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 TBA
Excluded: CVEN9835

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 TBA
Corequisite/s: CVEN7802
Excluded: CVEN9835

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 TBA
Prerequisite/s: CVEN7802
Excluded: CVEN9835

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 TBA
Excluded: CVEN9836

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 TBA
Excluded: CVEN9858

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 TBA
Corequisite/s: CVEN7819
Excluded: CVEN9860

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 TBA
Corequisite/s: CVEN7807
Excluded: CVEN9860

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 Studies
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21 TBA
Excluded: CVEN9861

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 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 engineering and environmental investigation.

CVEN7810 Electrical Methods in Groundwater Investigation
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21 TBA
Excluded: CVEN9861

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 TBA
Excluded: CVEN9862

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 TBA
Corequisite/s: CVEN7819
Excluded: CVEN9863

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 TBA
Excluded: CVEN9863

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 TBA
Excluded: CVEN9866

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 TBA
Corequisite/s: CVEN7820
Excluded: CVEN9867

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 TBA
Corequisite/s: CVEN7814, CVEN7815
Excluded: CVEN9867

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.

CVEN7817 Water in Mining Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21 TBA
Prerequisite/s: CVEN7807
Excluded: CVEN9871

Hydrological cycle and sources of mine water; mine dewatering strategies; groundwater flow into mines; consolidation and drainage of fine-grained material during dewatering; monitoring the effects of mining on regional groundwater resources.

CVEN7818 Channel and River Models
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW21 TBA
Corequisite/s: CVEN7815
Excluded: CVEN9871

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 TBA
Excluded: CVEN9875

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 TBA
Corequisite/s: CVEN7819
Excluded: CVEN9875

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 TBA
Prerequisite/s: CVEN7819
Corequisite/s: CVEN7824
Excluded: CVEN9876

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 TBA
Corequisite/s: CVEN7821
Excluded: CVEN9876

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 TBA
Prerequisite/s: CVEN7807
Excluded: CVEN9880

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 TBA
Excluded: CVEN9880

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 TBA
Excluded: CVEN9884

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 TBA
Corequisite/s: CVEN7825
Excluded: CVEN9884

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 TBA
Prerequisite/s: CVEN7825
Excluded: CVEN9885

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 TBA
Prerequisite/s: CVEN7825
Corequisite/s: CVEN7827
Excluded: CVEN9885

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 TBA
Corequisite/s: CVEN7815
Excluded: CVEN9890

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 TBA
Excluded: CVEN9891

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 TBA
Corequisite/s: CVEN7830
Excluded: CVEN9891

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.

CVEN8414 Transport Systems Part 1
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 TBA

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 TBA

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 TBA

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: P Hidas
UOC6 S1 S2

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

CVEN8798 Fundamentals of Geomechanics
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 TBA

Fundamentals of Geomechanics for geologists and other professionals who wish to work in geotechnical engineering, engineering geology adn 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 soils.

CVEN8799 Geotechnics Waste Disposal and Site Remediation
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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.

CVEN9414 Transport Systems Part 1
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3 TBA

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 TBA

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.

CVEN9421Fundamentals of Traffic Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3 TBA

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 TBA

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.

CVEN9701 Engineering Economics and Financial Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3 TBA

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 TBA

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 TBA

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 TBA

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.

CVEN9708 Asset Management
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3 TBA

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 TBA

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: K Irvine
UOC6 HPW3 S1

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 Methos in Civil Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3 TBA

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 TBA

An introductory course for those students with no previous knowledge of rock engineering.

CVEN9775 Numerical Methods in Geotechnical Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3 TBA

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 Underground Structures
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3 TBA

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.

CVEN9783 Pavement Materials
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3 TBA

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 HPW3 TBA

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 TBA

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 TBA

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 TBA

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 and Rock Slope Instability and Stabilisation
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3 TBA

Assessment of the stability, design and stabilisation of soil and rock slopes in civil and mining Engineering. Influence of geology and hydrogeology; site investigations, laboratory testing and field instrumentation; analysis of stability using limit equilibrium and numerical methods; gathering of geological data and stereographic presentation and analysis; design of slopes in soil and rock; stabilisation methods including geometry change, control of piezometric pressures, anchoring, retaining walls, reinforced soil; design of slopes in soft ground; design of slopes for earthquake; open cut mine slopes and probabilistic design; landslide risk assessment and zoning.

CVEN9792 Foundation Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3 TBA

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 TBA

The fundamentals of the effective stress concept, clay mineralogy, seepage analysis and Laplace Equation, basic and advanced theories of consolidation, nonlinearity and Biotls 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 TBA

Geotechnical engineering for embankment and concrete dams. Zoning of embankment dams. Weathering processes and profiles in valleys, Geotechnical questions associated with various geological environments Site investigations planning, and techniques, laboratory testing of soil and rock and selection of properties. Design specification and construction of filters. Stability analysis for embankment and concrete gravity dams. Foundation preparation, cleanup and grouting. Specification and quality control. Mine and industrial tailings dams. Monitoring and surveillance. Risk assessment methods.

CVEN9795 Design of Dams for Earthquake
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC3 HPW3 TBA

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 TBA

Fundamentals of Geomechanics for geologists and other professionals who wish to work in geotechnical engineering, 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 TBA

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.

CVEN9802 Structural Stability
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA

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 TBA
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 TBA
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.

CVEN9895 Fundamental Knowledge in Environmental Management: Engineering
School of Civil and Environmental Engineering
Staff Contact: School Office
UOC6 HPW3 TBA

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 TBA

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 TBA

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 TBA

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.

ECOH5391 Project Report
School of Economics
Staff Contact: School Office
UOC12 TBA

ECON5103 Business Economics
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1 S2

An introduction to economic analysis and policy. Using a case study approach, students will examine government and business reports, magazine and newspaper articles, and monographs/journals dealing with contemporary economic issues. Reports or articles will be analysed using simple micro and macroeconomic tools and reasoning. The aim of the course is to improve the economic literacy of students.

ECON5104 International Economics
School of Economics
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S1 S2

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; foreign exchange markets; international monetary system; foreign investment.

Assumed knowledge: ECON5103

ECON5108 Public Finance
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2

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.

Assumed knowledge: ECON5103

ECON5109 Business Economics
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 TBA
Excluded: ECON5103

An introduction to economic analysis and policy with particular reference to managing technological change. Using a case study approach, students will examine government and business reports, magazine and newspaper articles, and monographs/journals dealing with contemporary economic issues. Reports or articles will be analysed using simple micro and macroeconomic tools and reasoning. The aim of the course is to improve the economic literacy of students.

Note/s: Only offered to students in graduate programs in Business and Technology.

ECON5115 Natural Resource Economics
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1

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.

Assumed knowledge: ECON5103

ECON5116 Environmental Economics
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2

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.

Assumed knowledge: ECON5103

ECON5119 Economic Analysis of Productivity
School of Economics
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S2

Provides an economic analysis of the concept of productivity. What is productivity? Why does it matter? How can we measure it? Topics to be covered include; the microeconomic foundations of productivity levels and productivity growth, the measuremetn of productivity and impirical studies of productivity measurement for Australia and overseas countries.

ECON5120 Topics in Business Economics 1
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1 S2

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 corporations, economic development, international trade policy, microeconomic policy, and macroeconomic policy.

Assumed knowledge: ECON5103

ECON5121 Topics in Business Economics 2
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1 S2

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 corporations, economic development, international trade policy, microeconomic policy, and macroeconomic policy.

Assumed knowledge: ECON5103

ECON5122 Competing in the Knowledge Economy
School of Economics
Staff Contact: School Office
UOC6 HPW3 TBA

The growth of the "knowledge economy" is rapidly changing the business envrionment and the aggregate economy. Topics covered in this course include: the economics of innovation, technological change, intellectual property rights, clusters of innovations, the diffusion of innovations, market structure, R&D, biotechnology, asymmetric information and market failure.

Assumed knowledge: ECON5103

ECON5123 Economics of E-Business
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2

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.

Assumed knowledge: ECON5103

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 Monetary Economics
School of Economics
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S1

Considers topics in monetary theory, including theories of monetary exchange, inflation, financial intermediation, exchange rate determination and monetary policy in an international context.

Assumed knowledge: ECON5103

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
UOC6 HPW3 S1
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
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
UOC6 HPW3 S2
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

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
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.

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.

ECON5201 Comparative Forecasting Techniques
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON5207 or ECON5248

Topics include the following: exponential smoothing, Box-Jenkins techniques, transfer functions, VAR models, combination of forecasts, accuracy of forecasts, spreadsheets and forecasts.

ECON5203 Statistics for Business
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1 S2

The aim of this course is to provide students with the appropriate statistical tools for application to applied problems and current research in business. Topics will include: quantitative analysis of statistical data, sampling distributions, statistical estimation; hypothesis testing; multiple regression; introduction to time series analysis; forecasting; index numbers. This course will emphasise practical aspects of model building.

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

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.

Assumed knowledge: ECON5203

ECON5233 Operations Research
School of Economics
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: ECON5204

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.

Assumed knowledge: ECON5203

ECON5248 Business Forecasting
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1

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.

Assumed knowledge: ECON5203

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
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
UOC6 HPW3 S2
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 Econometric Model Building
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON5207

Quantitative economic models are widely used nowadays as a tool (in business and government) for forecasting and policy management, and (in academia) for testing economic theory. In this course we look at several types of quantitative economic models, and focus, in particular, on the use of causal econometric models in forecasting. The approach to building such models in business and government is contrasted with that used in academia. Students replicate the process of econometric model building in both cross-section and time-series data contexts, building skills in the use of software fo statistical database management and econometric analysis.

ECON5284 Mathematical Economics
School of Economics
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: ECON5204

This course gives students a working knowledge of static and dynamic optimisation techniques applied in economics. Topics include classical optimisation, comparative statics, non-linear programming, differential equations and optimal control. All techniques introduced are illustrated with mainstream applications such as consumer theory and the neo-classical theory of optimal growth.

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

ECON7105 Business Economics (Internat.)
School of Economics
Staff Contact: G Bradley
UOC6 S1 S2

ECON7203 Statistics for Business (International)
School of Economics
Staff Contact: G Bradley
UOC6 S1 S2

ECON8105 Business Economics (Internat.)
School of Economics
Staff Contact: G Bradley
UOC6 S1 S2

ECON8203 Statistics for Business (International)
School of Economics
Staff Contact: G Bradley
UOC6 S1 S2

EDST5011 Issues in Educational Management
School of Education
Staff Contact: J McCormick
UOC12 HPW4 S1

Issues and problems facing managers at all levels of education in Australia are examined in depth. Content will depend on current issues and the backgrounds and interests of students, but may include topics such as: controls on managerial decision making; managerialism and politicisation of educational management; centralisation/ decentralisation of educational management; job satisfaction and stress/burnout of educational managers; organisational effectiveness in education; impact of educational research on policy and practice; staff development programs; culture in educational organisations; planned organisational change in education; performance appraisal and performance indicators in education.

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: P Chandler
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 S2

The traditional emphasis in learning and teaching mathematics has been on practice in computational and calculational skills. However, 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: J Tognolini
UOC12 HPW4 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. The course will primarily take 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.

EDST5029 Philosophy, Politics & Ethics in Education
School of Education
Staff Contact: R Bibby
UOC12 HPW4 S2

Issues of social justice, professional ethics, and the competing demands of equity, efficiency and expediency. Political and ethical issues in relation to education and educational administration including the responsibilities of administrators with regard to the rights of students, parents, interest groups, clients and governments. Curriculum issues.

EDST5031 Research Methods 1
School of Education
Staff Contact: P Jin
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: P Jin
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. Component analysis. The use of factor analysis in determining or confirming the hypothetical constructs underlying a set of variables. Factor analysis as a tool in the construction of educational and psychological inventories. Structural equation modelling, hierarchical linear modelling, path analysis profile analysis. The extension of factorial analysis of variance designs to include many dependent variables. Analysis of data in non-orthogonal designs, both univariate and multivariate. Post hoc procedures, using Wilks, Roy Pillai and Lawley-Hotelling intervals. 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: J Tognolini
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.

EDST5108 Introduction to Modern Test Theory
School of Education
Staff Contact: J Tognolini
UOC8 HPW2 S2
Excluded: EDST2108, EDST3108

Aims to introduce Rasch's Simple Logistic Model and its application to the construction of scales, such as tests and other measurement instruments. Includes hands-on training using the RUMM program to analyse data. A range of practical applications that use this model: scaling, scale-equatings, computer adaptive testing and item banking. Basic issues in statistical modelling are emphasised throughout.

EDST5120 Qualitative Research Methodology
School of Education
Staff Contact: M Varvaressos
UOC8 HPW2 S2

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.

EDST5206 Professional Ethics
School of Education
Staff Contact: R Bibby
UOC8 HPW2 S2 X1
Excluded: EDST3206, PROF0001

An exploration of the ethical requirements of professional practice. Topics include contemporary ethical theories, moral reasoning, and a variety of issues such as duties to stake holders, whistleblowing and codes of ethics; obligations to clients and to society; obligations to employers, colleagues and subordinates; professionals in the public sector; unethical orders; research with human subjects; unethical directives; conflicts of interest; the place of professions in society; responsibilities for the profession; unions and strikes.

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.

EDST5308 Learning: Theory and Practice
School of Education
Staff Contact: R Low
UOC8 HPW2 S2
Excluded: EDST2308, EDST3308

The study of basic theories and principles of learning and methods of translating these theories and principles into educational practice. Includes classroom management, instructional development, and developing understanding.

EDST5311 Principles of Industry, Commercial & Vocational Training
School of Education
Staff Contact: School Office
UOC8 HPW2 S1
Excluded: EDST2311, EDST3311

Explores modern conceptions of instructional design and their implications for industry, commercial and vocational training. Focuses on the use of recent research findings to improve the quality of training programs. Introduces and discusses a range of research based training strategies and procedures. Provides guidance in adapting appropriate instructional procedures for students' areas of interest and specific training needs. Aims to demonstrate a package of learning solutions designed to enhance performance, increase training flexibility, recognise individual learning needs and reduce instructional time.

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.

EDST5321 Motivation in Educational Settings
School of Education
Staff Contact: R Howard
UOC8 HPW2 S2
Excluded: EDST2321, EDST3321

Looks at the importance of motivation in school, university and workplace training educational settings and various problems and issues surrounding it. Cultural and ethological reasons why motivation is such a problem in education today. Examines theories of motivation, ethological and psychological approaches to its study, the range of motives people have and how they interact, achievement motivation and motivational consequences of self-perceptions of ability. Looks at practical applications. Also examines common motivational enhancement systems used in various institutions and their applications in educational settings.

EDST5403 Organisational Analysis and Diagnosis
School of Education
Staff Contact: P Jin
UOC8 HPW2 S2
Excluded: EDST2403, EDST3403

Impartial analysis of multifaceted organisational issues through psychosocial models and a set of tools. Aims at discussing organisational diagnosis and action perspectives. Emphasis on the problems of organisational, group and individual behaviour identified at different levels of the workplace. Includes an overview of current macro and micro organisational research, organisational assessment and methodology, political dynamics, education-business relationships, determinants of self-efficacy, cognitive traps, decision-making processes and dilemmas, organisational stress and developing new frames of reference.

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.

EDST5439 Legal Aspects of Educational Administration
School of Education
Staff Contact: J McCormick
UOC8 HPW2 S1
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.

EDST5444 Social Issues and Educational Policy
School of Education
Staff Contact: R Bibby
UOC8 HPW2 S2
Excluded: EDST4214, EDST4314

Major issues in educational policy and its application in the school. The issues, which arise at both institutional and national levels of policy making and decision making, involve the competing demands of equity, efficiency and expediency, the rights of individuals and the struggle for control of education policy. Issues include: censorship; the ethics of compromise; privacy; parent and community participation; centralisation and decentralisation of decision making; professionalism and accountability; efficiency and benchmarking; reverse discrimination and affirmative action; equality and difference; multiculturalism; and indigenous rights.

EDST5445 Supervised Fieldwork in Educational Administration
School of Education
Staff Contact: J McCormick
UOC8 S1
Excluded: EDST4215, EDST4315

On-the-job administrative training for a specified period under the joint supervision of a practising educational administrator and the Co-ordinator 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 Co-ordinator before enrolment.

EDST5607 Research on the Learning and Teaching of Mathematics
School of Education
Staff Contact: P Ayres
UOC8 HPW2 S2
Excluded: EDST2607, EDST3607

A study of recent and current research in Mathematics Education, including problems in the areas of arithmetic, algebra, geometry, representation, computers and mathematics learning, teaching and the training of teachers. Emphasis is placed on experimental designs and methodologies as well as on findings and underpinning resulting theory. Encouragement for students to engage in research of their own.

EDST5608 Effective Teaching and Effective Schools
School of Education
Staff Contact: P Ayres
UOC8 HPW2 S2

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 current philosophic and social attitudes within Australia and internationally, 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 different domains and levels of giftedness. Analysis and evaluation of a range of techniques for identifying giftedness and high ability in both primary and secondary students, with particular focus on strategies to identify gifted children in disadvantaged and minority groups. Explores current research evidence of the academic, social and emotional needs of gifted children and investigates teaching strategies and school organisational structures which have been shown to facilitate or impede the full development of high potential. Examines strategies by which teachers and administrators can facilitate school change to meet the needs of gifted students.

EDST5802 Introduction to the Identification of Intellectually Gifted Children
School of Education
Staff Contact: M Gross
UOC8 HPW2 S2
Prerequisite/s: EDST5800
Excluded: EDST2802, EDST3802

An introduction to some of the subjective and objective measures by which children of high intellectual potential can be identified and their abilities and achievements accurately assessed. Methods of identification including: behaviours which indicate possible giftedness; developmental indicators such as early speech, mobility and reading; teacher, parent peer and self nomination; and standardised tests of aptitude and achievement. Emphasises the use of a combination of approaches rather than a single measure. Attention to the recognition of different levels of giftedness, and to the identification of high potential in minority and disadvantaged groups including the physically handicapped, geographically isolated, Aboriginal children, and girls.

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.

EDST5888 Project
School of Education
Staff Contact: School Office
UOC8 S1 S2 X1 X2
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.

ELEC9201 Electricity Industry Planning and Economics
School of Electrical Engineering and Telecommunications
Staff Contact: School Office
UOC6 HPW3 H Outhred

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 Engineering and Telecommunications
Staff Contact: R Kaye
UOC6 HPW3 I Macgill

Introduction to the main techniques currently used in the operation and control of power systems: economic dispatch and optimal power flow; unit commitment; fuel scheduling and management of storage hydro-electric releases; production costing, reliability calculations and operations planning. Operations in the spot market:bidding and market clearing, dispatch and commitment, storage operation. Renewable energy systems.

ELEC9213 Electrical Energy Systems
School of Electrical Engineering and Telecommunications
Staff Contact: T Blackburn
UOC6 HPW3 S1

Review of the basic concepts used in power system analysis; phasers, 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. Insulation system design and practical limitations. High voltage equipment testing methods and their use in insulation condition monitoring of electrical energy systems. Quality of supply. The impact of EMC and EMI requirements on electrical energy systems.

ELEC9214 Power Systems Equipment
School of Electrical Engineering and Telecommunications
Staff Contact: T Blackburn
UOC6 HPW3 TBA

Operating characteristics and design features of the major equipment components of a power system. Includes a general treatment of equipment rating, thermal design, electrodynamic forces, equipment protection and data acquisition. Specific items of equipment include power transformers, instrument transformers, switchgear, overhead lines and underground cables, surge arrestors, gas insulated systems. Protection of electrical equipment. Effects of electromagnetic fields on personnel. Condition monitoring and testing of power equipment.

ELEC9223 Power Engineering Seminar
School of Electrical Engineering and Telecommunications
Staff Contact: E Spooner
UOC6 HPW3 S1 S2

Weekly seminars given by members of the staff, postgraduate students and outside speakers, covering aspects of power and energy engineering. Outside speakers will be drawn from other universities, research institutions and industry. The purpose of the course is to expose students to the range of research and development activities within the power engineering discipline. Subject is taken over two consecutive sessions commencing session 1 or session 2.

ELEC9225 Special Topic in Power
School of Electrical Engineering and Telecommunications
Staff Contact: T Blackburn
UOC6 HPW3 TBA

The content of this subject changes to allow presentation of a special topic of current interest in a short course format.

ELEC9226 Electrical Services in Building
School of Electrical Engineering and Telecommunications
Staff Contact: T Blackburn
UOC6 HPW3 TBA

The course coverage will include: regulatory aspects, switchboard design and operation, 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, emergency and fire alarm systems and monitoring aspects. Energy use and minimisation principles will also be covered. EMC and EMI and the need for shielding of cabling and equipment will also be covered, together with a review of the impact of power frequency magnetic fields in building.

ELEC9231 Electrical Drive Systems
School of Electrical Engineering 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 Engineering and Telecommunications
Staff Contact: F Rahman
UOC6 HPW3 TBA

This subject covers the analysis and design of modern motion control systems. Detailed analysis of the dynamics of induction, brushless dc, stepping and switched reluctance motor driven motion control systems is undertaken. Sensors used in motion systems and their integration/elimination are also covered. Also included is the modeling of motion control systems with the help of standard design tools such as Matlab and Simulink. The course should be useful to those seeking specialist knowledge of the various types of motion systems used in automation, robotic and other applications where highly dynamic systems are controlled precisely.

ELEC9233 Electrical Safety
School of Electrical Engineering and Telecommunications
Staff Contact: C Grantham
UOC6 HPW3 TBA

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, affects 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; Ex d, Ex i, Ex e, Ex n, Ex p, Ex s, 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 Engineering and Telecommunications
Staff Contact: F Rahman
UOC6 HPW3 S1
Excluded: ELEC4240

Modern power semicondutor 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 Engineering and Telecommunications
Staff Contact: C Kwok
UOC6 HPW3 TBA

Course begins with a review of signal, spectra and modulation techniques. Electronic building blocks for modulation and demodulation. Analog/digital AM modulation and demodulation. Phase lock loop design analysis and techniques for modulation and demodulation. Design of VCO, phase detectors etc. FM modulation and demodulation. SN performance of AM and FM systems. Noise and design of LNA. RF amplifiers.

ELEC9342 Digital Signal Processing and Applications
School of Electrical Engineering and Telecommunications
Staff Contact: E Ambikairajah
UOC6 HPW3 TBA

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. Decimation and interpolation. Time - frequency analysis. Wavelets. Multi-rate signal processing. Applications include: tone detection, noise reduction, pitch estimation and processing of ECG signals.

ELEC9344 Speech and Audio Processing
School of Electrical Engineering and Telecommunications
Staff Contact: School Office
UOC6 HPW3 TBA

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.

ELEC9345 Neural Networks and Applications
School of Electrical Engineering and Telecommunications
Staff Contact: E Ambikairajah
UOC6 HPW3 TBA

Biological neurons. Mathematical model of a biological neuron. Neural signals. Single layer perceptron (SLP). Multi-layer perceptron (MLP). Non-linear mapping. Supervised and unsupervised learning, learning algorithms. Hopfield neural net. Kohonen's unsupervised network. Look-up perceptron. Baye's classifier and neural network based classifiers and applications.

ELEC9350 Theory of Optical Fibres and Optical Signal Processing
School of Electrical Engineering and Telecommunications
Staff Contact: School Office
UOC6 HPW3 S1

Ray propagation and impulse response. In step index multimode fibres. Ray propagation, dispersion and bandwidth of graded-index multimode fibres. Measurements of optical fibres. Light propagation and bandwidth in step-index single mode fibres. Graded-index single mode fibres. Bending and microbending losses in fibres. Launching efficienceis in multimode and single mode fibres. Power budget and dispersion budget in fibre systems. Optical fibre components.

ELEC9353 Microwave Circuits: Theory & Techniques
School of Electrical Engineering and Telecommunications
Staff Contact: R Ramer
UOC6 HPW3 TBA

The general flow of the course is Applications, Systems, Components. Specific topics to be enclosed are applications of microwaves (terrestrial and satellite communicjations, 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 Engineering and Telecommunications
Staff Contact: School Office
UOC6 HPW3 S2

Light emitting diodes. Semiconductor lasers. Optical fibre lasers and amplifiers. Photodectors. Receiver circuit design. Signal to noise ratio calculation in optical communication systems. Analogue and digital optical communication systems. Analog optical communication systems. Multiplexing systems. Wavelength division multiplexing. Optical components. Optical networks.

ELEC9370 Digital Image Processing Systems
School of Electrical Engineering 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 Engineering and Telecommunications
Staff Contact: T Hesketh
UOC6 HPW3 TBA

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.

ELEC9404 Topics in Digital Control
School of Electrical Engineering and Telecommunications
Staff Contact: V Solo
UOC6 HPW3 TBA

Possible modules include: identification, estimation, multivariable systems, robust control, optimisation, adaptive control, biomedical applications, instrumentation and sensors, robotics, industrial design case studies, variable structure systems, expert systems and fuzzy control, neural networks.

ELEC9405 Human Movement Control Topics
School of Electrical Engineering 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 Engineering and Telecommunications
Staff Contact: B Celler
UOC6 HPW3 S2
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 Engineering and Telecommunications
Staff Contact: B Celler
UOC6 HPW3 S2
Excluded: ELEC4483

Digital computer methods of extracting information from biological signals using filtering and averaging, expectation density functions, correlation functions, spectral analysis and other techniques. Methods of constructing models of biological systems.

ELEC9421 Robust and Linear Control Systems
School of Electrical Engineering 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 Engineering 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 nolinear 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.

ELEC9501 Advanced Semiconductor Devices
School of Electrical Engineering and Telecommunications
Staff Contact: A Dzurak
UOC6 HPW3 TBA

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 Engineering and Telecommunications
Staff Contact: C Kwok
UOC6 HPW3 TBA

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 Engineering and Telecommunications
Staff Contact: C Kwok
UOC6 HPW3 S1

An advanced treatment of the design of integrated circuits with emphasis on the relationships between technology, device characteristics and circuit design. Includes properties and modelling of bipolar and MOS circuit components, circuit analysis and simulation,

layout rules, analog functions such as operational and power amplifiers; multipliers, D A and A D converters. Analog MOS circuits. Switch capacitor filters. Digital circuits include gates, compound functions, RAM, ROM, speed and power analysis. Yield, reliability, failure analyis and packaging. MEMS technology. Non-volatile memory, low voltage low power circuits.

ELEC9505 Microsystems Technology: Design and Microfabrication
School of Electrical Engineering and Telecommunications
Staff Contact: C Kwok
UOC6 HPW3 TBA

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
School of Electrical Engineering and Telecommunications
Staff Contact: School Office
Enrolment requires school approval
UOC12 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. At the end of the work a comprehensive project report giving an account of the student s own research must be submitted. Information on the preparation of project reports is contained in the University Calendar.

ENGL5000 Individual Reading Program
School of English
Staff Contact: S Eggins
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.

ENGL5013 Shakespeare on His Stage
School of English
Staff Contact: R Madelaine
UOC8 HPW2 S1

Shakespeare's plays are studied in conjunction with the most recent theories about conditions of their first performances. The direct influence of these conditions on the form and subject-matter of the plays is the basis of discussion in this course.

ENGL5024 Dickens and the City
School of English
Staff Contact: M Hollington
UOC8 HPW2 S1

A consideration of the city in Dickens from two angles: 1) as the essential topic of Dickens's novels, and 2) as one of the determinants of their formal properties. Dickens's early, middle and late work is examined.

ENGL5031 Post-colonial Representations
School of English
Staff Contact: W Ashcroft
UOC8 HPW2 S2

An analysis of various forms of post-colonial representation in different media and an examination of the cultural issues raised.

ENGL5032 Precocious Writing: A Study of Literary Juvenilia
School of English
Staff Contact: C Alexander
UOC8 HPW2 S1

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.

ENGL5033 Restoration Epic: Milton's Paradise Lost
School of English
Staff Contact: W Walker
UOC8 HPW2 S1

Studies how Milton's great poem responds to aspects of late Interregnum and early Restoration culture such as libertinism, natural science, religious persecution, monarchy, warfare, public spectacles of punishment, and empiricism. Also attends to Milton's extraordinarily aggressive response to western literary tradition at large (Homer, Virgil, the Bible). There is also time for delighting in the sublime.

ENGL5300 Poetry Plus
School of English
Staff Contact: H Smith
UOC8 HPW2 S2

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: H Smith
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 S1 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: School Office
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.

ENGL5517 Australian Children's Literature and Culture
School of English
Staff Contact: S Eggins
UOC8 HPW2 S2

Critically examines the development of Australian writing for children. Topics covered include: colonial texts; use of indigenous sources; aboriginal children's literature; constructions of class, gender and the family; representations of the bush and the city; multiculturalism; key figures in Australian children's literature and the emergence of an Australian 'canon'.

ENGL5600 Introduction to Cultural Studies
School of English
Staff Contact: B 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 Higher School Certificate English syllabus and will make specific reference where appropriate to current HSC texts.

FINS5510 Personal Financial Planning and Management
School of Banking and Finance
Staff Contact: J Bartle
UOC6 HPW3 S1 S2

This course provides students with knowledge necessary to effectively manage their personal financial resources and needs in the context of globalised financial and stock markets. The course considers the whole range of personal financial affairs and the planning required to optimise available opportunities to enhance individual wealth. A major feature of this course is extensive use of spreadhseet applications with the latest data and information from the financial, insurance and real estate industries.Topics include: Foundations of financial planning: time value of money, measurement of personal financial standing, planning financial future, financial implications of taxes; Management of individual portfolio of basic assets: mortgage finance (residential housing and real estate), cash management; Management of personal credit and loans; Selection and management of financial securities: opportunities in the Australian and global stock markets, corporate debt markets, derivative and futures markets, managed and hedged funds, real estate and other forms of acquisitions (gold, antiques, painting etc.); Financial planning for retirement and estate preservation.

FINS5511 Corporate Finance
School of Banking and Finance
Staff Contact: T Pham G Bradley E Jarnecic
UOC6 HPW3 S1 S2 X1

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.

Assumed knowledge: ACCT5901, ECON5103, ECON5203

FINS5512 Financial Markets and Institutions
School of Banking and Finance
Staff Contact: R Wixted J Bartle
UOC6 HPW3 S1 S2 X1

This course serves as one of the introductory courses to the study of finance. It focuses on the major financial markets, including the equity, money, bond, exchange rate and derivatives markets. Students will learn about the basics of financial instruments in these markets, such as bank bills, treasury bonds, futures and options. In addition, students are exposed to the tools of analyses and the roles and innovations of major financial institutions. These include the banks and non-banks, such as finance companies, building societies and credit unions, life and insurance companies as well as funds management companies.

FINS5513 Security Valuation and Portfolio Selection
School of Banking and Finance
Staff Contact: J Wang L Prather
UOC6 HPW3 S1 S2 X1

The aim of this course is twofold: (i) to introduce students to theoretical building blocks in the theory of finance; and (ii) to illustrate these by means of a combination of tutorial problems and case studies. Topics include: investment decisions under certainty; investment decisions under uncertainty (the portfolio selection problem); capital asset pricing model and arbitrage pricing theory: rudiments of theory and evidence; fundamentals of bond valuation; introduction to duration and the term structure of interest rates; valuation of equity shares; market efficiency: fads, bubbles, martingales.

Assumed knowledge: ECON5103 and ECON5203

FINS5514 Capital Budgeting and Financial Decisions
School of Banking and Finance
Staff Contact: R Powell
UOC6 HPW3 S1 S2
Prerequisite/s or Corequisite/s: FINS5513

This course focuses on various aspects of corporate decision making. Topics include: Objectives of the corporation. Investment criteria under certainty and uncertainty. Quantitative techniques to assist managerial judgement including: capital budgeting; modelling and management of risk (including decision-tree analysis, diversification, sensitivity analysis and simulation). Capital structure propositions; the impact of taxation and bankruptcy costs; information asymmetry and signalling approaches; dividend policy and imputation. Particular references to case studies and computer applications.

Assumed knowledge: ECON5103 and ECON5203

FINS5515 Issues in Corporate Finance
School of Banking and Finance
Staff Contact: T Pham
UOC6 HPW3 S1
Prerequisite/s: FINS5513, FINS5514

Specialised topics in corporate finance with an emphasis on corporate governance, the market for corporate control and financing issues. Mergers, acquisitions, buyouts and proxy contests: theoretical issues, regulation and empirical evidence. Management compensation schemes and agency problems. Corporate distress. Regulatory and ethical issues of corporate finance. Long-term finance: initial public offerings and seasoned equity offerings: after market performance; leasing. Short-term finance: cash and liquidity management; working capital management.

FINS5516 International Corporate Finance
School of Banking and Finance
Staff Contact: F Moshirian S Kim
UOC6 HPW3 S1 S2 X1
Prerequisite/s: FINS5513

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: A Sim T Henker
UOC6 HPW3 S1 S2 X1
Prerequisite/s or Corequisite/s: FINS5513

This course 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.

FINS5522 Asian Financial Market Analysis
School of Banking and Finance
Staff Contact: V Hooper
UOC6 HPW3 S2 X1
Prerequisite/s: FINS5513

This course provides an in-depth analysis of the major financial markets in Asia. It aims at applying investment and international finance theory to the context of diverse Asian markets. After a review of the institutional structure of the markets and their role in economic development, the course will examine equity market relationships, country risk analysis, portfolio management and hedging across Asian markets, syndication and off-shore banking and other contemporary issues.

FINS5523 Finance for Entrepreneurial and Small Firms
School of Banking and Finance
Staff Contact: B Gibson
UOC6 HPW3 S2
Prerequisite/s: FINS5513

The course examines various aspects of entrepreneurial finance to small to medium enterprises and considers financial decisions made from start-up until the original shareholders cash out via the public offering. Financial theories associated with entrepreneurship and specifically small sized corporations are analysed. In dealing with advanced financial issues in relation to project selection, business finance and financial management, there is a strong emphasis on encouraging students to understand how to augment traditional finance views with practical issues and problems faced by small to medium sized firms. Other topics include: how to value new start-up firms/ projects; how to value new technology; implications of technology transfers; finance non-neutrality in technological venturing; optimal financing strategy of high-tech firms; finance investment and innovation; asymetric information and credit rationing; the financial structure of financing intellectual property rights; venture capital business angles and pooled development funds; equity and debt capital from the public and private sectors

FINS5526 International Corporate Governance: Accounting and Finance Perspectives
School of Banking and Finance
Staff Contact: K Fong
UOC6 HPW3 S1
Prerequisite/s: FINS5513

This course considers the structure of international corporate governance mechanisms and how these differ from the corporate governance mechanisms in Australia. The role of the governing board, the use of sub-committees, and the association between corporate governance mechanisms and auditor choice will be considered. Financial reporting and disclosure implications are then considered. Further consideration is then given to the ways in which suppliers of finance assure themselves of getting a return on their investment. This course is of importance as it impinges upon the flows of capital to corporate entities and the repatriation of profits to the providers of finance. The corporate activities of the 80s, such as mergers, acquisition, leveraged buy-outs via junk bonds and the subsequent spectacular collapses, have shown the importance of good corporate governance mechanisms. The course deals with the analysis of the financial aspects of incentive contracts, the protection of financial rights of minority shareholders, the prohibition of financial managerial self-dealing. The course also integrates a wide range of concepts in a unifying framework. After introducing the concept of corporation as an organisational form of business, a detailed treatment of its structural and legal forms in the agency framework— separation of ownership and control — is provided. The course analyses various internal corporate governance structures and mechanism including the board of directors and management, ownership structure, and executive compensation. Setting the issue in market setting, the course considers external governance mechanisms in terms of block ownership and shareholder activism, and the market for corporate control aspects of mergers and acquisitions, takeover defense mechanisms and corporate restructuring strategies. Finally, a comparative analytic treatment is given to corporate governance systems in Japan, Germany, the United Kingdom and the United States.

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 both domestic and international. Topics include: (i) Objectives of financial institutions from the perspective of portfolio, hedging and agency theories; (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 of financial institutions; (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) Securities portfolio management; (vii) Capital adequacy and prudential regulation and management; (viii) International dimensions including exchange rate risk management and country risk assessment.

FINS5531 Risk and Insurance
School of Banking and Finance
Staff Contact: A Sim D Li
UOC6 HPW3 S1 S2
Prerequisite/s or Corequisite/s: FINS5513

This course introduces the discipline of risk management and precedes advanced work in the risk management and insurance major. Particular focus is placed upon the principles associated with corporate risk management and provides a structured and well-reasoned methodology in the identification and analysis of risk. Additionally, the course investigates the management of identified risk through both risk control and risk financing techniques. An introduction to the basic principles of insurance products, as one possible risk-financing tool, is also presented.

FINS5533 Real Estate Finance and Investment
School of Banking and Finance
Staff Contact: G Noti
UOC6 HPW3 S1
Prerequisite/s: FINS5513

An evaluation of real estate financing, the mechanics of the mortgage market and the application of modern finance theory to the evaluation, selection and management of property investments. Topics include the role of regulation, taxation, government agencies, property trusts and the banking system in promoting real estate activity. An analysis of real estate price and yields, diversification aspects and use of property as an inflation hedge. An evaluation of leasing, type of tenancy, property options and property trusts.

FINS5534 Strategic Management of Credit Risk and Loan Policy
School of Banking and Finance
Staff Contact: J Bartle
UOC6 HPW3 S1 S2
Corequisite/s: FINS5513

This course is 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: T Pham D Colwell R Bhar
UOC6 HPW3 S1 S2 X1
Prerequisite/s: FINS5513

This is an intermediate course of options, futures and the techniques using these contracts to offset some of the risk associated with some given market commitment. Topics include: overview of derivative securities; forward and futures contracts on stock indices, currencies, gold and silver, T-bonds and T-notes, and other commodities; stock options; options on stock indices, currencies, and futures contracts; swaps and the evaluation of credit risk; hedging positions in options and other derivative securities.

FINS5536 Fixed Income Securities and Interest Rate Derivatives
School of Banking and Finance
Staff Contact: D Colwell
UOC6 HPW3 S1 S2
Prerequisite/s: FINS5513

This course is designed to study the pricing, hedging and risk management of fixed income securities and interest rate derivatives. Topics to be studied include term structure dynamics (including bond price lattices, spot and forward rate models), analytical and numerical techniques, duration measures, interest rate derivative securities (including options, futures and swaps), the interaction between interest rate risk and credit risk, mortgage-backed securities and value-at-risk. Extensive treatment of repo markets and how they are used to finance dealer positions is included. The concepts of general collateral and special repo rates are also discussed. Furthermore, an accessible treatment of the arbitrage-free models of the term structure, including the concept of state prices and no-arbitrage, is provided.

FINS5541 Advanced Investment and Funds Management
School of Banking and Finance
Staff Contact: R Bhar L Prather
UOC6 HPW3 S1 S2
Prerequisite/s: FINS5517
Prerequisite/s or Corequisite/s: FINS5535

The course covers advanced techniques of modern fund management. Topics include: asset allocation decisions, domestic versus international fund components, integration of equity, bond and cash management, program trading, design of algorithms for automated decisions and the legal and ethical ramifications of fund design and decisions. The course structure consists of lectures and speakers from the fund management industry.

FINS5542 Applied Funds Management
School of Banking and Finance
Staff Contact: J Reeves R Zurbrugg D White
UOC6 HPW3 S1 S2 X1
Prerequisite/s or Corequisite/s: FINS5541

This is a laboratory-based course that aims to provide the student with the ability to construct and hedge a portfolio over the duration of the semester. The topics are primarily focused on empirical issues that need to be addressed when managing a portfolio over time. This will incorporate extensive use of computer spreadsheets, macros, and programs to aid the student initially examining individual stock beta calculations, to finally hedging a fund via the derivatives market.

FINS5550 International Banking Management
School of Banking and Finance
Staff Contact: S Kim
UOC6 HPW3 S1 S2
Prerequisite/s: FINS5513

This course provides students with an understanding of international financial intermediation in the contemporary environment. Topics include: the nature and theory of international banking, the main institutions and markets in which international banks are involved; correspondent banking relationships; cross-border financing; performance measurement and evaluation; foreign direct investment in banking; exchange rate risk; non-compliance risk arising in the financing of foreign trade; sovereign risk; and off-balance sheet risk. The course also presents and analyses the current issues in international financial services and the fundamental and non-fundamental exchange rate modelling and forecasting with a particular emphasis on the market microstructure.

FINS5551 International Insurance Management
School of Banking and Finance
Staff Contact: F Moshirian D Li
UOC6 HPW3 S1 S2
Prerequisite/s or Corequisite/s: FINS5513

This course is 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 will be surveyed. Topics will 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. The course also deals with insurance with a focus on global risk management.

FINS5552 Hazard Risk Financial Management
School of Banking and Finance
Staff Contact: A Sim D Li
UOC6 HPW3 S1 S2
Prerequisite/s or Corequisite/s: FINS5531

The goal of this course is to provide the student with an awareness of the breadth of risk with which the property assets of a corporation are faced and provide the student with the knowledge of, and practical experience in the management of this risk. This course requires the application of the principles of risk management in the proposed preservation of an actual corporation entity's property assets. Investigation of various risk control and risk financing techniques, including insurance alternatives, are central to this experience.

FINS5553 Insurance Company Operations and Management
School of Banking and Finance
Staff Contact: School Office
UOC6 HPW3 S1 S2
Prerequisite/s or Corequisite/s: FINS5531

The goal of this course is to provide the student with an understanding of the liability risks faced by a corporate entity and the tools by which these risks can be effectively managed. In achieving this goal, this course applies the principles of risk management to the preservation of corporate financial assets that are commonly exposed to loss in the legal risk environment. Learning foci will include identification of assets at risk, liability loss prevention activities, and loss financing techniques. This activities-based course will include use of case studies and a project that requires a legal environment analysis of an actual corporate entity.

FINS5560 Fundamentals of Corporate Finance
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW1.5 S2

Note: Enrolment in this course is only available to students undertaking the MBT Programs 8616,7333, 5457.Fundamentals of Corporate Finance is an introductory course in financial management. It stresses the modern 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 corporate objectives.both at the individual and corporate level. The course is a blend of theory and practice. Specific topics to be covered include: financial mathematics, security valuation, techniques for capital investment decisions, financial decision making under uncertainty (portfolio theory and capital market theory), corporate capital structure, cost of capital, and dividend decision and policy.

FINS5566 Electronic Financial Trading
School of Banking and Finance
Staff Contact: E Jarnecic
UOC6 HPW3 S1 S2

The speed of the change to electronic trading at major financial exchanges and institutions has been breathtaking. Internet financial trading facilities and services are now common among major financial institutions and brokerage firms. This course looks at the development of electronic financial trading, and examines the various issues regarding electronic transactions. The role of electronic trading network in the automation of financial markets would also be covered, together with the market microstructure issues, and its competition with traditional trading systems. Two case studies will be discussed in this course; 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, some with self-regulation, is a recent phenomenon. It has many ramifications for regulation, supervision and other broad market issues. These issues will also be covered.

FINS5567 Banking & Financial Innovation
School of Banking and Finance
Staff Contact: J Bartle
UOC6 HPW3 S2

As banks look to make their operations more cost efficient, they are looking to have their customers access them by electronic means. This has meant a dramatic education process for both banks and their clients resulting in access to bank records by telephone, internet and in some cases, direct access to bank computers. Coupled with this is the rise of various forms of electronic funds transfer. This has further implications for the nature of banking and the operation of the payments system to include electronic payments. This course 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. The course will examine 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: D Michayluk
Enrolment requires school approval
UOC6 HPW3 S1

Finance is concerned with decision making, at both the individual and corporate level, which involves uncertain pay-offs in multiple periods of time. Toward a better understanding of the operations of these decisions, this course provides an intermediate exposition of the fundamentals of portfolio selection and corporate finance. Specifically, the course will examine: (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. This course will also emphasise and reinforce those techniques that underlie advanced studies in asset pricing and corporate finance.

Assumed knowledge: Credit or better in FINS5513

FINS5575 Research Methods in Finance 1
School of Banking and Finance
Staff Contact: A Sim
UOC6 HPW3 S1
Prerequisite/s: FINS3774

The objective of the course is to review applications of mathematical and statistical tools to applied problems and current research, in finance.

FINS5576 Advanced Topics in Asset Pricing
School of Banking and Finance
Staff Contact: D Michayluk
UOC6 HPW3 S1
Prerequisite/s: FINS3774

This course provides an in-depth and advanced treatment of asset pricing theories and examines selected tests of the validity of the theories. The emphasis is on applying mathematical and statistical tools to derive results which are usually given without proofs in preceding subjects as well as deriving new results to reflect current research. Examination of empirical tests aims at pointing out how research can be implemented and modified to suit local market conditions. In addition, the course also introduces a relatively new area of financial economics; security market microstructure and the implications for empirical research in finance. Topics include: utility theory; portfolio theory and capital asset pricing models; arbitrage pricing theory; option and futures pricing; intertemporal models in finance; and security market microstructure.

FINS5577 Advanced Topics in Corporate Finance
School of Banking and Finance
Staff Contact: L Woo
UOC6 HPW3 S1
Prerequisite/s: FINS3774

This course provides an introduction to contemporary theoretical literature relevant for an advanced treatment of the study of investment and financing decisions of firms under alternative assumptions about the institutional environment within which such decisions are made. Emphasis will be given to the corporate form of business. Furthermore, special cases of investment and financing decisions such as mergers, takeovers and leveraged buyouts are focused on. The conceptual basis is such that it allows discussions of ethical issues in relation to corporate decisions and management compensation schemes. The course structure consists of lectures and a seminar program. In the latter students are encouraged to supplement theoretical discussions with empirical evidence.

FINS5578 Recent Developments in Banking Research
School of Banking and Finance
Staff Contact: School Office
UOC6 HPW3 TBA
Prerequisite/s: FINS5530, FINS3774

This course 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: A Sim
UOC6 HPW3 S2
Prerequisite/s: FINS5575

A more advanced course in empirical methodology in finance. 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: School Office
Enrolment requires school approval
UOC6 TBA

FINS5599 Project Report
School of Banking and Finance
Staff Contact: School Office
Enrolment requires school approval
UOC12 TBA

FINS6610 Advanced Finance Research Topic 1
School of Banking and Finance
Staff Contact: School Office
Enrolment requires school approval
UOC12 HPW3 S1 S2

This course is designed for students enrolled in the PhD Program in Finance. Materials included in Advanced Finance Research Topic 1 and Topic 2 will draw from Asset Pricing, Banking, Corporate Finance, Funds Management, Risk and Insurance, Portfolio Management and Quantitative Finance. In addition, these courses may also cover advanced research tools, eg 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

This course is designed for students enrolled in the PhD Program in Finance. Materials included in Advanced Finance Research Topic 1 and Topic 2 will draw from Asset Pricing, Banking, Corporate Finance, Funds Management, Risk and Insurance, Portfolio Management and Quantitative Finance. In addition, these courses may also cover advanced research tools, eg stochastic processes, partial differential equations, advanced econometrics, advanced theoretical economics, games theory, programming etc.

FINS6680 Empirical Techiques & Applications in Finance
School of Banking and Finance
Staff Contact: R Bhar
UOC6 HPW3 S1 S2

This course 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. Students will be introduced to appropriate software for such exercises.

Assumed knowledge: First year undergraduate course on quantitative methods for economics/business.

FINS6681 Advanced Applied Corporate Finance
School of Banking and Finance
Staff Contact: L Woo
UOC6 HPW3 S1 S2

This course provides an introduction to contemporary theoretical and empirical literature for an advanced treatment of the study of investment and financing decisions of corporations. Topics include event study methodology, games theory and its applications to corporate finance, capital structure policy, corporate restructuring, mergers and acquisitions, measurement of financial/operating performance, IPOs, MBOs and management turnover, real options and capital budgeting, credit rationing by financial institutions, corporate governance, internet companies. The method of teaching is a combination of lecturers, seminar presentations, case studies and active participation by students.

Assumed knowledge: FINS5514 or its equivalent.

FINS6682 Advanced Applied Portfolio Management
School of Banking and Finance
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: FINS6680, FINS6681

This course provides the foundation for the analysis of active funds management. In particular the course 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.

Assumed knowledge: FINS5513 and FINS5514 or their equivalents.

FINS6683 Project: Topics in Advanced Finance
School of Banking and Finance
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: FINS6680

The purpose of this course is to ensure that students are able to apply finance theories to real financial issues and gain practical financial experience. Students, in consultation with their supervisor, should choose a topic for research in finance which may well be related to their work environment with a focus on areas such as the following: Banking, Corporate Finance, Funds Management, Investments, International Finance, Risk and Insurance and Quantitative Finance. The project should demonstrate the students' ability to analyse and grasp the implications of that project in the context of the national and international financial markets.

Assumed knowledge: FINS5513 and FINS5514 or their equivalents.

FINS7511 Corporate Finance (International)
School of Banking and Finance
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 TBA

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: This course is taught in Beijing.

FINS8511 Corporate Finance (International)
School of Banking and Finance
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 TBA

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: This course will be taught in Guangzhou.

FOOD1517 Chemistry, Biochemistry and Physics of Foods
Department of Food Science and Technology
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.

FOOD1567 Food Preservation
Department of Food Science and Technology
Staff Contact: J Paterson
Enrolment requires school approval
UOC6 HPW6 S1
Excluded: FOOD1577, FOOD1587, FOOD1597

Introduction to food preservation and food processing; heating, chilling, freezing, dehydration; use of salt, sugar, acid, chemical preservatives, modified atmospheres in food preservation; water relations and chemical and microbial stability of foods; an integrated program of laboratory and plant exercises designed to illustrate the principles and procedures presented in the lecture course.

FOOD1577 Food Processing Principles
Department of Food Science and Technology
Staff Contact: J Paterson
UOC6 HPW6 S1
Corequisite/s: FOOD1587

This course is presented as a series of lectures and some discussion groups that cover methods of preservation and processing used in the food industry. Preservation principles and technologies covered include heating, chilling, freezing, dehydration, salt, sugar, acids, chemical preservatives, ionising radiations and novel methods. Basic principles of processing covered are mass and energy balances, heat transfer, fluid flow. Methods of processing include refrigeration, evaporation, dehydration, fermentation, extrusion, chemical and physical separation, and particle size reduction. The course is run in conjunction with FOOD1587 Food Processing Laboratory designed to demonstrate key principles in a practical context.

FOOD1587 Food Processing Laboratory
Department of Food Science and Technology
Staff Contact: J Paterson
UOC6 HPW6 S1
Corequisite/s: FOOD1577

This course is presented as an integrated lecture-laboratory program that covers production principles of a number of primary food commodities including dairy, marine and meat products, fruit and vegetables, sugars and cereal products. The laboratory component demonstrates the effect of processing on aspects of food such as functionality and quality.

FOOD1597 Food Processing and Packaging
Department of Food Science and Technology
Staff Contact: R Driscoll
UOC6 HPW6 S2
Prerequisite/s: FOOD1577, FOOD1587

This course is presented as an integrated lecture-laboratory program that covers production principles of a number of primary food commodities including dairy, marine and meat products, fruit and vegetables, sugars and cereal products. The laboratory component demonstrates the effect of processing on aspects of food such as functionality and quality. In addition, aspects of plant design such as factory layout, hygienic design and operation, cleaning in-place and application and comparison of HACCP and HAZOP, and an introduction to new technologies such as high pressure processing and ohmic heating, are covered. This course also provides fundamental principles of packaging including properties of packaging materials, and selection and evaluation of packaging materials and systems.

FOOD1657 Postharvest Physiology and Handling of Fruit and Vegetables
Department of Food Science and Technology
Staff Contact: J Paton
UOC6 HPW6 TBA
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
Department of Food Science and Technology
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
Department of Food Science and Technology
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
Department of Food Science and Technology
Staff Contact: School Office
UOC6 HPW6 S1
Prerequisite/s: CHEM3801

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
Department of Food Science and Technology
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
Department of Food Science and Technology
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
Department of Food Science and Technology
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 an Acceptability
Department of Food Science and Technology
Staff Contact: J Paton
UOC6 HPW6 S2

This course considers factors that influence the choice of foods and eating patterns by consumers, and provides a rational basis for the design, development and marketing of new food products and new processing technologies. It is aimed at students with interest in food and human behaviour, for example, marketing, advertising, food service/ hospitality and psychology, as well as students in food science and technology. Topics covered include: physiology of taste and smell; sensory acceptability of foods in terms of flavour, appearance and texture and its measurement (sensory evaluation); psychological, physiological, cultural, religious, environmental and genetic factors that affect food preference and consumption patterns and behaviour; eating disorders (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
Department of Food Science and Technology
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
Department of Food Science and Technology
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
Department of Food Science and Technology
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
Department of Food Science and Technology
Staff Contact: K Buckle
UOC6 HPW6 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
Department of Food Science and Technology
Staff Contact: G Fleet
Enrolment requires school approval
UOC6 HPW6 TBA

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
Department of Food Science and Technology
Staff Contact: G Fleet
UOC6 HPW6 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
Department of Food Science and Technology
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
Department of Food Science and Technology
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
Department of Food Science and Technology
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
Department of Food Science and Technology
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
Department of Food Science and Technology
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 TBA

GBAT9101 Project Management
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW1.5 S1 S2

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.

GBAT9102 Management of Manufacturing Systems
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW1.5 S2

Management of Manufacturing Systems presents an integrated and coherent account of new production management philosophies to give you a sound basis 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

Environmental Management gives you an overview of the range of environment issues facing our community. By understanding the big picture managers can make sound economic decisions without losing your commitment to a sustainable environment. The more specific issues and control strategies discussed will provide new 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

The world in which we live and the organisations in which we work are now best viewed as systems in which everything, everywhere, truly affects everything else. This course provides you with the opportunity of learning some new tools and some new ways of thinking that are better suited to addressing the complex problems and opportunities inherent in our organisations today.

GBAT9105 Risk Management
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW1.5 S1 S2

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/NZS4360 Risk Management and discusses how it is applied to issues of interest to the class. The particular focus is on risks which arise in a technical context such as project management, outsourcing, liability, IT, the environment and safety. Students undertake a case study of relevance to the particular interests.

GBAT9106 Information Systems Management
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW1.5 S1

This course addresses the need for information management, covering organisations and implementation of software engineering and technological projects; uses and abuses of information technology; traditional and future ways of acquiring, generating, preparing, organising and disseminating information; analysis, design implementation (software and hardware). The course takes a management view of the issues and only addresses technicalities by way of brief introdcuctions where needed to support the managerial theme.

GBAT9107 Maintenance Management
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW1.5 S1

This is a subject for anybody who wishes to examine how managers should interact with the physical world, and in particular the assets that are used by a business to generate wealth. The core understanding of reasons for failure, legacies from design and how to look for signs of failure are brought into systematic business processes that embrace all people within the organisation. The underlying principle is that managers should not necessarily be experts in applying the technology, but they have to understand the right questions to ask and to ensure that their staff is working with correct procedures and within the correct strategy, suitable for their business and the nature of the assets. The course is very hands-on and the student will appreciate the breadth of challenges facing the modern asset manager.

GBAT9109 Energy Management
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW1.5 S2

Energy Management examines the use of energy in the corporate setting and its importance in our society. It looks at the broader patterns of world energy use and evaluates the major energy resources, technologies and applications for fuel, transport, and power generation. The policies of government and the role of markets in influencing the price and availability of energy fuels and sources are discussed. The final topics include energy use and impacts on the natural environment, the changes to markets and international agreements to face the issue of climate change, and the application and implementation of an energy management program and strategy in a corporate setting.

GBAT9111 Organisationfor Quality Improvement
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW1.5 S1 S2

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. In this course, you will be provided by both the strategic importance of Quality and its role in lean production, concurrent engineering, cellular production, flexible manufacturing systems and related methods, analytical tools that you can use in 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

Workplace injury involves organisations in insurable costs (workers' compensation premiums) and uninsurable costs (productivity losses, low morale, reputation damage, equipment losses and downtime). This 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: School Office
Enrolment requires school approval
UOC6 HPW1.5 S1 S2

In this integrative course, students learn to view business and technology from a strategic perspective by analysing the forces within business environments and hence how organisations compete. This challenges students to develop skills in business scenario planning aimed at explaining sustainable competitive advantage. The course examines individual value creating activities in areas such as HRM, operations, service, logistics, marketing, finance and technology, bringing these together to create strategic position. Organisation structure, technology strategy, acquisition and merger, risk and politics are some of the influences studied. Case studies of winning and losing

organisations that have attempted to create sustainable strategic advantage over competitors are examined.

GBAT9114 Marketing for Technical Managers
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW1.5 S1 S2

Topics in this course include an introduction to marketing, definitions of marketing and the customer emphasis; marketing planning, its role and purpose; the environment and how to monitor it; market segmentation - what, why and how; customer behaviour; organisational marketing and behaviour; product design; product pricing; product place; product promotion; other marketing applications; and marketing strategy. necessary to ensure success when bringing new processes and different strategies into an organisation.

GBAT9115 Information Technology for Managers
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW1.5 S1 S2

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

The ongoing information technology revolution presents major challenges for managers. Inadequate understanding of the opportunities and risks associated with the use of new technologies inhibits managers' ability to use these to maximum benefit. Advanced Information Technologies for Managers will explore advanced information technologies and their application in modern organisations. It will look at both the advantages and limitations of some of the leading-edge information technology architectures (solutions). The course will also cover the latest IT trends, outlining new technologies on the horizon, and provide 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 S2

Drawing on the application of Information Technology for competitive advantage, the course E:Business Strategy & Management will look 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 - these will set the foundations for the future management of e-business. Topics in the course include the potential impact of e-business 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 S2

Management in the public sector today presents new challenges for agency managers, private sector joint venture partners and organisations providing services to government. Unwanted outcomes represent significant insurable and non-insurable organisational loss which public sector organisations can ill afford. In a public sector business climate of uncertainty, rapid change and complexity, exposure and loss must be creatively and intelligently managed within wider organisational strategies that are based on the most up to date business and technology thinking.Further, the management of risk within the public sector will increasingly involve more effective decision-making beyond the narrow band of human injury to address overall strategic resource management. In short, narrow technical or discipline-related certification is no longer sufficient for effective management.This course is designed to assist managers and future managers, particularly those working in the public sector, to meet their managerial and organisational objectives by assisting in the development of effective, highly competent strategic managers who focus on the management of risk. It provides managers with a series of options to enhance their decision-making and thus minimise risk relating to insured and uninsured losses through the utilisation and integration of risk management principles.

GBAT9200 Project
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 S1 S2

GBAT9201 Major Project
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC12 TBA

GEOG9011 Environmental Impact Assessment
School of Geography
Staff Contact: J Sammut
UOC6 HPW4 S1

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.

GEOG9012 Remote Sensing Applications
School of Geography
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.

GEOG9013 Directed Problems in Remote Sensing
School of Geography
Staff Contact: R Merton
UOC6 HPW3 S1 S2

A detailed investigation of a particular aspect of remote sensing technology or an area of applications relevant to candidates interests and background.

Note/s: This course requires prior approval of the Supervisor.

GEOG9014 Computer Mapping and Data Display
School of Geography
Staff Contact: B Garner
UOC6 HPW4 S1

Introduction to automated cartography and thematic mapping; theoretical and practical problems in displaying and mapping data by computer; review and application of selected computer mapping packages. MapInfo is used for cartographic manipulation and output.

GEOG9015 Population Health and Environment
School of Geography
Staff Contact: I Burnley
UOC6 HPW4 S2

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.

GEOG9016 Principles of Geographic Information Systems
School of Geography
Staff Contact: B Parolin
UOC6 HPW3 S1

An introduction to and understanding of the basic principles, structure, procedures and applications of geographical information systems, and to provide practical experience in the analytical use of spatial information. Lectures provide a comprehensive overview of the analytical treatment of geographic information: vector and raster data modelling, polygon overlay operations; digital terrain models; spatial analysis; GIS data structures; cartographic modelling. The practical component will expose students to several commercial GIs packages. ArcView and ArcInfo, plus other more specialised packages.

GEOG9017 Advanced Geographic Information Systems
School of Geography
Staff Contact: B Parolin
UOC6 HPW3 S2
Prerequisite/s: GEOG9016

Advanced topics and concepts in GIS research and development. Focus is primarily on vector-based systems. Topics include data models, structures and capture; vector editing and algorithms; errors and data accuracy: digital terrain models; projections and coordinate systems; artificial intelligence and GIS; spatial modelling. Practical exercises based on ArcInfo 8.1.

GEOG9018 Transportation Applications of Geographical Information Systems
School of Geography
Staff Contact: B Parolin
UOC6 HPW3 S2
Prerequisite/s: GEOG9016

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.

GEOG9019 Special Topic in Geography
School of 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 of Geography.

Note/s: This course requires prior approval of the Supervisor.

GEOG9020 Application and Management of Geographical Information Systems
School of Geography
Staff Contact: W Hennecke
UOC6 HPW3 S2

The process and issues involved in an organisation acquiring, implementing and managing a GIS will be considered using real examples. Applications using GIS in the management of natural resources (forest, park, soil etc), human activities at the local, national and global scale will be critically reviewed. The course will involve field visits.

GEOG9021 Image Analysis in Remote Sensing
School of Geography
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.

GEOG9022 Vegetation Management
School of Geography
Staff Contact: S Mooney
UOC6 HPW3 S1

The course provides a background in theory and practice in vegetation management, particularly under Australian conditions. It covers the description and measurement of vegetation, vegetation dynamics, vegetation response to perturbation and human impacts, theories, and modelling of vegetation change. A third of the course is devoted to management strategies of selected vegetation types..

Note/s: Field work forms a compulsory part of this course and students will incur personal costs.

GEOG9024 Soil Degradation and Conservation
School of Geography
Staff Contact: D Eldridge
UOC6 HPW3 S2

Identification, assessment and analysis of the main processes of soil degradation, including the role of climate, vegetation, geomorphology and pedology in controlling the processes. Discussions of appropriate management strategies for reducing degradation and for reclaiming degraded landscapes. Topics include: surface wash, gully erosion, wind erosion, soil acidification, soil structure decline, salinisation, accumulation of toxins and residuals.

Note/s: Field work forms a compulsory part of this course and students will incur personal costs.

GEOG9530 Project
School of Geography
Staff Contact: B Parolin
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.

GEOL0003 Special Programme (Geology)
School of Geology
Staff Contact: A Dunlop
UOC24 S1 S2

GEOL0220 Advanced Exploration Geophysics
School of Geology
Staff Contact: A Dunlop
UOC6 S1

GEOL0234 Field-Laboratory Project
School of Geology
Staff Contact: A Dunlop
UOC24 S1 S2

GEOL0240 Seminar
School of Geology
Staff Contact: A Dunlop
UOC3 S1 S2

GEOL0300 Computing and Statistics for Geologists
School of Geology
Staff Contact: A Dunlop
UOC6 S1 S2

GEOL0304 Data Processing Project
School of Geology
Staff Contact: D Cohen
UOC12 S1 S2

A project equivalent to 6HPW study for one session which requires the student to carry out detailed processing and analysis of a comprehensive data set for a geological project that may relate to the student's field of employment.

GEOL0310 Image Processing of Spatial Data Sets
School of Geology
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.

GEOL0311 Environmental Management
School of Geology
Staff Contact: A Dunlop
UOC3 S1 S2

GEOL0314 Data Processing Project 2
School of Geology
Staff Contact: A Dunlop D Cohen
UOC18 S1 S2

GEOL0320 Geostatistical Ore Reserve Estimation
School of Geology
Staff Contact: D Cohen
UOC6 S1 S2

When to apply geostatistics; brief review of univariate statistics; bivariate statistics and correlation; exploratory data analysis; measures of spatial correlation: the variogram, the covariance; variogram calculation and how to obtain a good variogram; random function models and stationarity; desirable properties of estimators; estimation of variance; dispersion variance and uses; optimal weighted average estimator, ordinary kriging; recoverable reserve estimation, problems and solutions; application examples, coal, copper, gold; blasthole kriging for orewaste selection; geotechnics and the environment.

GEOL0330 Conceptual Models for Exploration Geology
School of Geology
Staff Contact: A Dunlop
UOC6 S1 S2

The development and use of ore deposit models as a guide for exploration. Examples drawn from the major categories of deposit such as epithermal gold, greenstone associated gold, vein-type uranium, porphyry coppers, volcano-genic massive sulphides, carbonate and shale-hosted lead-zinc and ultramafic hosted nickel sulphides. Exploration strategies and tactics; risk analysis and prospect evaluation.

GEOL0340 Geochemical Exploration Techniques
School of Geology
Staff Contact: D Cohen
UOC6 S1 S2

Regolith development and element mobility. Principles of exploration geochemistry and its role in mineral exploration. Detailed consideration of soil, rock and drainage sampling interpretation techniques. Consideration of appropriate analytical techniques. Problems related to Australian and other regional environments examined on the basis of case histories.

GEOL0350 Exploration and Environmental Data Processing
School of Geology
Staff Contact: D Cohen
UOC6 S1 S2

Graphical analysis of exploration geochemical data; identification of anomalous observations. Correlation of geochemical variables; principal component analysis and identification of geochemical processes. Regression analysis and adjustment of background populations in geochemical data. Discriminant function analysis and factor analysis. Spatial filtering and definition of geochemical anomalies and regional distribution patterns of elements. Introduction to robust statistical methods. New developments in geochemical data processing. Data visualisation. Case Studies.

GEOL0360 Remote Sensing Applications in Geoscience
School of Geology
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.

GEOL0370 Fundamentals of Exploration Geophysics
School of Geology
Staff Contact: D Palmer
UOC6 S1 S2

An introduction to the theory and application of geophysical methods to engineering, environmental, and groundwater studies. The methods covered include gravity, magnetic seismic refraction, shallow seismic reflection, DC electrical resistivity, electromagnetic, transient electromagnetic, radar, and geophysical well logging. Each method is described in terms of the fundamental physical principles, data acquisition and field techniques, data processing and presentation, and quantitative interpretation.

GEOL0380 Electrical Methods in Geophysical Exploration
School of Geology
Staff Contact: D Palmer
UOC6 S1 S2

The relationships between geology and electrical geophysical properties; basic theory of resistivity, induced polarisation and electromagnetic methods. Evaluation of applications, survey design, instrumentation, data acquisition, interpretation and productivity. Computer methods of interpretation are emphasised by the extensive use of hands-on microcomputer tutorials. An introduction to recent advances in electrical geophysics: inversion, multi-electrode array resistivity, spectral induced polarisation, transient electromagnetics and ground probing radar.

GEOL0390 Data Processing for Fossil Fuel Resources
School of Geology
Staff Contact: C Ward
UOC6 S1 S2

Sedimentary basin analysis with special emphasis on the geology of coal deposits; coal deposit evaluation, data acquisition, computer processing, analysis and display.

GEOL8320 Gravity and Magnetic Methods
School of Geology
Staff Contact: D Palmer
UOC3 S1

GEOL8330 Seismic Methods
School of Geology
Staff Contact: School Office
UOC3 S1

GEOL8340 Electrical Methods
School of Geology
Staff Contact: D Palmer
UOC3 S1

GEOL8360 Geophysical and Geological Applications
School of Geology
Staff Contact: School Office
UOC3 S2

GEOL9053 Hydrogeochemistry
School of Geology
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 Geology
Staff Contact: B Volkman
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 Geology
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.

GEOL9060 Environmental Geology
School of Geology
Staff Contact: D Cohen
UOC6 S1 S2

Geology and urban planning; geological input to Environ-mental Impact Statements; soil and rock construction materials; ground subsidence due to mining and ground-water pumping; geological hazards; land degradation and problem soils; engineering geomorphology.

GEOL9070 Engineering Geophysics
School of Geology
Staff Contact: D Palmer
UOC6 S1

An introduction to the theory and application of geophysical methods to engineering, environmental, and groundwater studies. The methods covered include gravity, magnetic seismic refraction, shallow seismic reflection, DC electrical resistivity, electromagnetic, transient electromagnetic, radar, and geophysical well logging. Each method is described in terms of the fundamental physical principles, data acquisition and field techniques, data-processing and presentation, quantitative interpretation, and case histories.

Note/s: Short field tutorials are included as part of this course. Students will incur personal costs.

GEOL9100 Remote Sensing of Groundwater Resources
School of Geology
Staff Contact: G Taylor J Jankowski
UOC6 S1 S2

The physics of various remote sensing techniques; interpretation of conventional aerial photography in exploration; Infrared remote sensing techniques; sidelooking airborne radar; theory and applications of Landsat imagery; enhancement techniques for satellite imagery; interpretation of Landsat photographic products and application to several case history areas. Integration of remote sensing information with the overall database as applied to exploration. Remote sensing for hydro-geological mapping, recognition of aquifers and recharge, discharge zones, salinity mapping. Application of Landsat, TM, SPOT, RADAR and integrated information systems.

GEOL9111 Groundwater Environments
School of Geology
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 Geology
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 Geology
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 Geology
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 Geology
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 Geology
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.

GMAT9106 Special Topic in Geomatic Engineering A
School of Surveying and 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 and Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S1 S2

A special subject 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 subject.

GMAT9211 Introduction to Geodesy
School of Surveying and Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S2

Geodesy in the service of mankind. 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 and Spatial Information Systems
Staff Contact: School Office
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 and Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 TBA

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 and 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 and 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 and Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S1 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 and 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 and Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 TBA

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 and 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 and Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S2

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 and Spatial Information Systems
Staff Contact: School Office
UOC6 HPW3 S1 S2

GMAT9951 Land Information Systems
School of Surveying and Spatial Information Systems
Staff Contact: E Masters
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.

GMAT9953 Principles of Remote Sensing
School of Surveying and 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.

GSOE9200 Project (24 Credits Points)
Graduate Programs in Business and Technology
Staff Contact: School Office
UOC0 TBA

GSOE9201 Project (36 Credit Points)
Graduate Programs in Business and Technology
Staff Contact: School Office
UOC0 TBA

GSOE9202 Project (48 Credit Points)
Graduate Programs in Business and Technology
Staff Contact: School Office
UOC0 TBA

HEAL9011 Statistics and Epidemiology
School of Health Services Management
Staff Contact: M McLaws
UOC6 HPW3 S1 S2

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.

HEAL9041 Health Care Systems
School of Health Services Management
Staff Contact: S Short
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.

HEAL9071 Health Care Financial Management
School of Health Services Management
Staff Contact: K Forde
UOC6 HPW3 S2

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. Introductory financial statement analysis, budgeting, analysis of budgets and costing products and services.

HEAL9081 Health Care Financial Management 2
School of Health Services Management
Staff Contact: K Forde
UOC4 HPW2 S1 S2
Prerequisite/s: HEAL9071

The aim of this subject 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 subject - you are required to write your business plan - most students develop their plan from their own work experience.

HEAL9091 Healthcare Economics and Financial Management
School of Health Services Management
Staff Contact: K Forde
UOC4 HPW2 S1 S2

The economics of resource allocation in both the public and private healthcare systems. The impact of private health insurance and "user pays" on the efficiency and equity of healthcare markets. An introduction to double entry accountng to provide a working knowledge of cash and accrual accounting, plus an analysis of balance sheets, income statements and cash flow statements. How to apply budgeting, costing and capital budgeting to a healthcare environment.

HEAL9111 Quality Assurance for Health Administrators
School of Health Services Management
Staff Contact: H Lapsley
UOC4 HPW2 S2

An overview of quality assurance within the health care system, and of the development of quality assurance programs. A review of the roles and methodology of peer review, clinical review, screening criteria for risk management, patient satisfaction and accreditation. Techniques relating to the implementation of quality assurance programs. Integration of quality assurance concepts into the roles and functional responsibilities of health service managers.

HEAL9121 Measurement of Quality of Life, Health Status and Patient Satisfaction
School of Health Services Management
Staff Contact: R O'Connor
UOC4 HPW2 S1 S2

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.

HEAL9301 Health Planning 1
School of Health Services Management
Staff Contact: I Forbes
UOC4 HPW2 S1 S2

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.

HEAL9331 Health Related Law and Ethics (Australia)
School of Health Services Management
Staff Contact: P McNeill
UOC4 HPW2 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.

HEAL9351 Health Economics 1
School of Health Services Management
Staff Contact: S Maxwell K Forde
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.

HEAL9361 Physical Planning and Design
School of Health Services Management
Staff Contact: I Forbes
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.

HEAL9371 Research and Evaluation Methods
School of Health Services Management
Staff Contact: M McLaws
UOC4 HPW2 S1 S2

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.

HEAL9381 Policy Studies
School of Health Services Management
Staff Contact: School Office
UOC4 HPW2 S2
Prerequisite/s: HEAL9041, HEAL9711
Corequisite/s: HEAL9351

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.

HEAL9391 Health Services Strategic Management and Planning
School of Health Services Management
Staff Contact: J Braithwaite
UOC4 HPW2 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.

HEAL9411 Epidemiology
School of Health Services Management
Staff Contact: M McLaws
UOC4 HPW2 S1 S2

Skills for critical appraisal of medical literature and of clinical and service outcome indicators will be developed. Knowledge of epidemiologic methodology will be applied during critical appraisal of medical, scientific and nursing literature with the aim of assisting students to evaluate published findings and in decision making of clinical practice, policy and planning. Clinical and service outcome indicators will be developed and appraised.

HEAL9421 Public Health and Epidemiology
School of Health Services Management
Staff Contact: M McLaws
UOC6 HPW2 S1

Distribution patterns and determinants of disease and disability with particular reference to diseases of major Australian concern. Preventive, treatment and rehabilitation strategies. The uses of epidemiology in the planning, operation and evaluation of health services.

HEAL9422 Population Health, Epidemiology and Statistics
School of Health Services Management
Staff Contact: M McLaws
UOC6 HPW3 S1

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: to provide an examination of the determinants and causes of disease and injury in populations and communities; 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.

HEAL9431 Interpersonal Communication in Organizations
School of Health Services Management
Staff Contact: R Iedema
UOC4 HPW2 S2 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.

HEAL9441 Healthcare Economics and Financial Management
School of Health Services Management
Staff Contact: K Forde
UOC6 HPW3 S1 S2

The economics of resource allocation in both the public and private healthcare systems. How important 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 applying budgeting, costing and capital budgeting to a healthcare environment.

HEAL9442 Health Resources Planning and Development
School of Health Services Management
Staff Contact: I Forbes
UOC6 HPW3 S1 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.

HEAL9471 Comparative Health Care Systems
School of Health Services Management
Staff Contact: I Forbes
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.

HEAL9501 Computing Techniques for Health Services Management
School of Health Services Management
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.

HEAL9661 Current Issues in Nursing
School of Health Services Management
Staff Contact: A Whelan
UOC4 HPW2 S2

This interactive subject critically examines controversial issues involving the nursing profession. Topics addressed include: educational trends, continuing education and training, unionism and professionalism, political action in the health arena, clinical specialisation, cost effectiveness, consumer's rights, factors affecting nurses participation in the workforce, ethics in practice.

HEAL9701 Management of the Work of Health Professionals
School of Health Services Management
Staff Contact: A Whelan
UOC4 HPW2 S2 X1

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.

HEAL9711 Management of Organisations
School of Health Services Management
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.

HEAL9741 Management of Health Services
School of Health Services Management
Staff Contact: J Braithwaite
UOC4 HPW2 S1

In this course we look at ways to improve how individuals manage. 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.

HEAL9743 Introduction to Casemix
School of Health Services Management
Staff Contact: M Ho
UOC4 HPW2 S1 X1

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.

HEAL9744 Casemix Accounting and Funding
School of Health Services Management
Staff Contact: M Ho
UOC4 HPW2 S2
Corequisite/s: HEAL9743

The conceptualisation of hospital products as the diagnosis, treatment and care of specific patient groups. Casemix costing and traditional hospital costing. Alternative methods of casemix costing including clinical costing systems and cost modelling. The Yale Cost Model. Application of casemix costing results from individual hospitals. Alternative methods and models of using casemix for hospital funding purposes. Budgeting for clinical departments.

HEAL9745 Managing Public Health Implementation
School of Health Services Management
Staff Contact: School Office
UOC4 S2

This course will identify the salient features of public health initiative which are likely to affect their implementation and describe the detailed composition of different approaches to implementation, as well as identify the circumstances and types of initiative in which is best used. It maps the interrelationship between control and evaluation in policy implementation and how the detailed composition of the methods used in the either of these ultimately affects the substantive content of what takes place in implementation. Design and develop an implementation structure which will address the issues associated with and/or arising from the substantive content of a nominated public health policy, and private appropriate mechanism of control and evaluation.

HEAL9746 Casemix & Contracting for Health Care
School of Health Services Management
Staff Contact: D Hindle
UOC4 HPW2 S2

Public and private funders are moving towards more sophisticated descriptions of services in formal contracts with health care providers. Particular attention is being given to the use of casemix classifications when defining those services. This course discusses and then illustrates the key components of casemix-based contracting. They include optional approaches to the process of categorisation itself, such as time-based and episode-based classifications, episodes of care and episode management units, and iso-resource and iso-utility classes. Attention is paid to the measurement of costs and utilities, and to audits of such matters as clinical codes, quality of care, and outcomes. The role of clinical pathways is considered in detail. The ideas are explored through a case study, in which students function as members of either a purchaser or a provider hospital during two annual rounds of negotiation. The outcomes of negotiation are then evaluated by use of amodel which predicts costs and revenues, and associated variables including admission rates and lengths of stay. Assessment is through two assignments, in which students are expected to provide advice on operations to both the insurer and the provider.

HEAL9747 Clinical Work Process Control
School of Health Services Management
Staff Contact: D Hindle
UOC6 S1

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.

HEAL9748 Clinical Governance
School of Health Services Management
Staff Contact: School Office
UOC6 S1 S2

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.

HEAL9751 Management for Public Health
School of Health Services Management
Staff Contact: J Braithwaite
UOC4 HPW2 S1

Note: This is a core course for Master of Public Health students. Provides students with an 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.

HEAL9771 Casemix for Clinician Managers
School of Health Services Management
Staff Contact: D Hindle
UOC4 HPW2 S2

This course examines how casemix information, methods and applications can be used to address organisation change issues that are likely to arise in constituting clinical units as learning organisations. The course is structured to develop practical skills in using casemix information and methods in engendering organisational learning with respect to: strategic planning and management; budgeting and financial control; service planning; clinical audit; utilisation review; quality assurance; clinical guideline development and implementation; the development of an outcomes focus in service planning and delivery; and, in planning and implementing streams care.

HEAL9781 Evidence-Based Clinical Management
School of Health Services Management
Staff Contact: M 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.

HEAL9811 Sociology, Ethics and Health
School of Health Services Management
Staff Contact: S Short
UOC4 HPW2 S1

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.

HIST5203 U.S. Foreign Relations Since 1900
School of History
Staff Contact: I Bickerton
UOC8 HPW2 S2

Examines the nature and determinants of US foreign policy since 1900 with particular reference to: (1) popular notions about US uniqueness as an anti-imperialist, isolationist and esssentially idealistic great power and (2) the bitter debate between orthodox and revionist historians over the nature and purpose of American policies. Subjects include the initial phase of "Open Door" expansion into East Asia, the Pacific and Central America, participation in the First and Second World Wars, the nature of "isolationism" containment activities during the Cold War and involvement in such post-war crises as the Chinese revolution, Korea, Cuba, Vietnam, Latin America and the Middle East.

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.

HIST5233 Modern China: History and Historiography
School of History
Staff Contact: School Office
UOC8 HPW2 S2

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.

HIST5301 Reading Program in History
School of History
Staff Contact: School Office
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.

HIST5310 Recording Voices: Oral History and the Interview
School of History
Staff Contact: M Roces
UOC8 HPW2 S2

Critically analyses the methods of oral history, and ethical, philosophical and practical difficulties of oral history, and exposes students to the theory and practice of writing oral histories particularly the use of interviews as a primary source. A critical component is the oral history project where students conduct their own interviews and write their own oral history. Interview ethics, transcribing data, problems with interpreting the interview data are linked to the oral history project. Includes workshop presentation.

HIST5311 Historical Research and Public Policy
School of History
Staff Contact: School Office
UOC8 HPW2 S2

Examines the relationship between history and public policy from two perspectives. Firstly, the ways in which the study of history can explain important features of contemporary public policy making. Secondly, the ways in which conceptions of history and the skills encouraged by the discipline are actually used in contemporary professional public policy practice. Students will have the opportunity to study the long-range history of a series of public policy areas in which disputes over historical fact and/or interpretation have been critical. Develops historical research skills, ability to establish factual matters subject to dispute in contemporary political, government or business dealings.

HIST5312 Archival Research Strategies
School of History
Staff Contact: School Office
UOC8 HPW2 S1

Archival records of national, state and local governments, business corporations, community organisations and individuals, preserved for their evidential and historical value, are the primary sources for research in a wide range of academic and professional disciplines. Introduces students to archival theory and principles: provides them with necessary practical skills and techniques for undertaking research using archival sources; consists of seminars and visits to archival institutions and a project based on the location, identification and use of primary archival sources and the secondary sources which complement them.

IBUS5601 Global Business and Multinational Enterprise
School of International Business
Staff Contact: School Office
UOC6 HPW3 S1

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 venturs 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

Understanding cultural differences, and effectively managing thses 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 consider strategies for manging and vlauing 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
Prerequisite/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
Prerequisite/s: IBUS5601

Asia-Pacific business development in a comparative international context. Investment and business activities of multinational enterprises in the Asia-Pacific region. Influence of regional factors including governmental regulation and the development of ASEAN and APEC. The significance of socio-cultural differences in the region. Comparative analysis of business and management systems across a selection of countries including China, Japan, Korea and Indonesia. The development of Australian business in the Asia-Pacific region. Future prospects for Asia-Pacific business.

IBUS5605 Japanese Business and Management
School of International Business
Staff Contact: School Office
UOC6 HPW3 S2

Impact of bubble economy collapse and currency crisis on Japanese business; new directions in corporate strategy and human resource management; culture and management style; corporate strategy and inter-organisational relationships; corporate finance and governance; dynamics of small business and entrepreneurship; Japan s production system; information structures in the Japanese firm; business networks and supplier relations; globalisation of Japanese business; the Japanese MNE; Japanese management overseas.

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.

IBUS5681 Business Communication
School of International Business
Staff Contact: School Office
UOC6 HPW3 S1 S2

Managing communication is an essential skill required in business and professional contexts. This course raises awareness of effective business communication skills and strategies, develops students capacity to manage communication processes, and enhances communication competence. It examines different models of communication, and explores topics such as language and communication, persuasion, reasoning and argument in communication, non-verbal communication, interpersonal communication, intercultural communication, communicating in small groups and teams, communication for the workplace, and written and spoken communication. Advanced topics in organisational communication, globalisation and intercultural communication competence, business negotiation, and public relations are also included.

IBUS5691 Special Topic in International Business
School of International Business
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S1
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: School Office
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.

IDES1121 History of Industrial Design
Industrial Design Program
Staff Contact: School Office
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 Park
UOC3 HPW2 S1

This course is a chronological and focused study of the emergence and development of industrial design from 1800 to the preent day. It includes products as an aspect of our culture/society/commerce/ industry from 1750 to teh present day and examines consumer products within teh context of the changes taking palce in industgry and society.

IDES4371 Design Management for Industrial Design
Industrial Design Program
Staff Contact: L Green
UOC3 HPW2 S2
Prequisite/s: IDES2091

The problem of integrating innovative product design and development within the overall managerial, production and financial structure of industry. Australian and overseas studies are given. Particular emphasis is placed on the development of appropriate design management structures and methods for the Austrlaian situation.

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: School Office
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 course work.

IDES5152 Manufacturing Technology
Industrial Design Program
Staff Contact: L Green
UOC3 HPW2 S1 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: School Office
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: School Office
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: L Green
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: School Office
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: L Green
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: R 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 organizations; critiques of sustainability as a framework for environmental management; alternative models.

IEST5002 Tools for Environmental Management
Institute of Environmental Studies
Staff Contact: R 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: Institute Office
UOC6 S1

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: Institute Office
Enrolment requires Institue approval
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: Institute Office
Enrolment requires Institue approval
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.

Prerequiste: Completion of IEST 5004 at a satisfactory level

IEST5018 Environmental Management Research Project Part C
Institute of Environmental Studies
Staff Contact: Institute Office
Enrolment requires Institue approval
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.

Pre-requiste: Completion of IEST 5004 and 5012 at a satisfactory level

IMGT5110 Information Retrieval Systems
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1 S2

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.

Assumed knowledge: INFS5988

IMGT5120 Organisation of Knowledge
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1

This course provides an introduction to the concepts of intellectual organisation of information and records in different temporal, societal and communications contexts. The course introduces the student to interdisciplinary perspectives and some of the theoretical understandings and the knowledge base necessary to work in information management environments. This course aims to provide both a theoretical basis and practical experience through examining ways in which information and records are identified, intellectually organised and managed for retrieval and use. Introduction to current tools and methods used for organising information and records. The notion of metadata is taken as a conceptual framework for examining contemporary and historical issues of intellectual organisation of information and records. The course examines definitions, characteristics and typologies of information entities as resources, with special attention to the record as evidence, for pluralistic uses in social, legal, political and business contexts. The student thus gains an understanding of the typology, properties, functionality and management of information under its various entities of data, document or record. Methods in current use for organising information will be examined together with consideration of existing policies and infrastructures relating to the intellectual organisation of information both globally and nationally. The desired outcome from this course is that students gain an understanding of the relevance of the principles of the intellectual organisation of information to managing information or records for retrieval and use.

IMGT5220 Electronic Recordkeeping Fundamentals
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2

The course will describe tools for the design, establishment and management of effective electronic recordkeeping regimes in public and private sectors, including design, implementation and operational aspects over the short, immediate and long term. Topics include: tools and techniques for effective analysis of contextual factors and recordkeeping requirements for operational business and regulatory systems and for managing archival holdings within the office and repository environments; developing or adapting strategies for effective capture and ongoing management of paper-based and electronic records; forming critical alliances with other stakeholders; drafting electronic recordkeeping regime specifications incorporating requirements, standards and "best practices", both technical and professional; problems and issues of long-term integrity, authenticity, accessibility and useability.

IMGT5410 Knowledge and Society
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2

This course aims to introduce, analyse and draw out current issues on the role of information in society and to discuss practical implications of some fundamental concepts in information studies which are of particular relevance to professional practice in a wide variety of organisational and cultural situations. Societal and technological factors shaping and being shaped by different conceptions of information. Setting the different ideas about information and records in historical and cultural context. Role of information in social and organisational change and development, and as catalyst and support for innovation. A consideration of the roles of various agencies in developing and maintaining information infrastructure. Use of information and records including their role in decision-making and problem solving, and their value in specific situations and transactions. Information diffusion and dissemination research in various environments and utilising various technologies. Exploration of the

practical, social and ethical implications of the various ideas about the value of information for the design of information services. Cognitive models of information seeking and sense-making including their relevance for information design and delivery. Consideration of the implications for users and information agencies of intellectual property, ownership of intellectual products, and copyright law, in both print and electronic mediums.

IMGT5420 Information Sources: Access, Assessment and Acquisition
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1

Introduction to the two sides of information resources: what sources might be available to meet a particular need and how to acquire them; and strategies to be employed in developing a collection of information resources. The range of possible sources (in print, electronic or other format, available locally or remotely) and navigation of the physical or electronic routes (including the Internet) to obtain access to these sources. Synchronisation of appropriate information sources with the needs of the end-user/client through negotiation of both expressed and actual needs/wants. Interaction between information provider and user/client is studied, individually in the reference interview and collectively in reader education programs. Developing a collection of information resources. Conversion of sources into resources through the application of policies, strategies and plans. Varying approaches to acquisition and access, including evaluation and comparison of relative cost benefits. Resource sharing at the regional, national and international levels.

IMGT5430 Health Information: Retrieval, Systems & Management
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1

This course examines the information needs of health professionals including the structure and characteristics of health information sources and their supporting databases. Special emphasis is placed on the indexing, classification and retrieval of health information as well as on the design and evaluation of health information systems. Other information related issues in the health sciences covered in this course include: the role of hospital libraries in the provision of information, the selection and evaluation of the variety of online databases and electronic journals in the health sciences. 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 directions for clinical data capture and analysis. The course concludes with a discussion on the future integration of the various information systems in the health sciences.

IMGT5445 Business & Government Information: Sources and Services
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2

A knowledge management framework is utilised to examine the nature and function of information services in public and private sector enterprise. The organisation-wide information audit. The contribution of information services to an organisation?s overall strategy. External information sources, essential to competitive intelligence, such as patents, legislation, demographics and statistics. Information needs and the design of appropriate information resource centres and services. Information resource discovery, presentation, re-packaging, and other value-adding techniques appropriate to corporate and government environments. The role of specialised libraries in decision-making processes and product life cycles. Current issues in the management of information services, such as outsourcing and the exploitation of entrepreneurial opportunities.

IMGT5555 Knowledge Generation: Communication, Structure and Process
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2

This course is intended to bring together various areas of interest including science of science, scholarly communication studies, science policy, quantitative aspects of information and communication processes, particularly those using text. These areas of study are incorporated in the subfields of Scientometrics and Informetrics. Informetrics incorporates the older field of bibliometrics and the new areas of cybermetrics and webometrics. The statistical and mathematical orientation does not preclude analysis by qualitative methods. Topics investigated include: dynamics (growth and diversification) of scientific fields; interdisciplinarity; mathematical modeling of informetric laws, citermotivation; evaluation of scientists' research performance; development of indicators for science and technology, e.g., impact factors, mapping and visualization of knowledge; institutional and national publication productivity and research co-operation; library management, e.g. journal evaluation or circulation control; economic factors in information production and dissemination; science policy analysis and forecasting.

IMGT5560 Information Management: Professional Attachment
School of Info Systems, Technology & Management
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 X2

The overall goal of this course is to expose students to the wider world of information management, not only to the principles, concepts and techniques, but also to the considerations, issues and problems affecting their application in today's dynamic societies. The focus will be on developing an understanding of the underlying ideas and values embodied in the principles and ethics which guide our work. Students will be attached full-time to ahost organisation as consulting professionals-in-training to design and undertake a specific project over a minimum of 120 hours. Because there are several possible ways of accomplishing information tasks effectively, the emphasis of the professional attachment will be on documenting and reporting project objectivesm decision, challenges/obstacles, actions and outcomes APPROPRIATELY, both verbally and in writing.Students will be required to attend preparatory seminars in the session before undertaking their attachment and to present a formal seminar on their work in the session following.

INFS5721 Electronic Commerce Telecommunications
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1 S2

This course aims to provide the student with a theoretical and a practical understanding of the underlying telecommunications architecture and associated networking technologies required for the implementation of electronic commerce. The course considers the strategic issues in telecommunications for e-commerce; current and emerging technologies for data networking; and the specification of corporate networks including local and wide area networks; a detailed understanding of the internet protocol suite; TCP/IP - IP version 4, subnets, TCP, UDP, inter-router protocols, multicasing, IP version 6; security threats, internet application security issues, firewalls, encryption, digitial signatures, network management; and an understanding of non TCP/IP peer to peer networking protocols.The theoretical aspects of the course are reinforced by the extensive laboratory work where the student is given the opportunity to gain practical experience in the implementation, configuration and operations of telecommunications systems.

INFS5722 Advanced Database Implementation for Electronic Commerce
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1

This course aims to provide students with an understanding of the theoretical and practical aspects of database implementation in an electronic commerce environment. Students will gain an understanding of how issues such as performance, security, and reliability can affect the physical implementation of a database system. The course also covers the implementation of a database in a distributed environment,Students will have the opportunity of implementing a logical database design in a distributed networking environment using a major commercial database management product.

INFS5723 Management Perspectives on Electronic Commerce Techologies
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1

The practice of electronic commerce has significantly changed the way that a business may interact with its suppliers, customers and other strategic partners. In order to accommodate these changes business practices, such as the acquisition, use and management of information and communication technology, are rapidly changing within regional economies and on a global scale. This course has been designed to assist students to understand the information and communication technology issues and impacts in regard to electronic commerce models and frameworks. Topics include: electronic commerce on-line services strategy formulation; the World Wide Web. Internet, intranets and stranets; technology management in the E-organisation and its supply chain; security and payment approaches, technologies and practices; international legal frameworks and government policies and their effect on the use of Electronic Commerce technologies in the global marketplace.

INFS5728 Information Design for the Digital Enterprise
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2

This course focuses on information architectures and information design. In particular we address the design of electronic commerce initiative from the point of view of the user. The term user in this case covers internal users (those individuals and groups within the organisation whose work is changed by the introduction of a business web site or intranet) and external users such as business partners, customers and clients.Information architects translate business and user requirements into functional definitions and develop interface recommendations for web sites, intranet and e-commerce applications. Their role is to structure of information into hierarchies and to ensure that content is available to enable users to achieve their goals. Information Design is the practice of acquiring, creating, filtering, and presenting information in order to communicate the meaning of that information to others.Participants will carry out research into current theory in the area of information architecture, information design and web site usability and will be expected to engage critically with current practice through exploratory case studies. We take contextual and participatory approaches to design, where usability is seen as a central and ongoing process.Topics covered will include: user-centred, contextual and participatory design methodologies, information auditing, information design, navigation design, user-interface development and usability testing.

INFS5848 Information Systems Project Management
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2

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 wil be used as illustrations.

Assumed knowledge: INFS5988

INFS5885 Management of E-Business Technology
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1
Excluded: INFS5985

This course aims to provide students with an introduction to the issues that surround the management of E-Business Techologies within the business environment. The course will address busness 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.

Assumed knowledge: INFS5988

INFS5905 Information Systems Auditing
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2

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.

Assumed knowledge: INFS5988

INFS5926 Advanced Data Management
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: INFS5989, 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: 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 take the subject INFS4848/ INFS5848 before this course.

Assumed knowledge: INFS5988

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.

INFS5972 Global Business Data Networks
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2
Excluded: INFS5983

Data communications networks, interfaces between networks and computers, data communications software, standard communication protocols, network architectures, distributed databases, design of information systems which include data communications.

Assumed knowledge: INFS5988

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.

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: School Office
UOC6 HPW3 S1 S2
Excluded: INFS5972

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.

Assumed knowledge: INFS5988

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.

INFS5985 Managing Electronic Commerce
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S2
Excluded: INFS5885

The conduct of commerce in electronic marketplaces has been heralded as the source of fundamental change to business practice with the substitution of existing market arrangements by computer-aided buying and selling. This course has been designed from a managerial perspective to help students develop specific skills relating to the use of electronic commerce models and frameworks as well as an understanding of essential concepts and technologies. Topics include: electronic commerce strategy and business definition; Internet and World Wide Web applications; management of Electronic Commerce in the organization; security and payment systems; intranets and supply chain management; legal issues and constraints to implementation of electronic commerce; essential concepts/technologies supporting electronic commerce; and government policy and electronic commerce.

Assumed knowledge: INFS5988

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

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.

Assumed knowledge: INFS5988

INFS5991 Decision Support Systems
School of Info Systems, Technology & Management
Staff Contact: School Office
UOC6 HPW3 S1

This course covers issues in the design, development and implemetnation 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.

Assumed knowledge: INFS5988

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 S1 S2

Note: Enrolment in this course is only available to students undertaking the MBT Programs 8616, 7333, 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: A Junor J O'Brien
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.

IROB5701 Employment and Industrial Relations
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
UOC6 HPW3 S1

Concepts and issues in Australian industrial relations at the macro or systems level, with overseas comparisons where appropriate. Labour movements and the evolution of employee-employer relations in the context of industrialisation and change; origins and operations of industrial tribunals at the national and state levels; their instrumentalities; nature of industrial conflict and procedures for conflict resolution such as arbitration and bargaining; national wage policy.

IROB5705 The Management of Training
School of Industrial Relations and Organisational Behaviour
Staff Contact: I Hampson
UOC6 HPW3 S2
Prerequisite/s or Corequisite/s: 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: S Hammond
UOC6 HPW3 S1
Prerequisite/s or Corequisite/s: 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 Bargaining and Advocacy
School of Industrial Relations and Organisational Behaviour
Staff Contact: D Chin
UOC6 HPW3 S2

Aims to give students studying industrial relations and/or human resource management practical skills in the areas of industrial and workplace negotiation, bargaining and advocacy. The course examines the content, character and making of industrial awards and agreements, with special emphasis on industrial tribunal processes and negotiation and advocacy in relation to paid employment. Students also receive a practical grounding in the requirements of particular policies and regulations governing employment relations, including Enterprise Bargaining, Equal Opportunity and Affirmative Action, Occupational Health and Safety, and Termination of Employment. In addition, the course provides appropriate theoretical perspectives on these and related employment issues.

Assumed knowledge: IROB5700

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
Enrolment requires school approval
UOC6 HPW3 S1 S2

This course is designed to assist people to manage in the turbulent, complex and changing environmentof today's organisations. It contains tools, techniques and new ways of thinking about management in the context of new forms of work organisations, combined with new technologies. It addresses issues such as organisation transformation and renewal, systems thinking, knowledge management, innovation and managing uncertainty. It offers practical management advice as well as providing a conceptual framework for better understanding of technology, organisations, innovation and management.

IROB5900 Social and Organisational Analysis
School of Industrial Relations and Organisational Behaviour
Staff Contact: L Taksa
UOC6 HPW3 S2

Examines the core metaphors, theories and paradigms employed in organisational analysis and problem solving. Topics examined include bureaucracy and scientific management, sociotechnical theory, contingency theory, organisational ecology, organisational politics and culture, economic theories of organisation, and psychoanalytical approaches. Case studies of specific organisations are used to apply different theoretical perspectives to organisational analysis and problem solving.

IROB5901 Organisational Behaviour
School of Industrial Relations and Organisational Behaviour
Staff Contact: P Bohle
UOC6 HPW3 S1
Excluded: PSYC7100

This subject 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.

IROB5903 Organisational Innovation and Change
School of Industrial Relations and Organisational Behaviour
Staff Contact: D Morgan
UOC6 HPW3 S2

Examines the need for, awareness, nature and processes of organisational change. It focuses on administrative innovation and contemporary techniques and procedures used to initiate, plan and implement change. The course is shaped by contemporary concerns over the need to combine consistent structures for predictable and efficient operations and personnel employment, with flexibility and timely adaptability to respond to the environment. It adopts a critical perspective and uses a multi-disciplinary framework with material drawn from Organisational Studies, Human Resource Management, Organisational Behaviour, and Sociology. Themes encompassed include: features of organisation design; types and phases of change; managerial and organisational cognition; culture and intervention for change; organisation development; techniques for process change, (eg TQM, business processes;); technological innovation; public-private sector differences; employment systems; career management; and change agency. Emphasis for study and class work is placed on both analytical scholarship and practical projects.

Assumed knowledge: IROB5700

IROB5904 Organisational Transformations at the Speed of E
School of Industrial Relations and Organisational Behaviour
Staff Contact: D Kennedy
UOC6 HPW3 S1 S2

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: T Wilcox
UOC6 HPW3 S1

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.

Assumed knowledge: IROB5700

IROB5912 International Dimensions of Negotiation Behaviour
School of Industrial Relations and Organisational Behaviour
Staff Contact: J Holt
UOC6 HPW3 S2
Prerequisite/s or Corequisite/s: IROB5901

Every aspect of business negotiations is influeneced by the dimensions of culture. The purpose of this course is to investigate how negotiation, as a process, differs accross cultures in terms of culture conditioning, negotiating style, approaches to problem solving, implied assumptions, and the role of ceremony and formality. The course consists of three modules. Taking an Asia-Pacific focus, the first module builds a framework through which to conceptualise the international dimensions that impact on Asia-Pacific business negotiation processes. 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.

IROB5920 Managing Equity, Diversity & Disability
School of Industrial Relations and Organisational Behaviour
Staff Contact: L Taksa
UOC6 HPW3 S2

This subject presents a multi-disciplinary overview of the issues and problems raised by the increasing diversity of the workforce and it evaluates organizational challenges and opportunities created by the need to attract, develop, and retain employees and managers from a diverse range of backgrounds and/or abilities. It introduces students to concepts and theoretical constructs that enhance understanding of difference and diversity, such as gender, identity, ethnicity and disability. It examines strategies required to more effectively deal with prejudice, stereotyping, discrimination, inter-group conflict, cultural clash, structural integration and organizational change. In this way the course relates the management of equity and diversity to changes in work organization, human resource management and industrial relations, as these involve issues of power and politics, legislative intervention and regulation, labour market segmentation, organisational power and politics, Equal Employment Opportunities, the merit principle, and organisational culture.

IROB5931 Special Topic in Organizational Behaviour
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S1

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 co-ordinator of the program must be obtained prior to enrolling in this subject. However, before approaching the co-ordinator 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: School Office
Enrolment requires school approval
UOC6 HPW3 S1

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: School Office
Enrolment requires school approval
UOC6 HPW3 S1

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: School Office
Enrolment requires school approval
UOC6 HPW3 S1

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: M Quinlan
UOC6 HPW3 S2

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. The subject also covers hazard identification, the development and nature of legal regulation, the industrial relations of safety and approaches to rehabilitation.

Assumed knowledge: IROB5700

IROB5947 Remuneration and Performance Management
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
UOC6 HPW3 S1

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.

Assumed knowledge: IROB5700

IROB5948 Human Resource Recruitment, Selection and Development
School of Industrial Relations and Organisational Behaviour
Staff Contact: C Royal
UOC6 HPW3 S1

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.

Assumed knowledge: IROB5700

IROB5949 International Human Resource Management
School of Industrial Relations and Organisational Behaviour
Staff Contact: J Holt
UOC6 HPW3 S2

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.

Assumed knowledge: IROB5700 or IBUS5601

IROB5950 Project Report (Organizational Behaviour)
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
Enrolment requires school approval
UOC12 HPW3 S1

IROB5951 Thesis (Organisational Behaviour)
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
Enrolment requires school approval
UOC48 HPW3 S1

C120

IROB5952 Project Report (Human Resource Studies)
School of Industrial Relations and Organisational Behaviour
Staff Contact: School Office
Enrolment requires school approval
UOC12 HPW3 S1

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.

JAPN5002 Trends & Issues in Teaching & Learning Japanese as a Foreign Language
Department of Japanese and Korean Studies
Staff Contact: C Thomson
UOC8 HPW2 S2

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

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: School Office
UOC8 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 The Social Construction of Japanese Identities
Department of Japanese and Korean Studies
Staff Contact: W Armour
UOC8 HPW2 S1

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 S1

Provides an introduction to sociolinguistics showing the relevance of an understanding of 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. The course will help 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).

JAPN5010 Japanese Business and Management
Department of Japanese and Korean Studies
Staff Contact: School Office
Enrolment requires approval
UOC8 HPW2 S2

Impact of bubble economy collapse and currency crisis on Japanese business; new directions in corporate strategy and human resource management; culture and management style; corporate strategy and inter-organisational relationships; corporate finance and governance; dynamics of small business and entrepreneurship; Japan's production system; information structures in Japanese firms; business networks and supplier relations; globalisation of Japanese business; the Japanese MNE; Japanese management overseas.

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 Elementary 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.

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: K Okamoto
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 a daily life and range of professional and business situations.

JAPN5103 Professional Japanese B
Department of Japanese and Korean Studies
Staff Contact: School Office
UOC6 HPW3 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.

LAWS3000 Selected Issues in Sentencing
Faculty of Law
Staff Contact: J Gans
Enrolment requires school approval
UOC4 X2

The content of the course covers selected issues of policy, law and practice that surround the exercise of the sentencing discretion. The course will emphasise the areas where there has been or will be major changes in Australian sentencing law. Typically, the course will

cover two of the following: (1) the nature of sentencing jurisprudence; (2) the principles governing the determination of a sentence; (3) the control of sentencing; (4) informing the sentencing decision.

LAWS3001 Sentencing: Law, Policy and Practice
Faculty of Law
Staff Contact: J Gans
UOC8 HPW2 X2

The content of the course covers both sentencing law and the issues of policy, law and practice that surround the exercise of the sentencing discretion. The course will emphasise the areas where there has been or will be major changes in Australian sentencing law. Particular topics typically examined are: (1) the nature of sentencing jurisprudence; (2) the principles governing the determination of a sentence; (3) the control of sentencing; (4) informing the sentencing decision.

LAWS3003 Crime Prevention Policy
Faculty of Law
Staff Contact: D Brown
UOC8 HPW2 S2

Crime prevention policy has traditionally been regarded as synonymous with the operations of the criminal justice system. Clearly the operations of the major criminal justice agencies - the police, courts and prisons are an important part of the response to crime. However, research shows that these agencies have a very limited effect on the incidence of crime. This is hardly surprising when we consider that the major causes of criminal offending lie in economic, social and cultural factors which by and large lie outside the criminal justice system. It is therefore imperative to develop approaches to crime prevention which focus on a broad range of areas and social agencies outside the traditionally defined criminal justice system. The emphasis should be on the attempt to link these various areas and to develop crime prevention policy. Topics include: the nature of crime prevention policy; situational and social crime prevention; forms of victimisation; crime victim surveys; community policing strategies; Neighbourhood Watch; the private security industry; crime prevention in the planning, design and construction of housing; the concept of defensible space; the provision of security hardware and insurance; crime problems on public transport; environmental town planning, local government and the development of crime impact statements; local crime prevention programs; the governance of crime prevention; "partnerships"; crime prevention and liquor licensing and drug policies.

LAWS3006 Policing
Faculty of Law
Staff Contact: D Dixon
UOC8 HPW2 S1

This course focuses on policing as a set of social and legal practices and institutions. It is particularly concerned with the potential role of law in policing, both as a resource and as a regulator. Comparative material is used, drawing out similarities and contrasts between policing in 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.

LAWS3008 Criminal Justice System
Faculty of Law
Staff Contact: D Brown
UOC8 HPW2 X1
Excluded: LAWS1004

This course examines current issues in criminal justice. The materials are socio-legal in orientation, with an increasing emphasis on popular cultural sources; they emphasise process rather than legal rules. Historical and contemporary issues are examined within their broader political and discursive context. In examining various forms of discretionary decision-making in the criminal process an attempt is made to identify practices specific to class, race and gender. Topics covered from year to year vary according to current inquiries, campaigns and controversies.Topics: reporting crime, criminal statistics, media approaches to crime, the politics of law and order, popular cultural perspectives, crime fiction, cop shows, fictional presentations of particular cases, serial killers, the death penalty, contemporary developments in social control, criminal violence, miscarriages of justice, and reform in the criminal justice system.

LAWS3032 TV, Radio and New Media
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 S2

On 1 January 2001, Australia's television broadcasters commenced digital broadcasts. This was one of the most important technical and market developments since the introduction of television in 1956. It has also been one of the most politically contentious. This course will cover the laws affecting TV and radio broadcasters in Australia and draw comparisons with the laws applying in some overseas countries, particularly those which have introduced or are introducing digital services in the near future. It will examine the changing social and cultural impact of broadcasting and the on-going changes to legislation in this area, particularly the review of broadcasting regulation published by the Productivity Commission in 2000.

LAWS3033 Defamation, Privacy and the Media
Faculty of Law
Staff Contact: School Office
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 S2
Excluded: LAWS1032

This subject covers the theory and practice of developing computer applications for use in the law. It combines critical analysis and 'hands on' experience. It focuses on the use of text retrieval and hypertext techniques, and the use of knowledge-based technologies such as expert systems (systems that give legal advice) and automated legal document generators, with a strong emphasis on the use of these technologies over the Internet. The special requirements of legal materials are emphasised. Systems in use in public administration and private practice will be demonstrated and discussed critically. Topics may include: principles and performance measurement of hypertext and free-text retrieval; special problems of legal applications; global systems over the Internet; litigation support and court technologies; computerised representation of legal knowledge; different types of legal expert systems; principles of automated document generators; policy implications for access to law, the delivery of legal services and the rule of law. Each student will design and implement an internet-based computer application in an area of law of the student's choice. 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, but a knowledge of programming is not required. Familiarity with computerised legal research is desirable, particularly Internet legal research. Classes take place in the Faculty Microcomputer Lab and enrollment is therefore limited. The course will be taught by a combination of seminars, internet delivery and computer lab instruction. Further details are on the subject web pages (http://www2.austlii.edu.au/cal/).

LAWS3037 Data Surveillance and Information Privacy Law
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 S1

The subject examines laws protecting privacy and regulating data surveillance (the techniques of social control through the use of information technology) 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); international standards and the regulation of personal data exports, particularly the European Union's privacy Directive; the Internet and jurisdictional problems. 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 will be taught by a team of academics and practitioners of various aspects of privacy law and policy, and will be supported by extensive Internet resources.

LAWS3039 Law and Internet Cultures
Faculty of Law
Staff Contact: K Bowrey
UOC8 HPW2 S2

This course looks at developments in popular philosophy of science, science fiction and cyberculture; information technology industry literature on innovation, marketing, technological redundancy and monopoly. The point is to examine the developing interdependencies between industry, law and culture. Legal analysis of cyberspace is moving on from concern that cyberspace cannot be regulated. It is suggested that commerce is the primary regulator, and our online behaviour is becoming more highly controlled than in real space. If this is so, from where does industry get its inspiration, what new technologies can we expect to see and how will they be sold to us? What avenues are there for legal input into the business of high technology?

LAWS3041 Contempt and the Media
Faculty of Law
Staff Contact: School Office
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: School Office
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.

LAWS3051 Telecommunications Competition and Consumers
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 S1

This course examines the Australian laws which affect competition and consumers in communications markets. These areas of law are some of the most dynamic currently being practised. Since 1988, the laws governing telecommunications in Australia have been through several major reforms. This has been part of a world-wide trend to liberalise and privatise the provision of communications services. New policy imperatives, particularly competition, have joined longer standing concerns about equity of access to affordable basic telecommunications services. Major topics include an overview of developments in communications technologies, interconnection of telecommunications networks, anti-competitive conduct and consumer issues such as universal service, pricing and complaints-handling. The course aims to provide students with a very practical, applied understanding of relevant laws and the ways they 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 - films, TV programs, recorded music and multi-media - from the conceptualisation of the idea and its development into a project, through financing, to distribution and commercial exploitation. Issues covered include applied intellectual property and contracts law, current policy debates and the application of legal requirements to industry practices. The focus of the course is the audiovisual production sector, although the material covered will be relevant to students with an interest in the broader entertainment industry, including live theatre and sport.

LAWS3091 Corporate Control Transactions
Faculty of Law
Staff Contact: P Redmond
UOC8 HPW2 S1

The overall aim of this course is to examine the legal regulation of the transfer of corporate control through takeovers, schemes and alternative modes of compulsory acquisition of corporate securities. The course also explores legal doctrines defining the elusive concept of control of a corporation. The following topics are covered: restrictions upon acquisition of voting shares; takeover offers and announcements under the Corporations Law; other forms of compulsory acquisition of securities under the Corporations Law, including schemes of arrangement, selective capital reduction and constitutional amendment; defensive measures in contests for corporate control.

LAWS3092 Securities Regulation
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 S2

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 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 issues; the licensing of securities dealer and investment professionals; the conduct of securities business; abusive trading on secondary markets, including stock market manipulation and insider trading.

LAWS3095 Corporate Insolvency
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 S2

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.

LAWS4021 Issues in Intellectual Property
Faculty of Law
Staff Contact: K Bowrey
UOC8 HPW2 S1

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 X1 X2

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.

LAWS4025 Commercial Property Transactions
Faculty of Law
Staff Contact: C Rossiter
UOC8 HPW2 X1

This course is designed to equip students with a knowledge of contract, equity and property law and cognate statute law governing the conduct of commercial land dealings. The course goes beyond a study of the standard form contract for sale of land used in New South Wales and treats topics of national interest and importance and of significance for cross border transactions. Where a study of state legislation is made, the New South Wales model will be used although reference may be made, for comparative purposes, to the legislation in other states. Topics to be studied include: Issues of formation - formal and informal agreements; intention; agreements deferring essential terms; machinery for settlement of terms; exclusive dealing and restitution for expenses incurred; agreements to negotiate in good faith; estoppel; Enforceability - statutory formalities; part performance; estoppel; Options - nature of put and call options; formalities for creation; assignment of options; exercise of options; relief against forfeiture of options; rights of pre-emption; Vendor disclosure - the common law and caveat emptor; mandatory vendor disclosure legislation; the Trade Practices Act, 1974 and the Fair Trading Act, 1987; Title - the fee simple; strata title; community land title; native land title; objections to and requisitions on title; termination for defective title; compensation and damages for defective titles; Remedies - rescission and termination; rescission for non-fulfilment of condition; discharge for breach under the general law; termination for failure to complete - the essentiality of time and notices to complete; anticipatory breach and repudiation; the obligation to tender performance and the right to dispense with tender of performance; express avoidance clauses; damages under the general law; liquidated damages and penalties; compensation for errors and misdescription; remedies under the Trade Practices Act, 1974; specific performance; forfeiture of land and development contracts and relief against forfeiture.

LAWS4026 Banking and Finance Law
Faculty of Law
Staff Contact: P Redmond
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 excclusive 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.

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.

LAWS4085 International Organisations
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 X1

This course will examine the law of international institutions with particular reference to the United Nations and Specialized Agencies and the law of regional organizations, such as the organizations of the European Union, the Organization of American States, the Organization of African Unity, ASEAN and the South Pacific Forum. Common institutional problems will be examined as will the impact of international organization on the doctrine of sovereign equality of States.

LAWS4086 Law of the Sea
Faculty of Law
Staff Contact: R Rayfuse
UOC8 HPW2 S1

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.

LAWS4151 European Union: Institutions and Legal Systems
Faculty of Law
Staff Contact: S Hall
UOC8 HPW2 S1

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.

LAWS4271 Australian Legal System
Faculty of Law
Staff Contact: M Dixon
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.

LAWS4422 Research Thesis: 16 uoc
Faculty of Law
Staff Contact: A Corbett
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: A Corbett
UOC8 S1 S2

LAWS4431 Legal Research
Faculty of Law
Staff Contact: C Fong
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.

LAWS9119 International Environmental Law
Faculty of Law
Staff Contact: School Office
UOC8 HPW2 S2

International environmental law is rapidly expanding. Its influence in Australian environmental law is particularly pronounced owing to the role that it allows the Commonwealth as a matter of international affairs under the constitutional division of powers. Its development will be examined as follows. 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". Major systemic concerns will be introduced. These include: governance, regionalism, definition of common concerns, state responsibility, shared but differentiated responsibility, equitable utilisation, regime design, precautionary principle, financial mechanisms, monitoring, implementation assistance, compliance enforcement, dispute settlement, trade and environment and liability. 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. Sectoral issues to be covered include environmental management of: atmosphere (climate, ozone), biodiversity (wildlife, migratory species, birds, genetic resources, biotechnology) biomes (wetlands, deserts, forests), marine resources (fisheries, whales), marine environment (pollution sources, coastal zones), hazardous substances (wastes, chemicals) and polar regions (Antarctica, Arctic). Specific attention will be given to current debates and issues within these sectors.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.

LAWS9972 International Trade Law
Faculty of Law
Staff Contact: School Office
UOC8 X1

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 Information Technology: Internet Governance
Faculty of Law
Staff Contact: School Office
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 player sand 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, etc issues including regulation/free speech* Computer crime* Privacy and Surveillance

LAWS9978 Corporate Self Regulation and Compliance
Faculty of Law
Staff Contact: C Parker
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 adoption of the Rome Statute of the International Criminal Court in July 1998; (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.

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
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 course 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

Trade practices and fair trading laws have assumed fundamental importance in the Australian marketplace. This course 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 course 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.

Assumed knowledge: LEGT5511

LEGT5541 Company Law
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1 S2

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.

Assumed knowledge: LEGT5511

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. The corporation as we understand it is essentially 19th century legal fiction. The focus has now moved from traditional company and securities law to the legitimacy and effectiveness of corporate governance. 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

A series of major changes beginning in the mid 1980s have transformed the Australian tax system. 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 course 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.

Assumed knowledge: LEGT5511

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 course 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 S1 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

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.

Assumed knowledge: LEGT5511

LEGT5581 Taxation Policy, Principles and Planning
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S2
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.

LEGT5588 Goods and Services Tax
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: LEGT5551

This course examines all aspects of GST Law. Emphasis is placed on the practical operation of GST. Topics discussed include - registration, taxable supplies, input tax credits, adjustments, accounting for and documenting GST, treatment of GST free supplies, treatment of input taxed supplies, reverse charges, and anti-avoidance provisions.

Note/s: Offered by distance education.

LEGT5589 Capital Gains Tax
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1
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.

Note/s: Offered by distance education.

LEGT5601 Contemporary Issues in Taxation
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: LEGT5551

Taxation is dynamic and rapidly changing discipline. Recent developments in relation to the appropriate tax base, and the the structure, objectives of and incentives in the system, raise significant social, policy, commercial and legal issues. This course examines selected contemporary issues in taxation in the context of their practical relevance to the tax professional.

LEGT5602 Tax Administration and Compliance
School of Business Law and Tax
Staff Contact: School Office
UOC6 HPW3 S2
Prerequisite/s: LEGT5551

The development and enforcement of administrative policies strategies is of increasing significance to revenue authorities. Compliance with administrative requirements and a knowledge of relevant appeal procedures and of the law relating to investigative powers forms an essential part of the knowledge base of the tax professional. This course examines the power and procedures of the Australian Taxation Office, the taxpayer's compliance obligations and the procedures for administrative and judicial review.

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

LEGT7552 Corporate and Revenue Law (International)
School of Business Law and Tax
Staff Contact: School Office
UOC6 S1 S2

LEGT7590 International Venture Mngt
School of Business Law and Tax
Staff Contact: School Office
UOC6 S1 S2

LEGT8512 Business Law (International)
School of Business Law and Tax
Staff Contact: School Office
UOC6 S1

LEGT8552 Corporate and Revenue Law (International)
School of Business Law and Tax
Staff Contact: School Office
UOC6 S1 S2

LEGT8590 International Venture Mngt
School of Business Law and Tax
Staff Contact: School Office
UOC6 S1 S2

LEGT9101 Business Law and Technology
Graduate Programs in Business and Technology
Staff Contact: School Office
Enrolment requires school approval
UOC6 S1

LING5000 Special Project
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).

LING5002 Language Teaching Methodology
Linguistics
Staff Contact: B Mullock
UOC8 HPW2 S1

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

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 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. Students apply theoretical ideas by developing a syllabus for a language teaching context.

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. Explores both the latest theoretical advances in linguistics and significant departures that are made from traditional grammar. Examples 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. Examines the ideational, interpersonal and textual functions of language. Attention paid not only to clauses, groups and phrases, and clause-complexes, but also to grammatical metaphor and information structure.

LING5015 Discourse Analysis
Linguistics
Staff Contact: R Gardner
UOC8 HPW2 S2

Examines the structure of various spoken and written genres (including everyday conversation, classroom discourse and academic writing), their internal structural patterns and relationship to their social contexts.

LING5019 Language Acquisition
Linguistics
Staff Contact: R Gardner
UOC8 HPW2 S2

Examines some of the central issues in language acquisition. Topics include: theoretical approaches to language acquisition, stages of language development, language acquisition in atypical situations, individual differences in language acquisition and language interference.

LING5020 Adult Language Learning and Teaching
Linguistics
Staff Contact: B Mullock
UOC8 HPW2 S2

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.

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: F Shafaghi
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: R Kerr
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 Huang
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.

MANF9000 Research Thesis Manufacturing Engineering and Management (Full time)
Staff Contact: M Behnia
UOC48 HPW0 S1 S2

MANF9001 Research Thesis Manufacturing Engineering and Management (Part time)
Staff Contact: M Behnia
UOC24 HPW0 S1 S2

MANF9010 Project Manufacturing Engineering and Management
School of Mechanical and Manufacturing Engineering
Staff Contact: H Kaebernick
UOC12 S1 S2

Note/s: The project must be completed in no more than two sessions.

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: F Shafaghi
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: R Kerr
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: H Kaebernick
UOC6 HPW3 S2

MANF9492 Advanced Topic in Manufacturing Engineering
School of Mechanical and Manufacturing Engineering
Staff Contact: H Kaebernick
UOC6 HPW3 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
Excluded: MARK5902

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

An understanding of business customers and final consumers is crucial in marketing. This requires knowledge of what 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
Excluded: MARK5914

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.

Assumed knowledge: MARK5900 or MARK5902 and ECON5203

MARK5940 International Marketing
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Excluded: MARK5903

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.

Assumed knowledge: MARK5900 or MARK5902

MARK5941 Services Marketing
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Excluded: MARK5903, MARK5920

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.

Assumed knowledge: MARK5900 or MARK5902

MARK5942 Contemporary Knowledge - Based Marketing
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Excluded: MARK5907

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 custoisation, 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.

Assumed knowledge: MARK5900 or MARK5902

MARK5945 Marketing in Asia
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2 X1
Excluded: MARK5917

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.

Assumed knowledge: MARK5900 or MARK5902

MARK5946 Marketing Communication
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2
Excluded: HOSP5906, MARK5904

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.

Assumed knowledge: MARK5900 or MARK5902

MARK5947 Interactive Electronic Marketing
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2
Excluded: MARK5910

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 cusotmer 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.

Assumed knowledge: MARK5900 or MARK5902

MARK5950 Marketing Strategy
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1
Prerequisite/s: MARK5930, MARK5932; Exclusion: MARK5905

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; Exclusion: MARK5928

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; Exclusion: MARK5916

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; Exclusion: MARK5901

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; Exclusion: MARK5913

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; Exclusion: MARK5922

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 aural) 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.

MARK5981 Market Orientation and Marketing Thinking
School of Marketing
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S1

A course that explores the concept of "market orientation" and what it means to be a truly customer focused and market led organisation. Building on recent research, theory and industry practice, the course addresses issues such as : What is meant by market orientation? How can an organisation become customer focused? What is the role of marketing in the modern organisation and what is its relationship with other business activities? How can relationship marketing and service management be used effectively? The course requires and further develops skills in analysis, creativity, communication (written and oral) and group collaboration.

MARK5982 Understanding Buyer Behaviour
School of Marketing
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S1 S2

A course that examines why and how customers - both individual and organisations - buy and consume. Typical issues include: How do consumers make choices? What role does emotion and mood play in buying and consumption behaviour? What are the most effective account management strategies? How should customer satisfaction be measured? How should organisations deal with customer complaints? Also studied are the implications of this behaviour for developing marketing strategy. Recent research and concepts are discussed through cases and exercises.

MARK5983 Decision Support Tools for Marketing
School of Marketing
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S2

Participants are exposed to recently developed qualitative and quantitative research techniques, as well as a range of computer-based decision-support tools. It is shown how these tools and techniques can be used to solve complex marketing problems and assist decison-making. Themes include: How can consumer insight be gained through customer research? How can customer demand and sales be forcasted? What new, computer-based decision-support applications are now available to marketers, and how can they be used? How can marketing performance be measured? The course requires and further develops quantitative and qualitative analysis skills, through exercises, workshops and project work.

MARK5984 Brand Management and Brand Communications
School of Marketing
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S2

Key aspects of brand management are addressed, including brand equity, brand extensions and new product development, price setting, brand communications planning, integrated marketing communications, and portfolio management. This course encourages students to use both analytical and creative skills, and provides opportunities to refine many different communication skills, with the aim of helping participants to develop and implement innovative marketing programs.

MARK5985 Customer Relationship Management
School of Marketing
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S2

Recent theory, management tools and industry practice are considered to better understand how an effective Customer Relationship Management (CRM) program can be designed and implemented. Topics include: How can indirect and direct one-to-one communications be used effectively? What role should interactive communications and e-commerce play in CRM? What kind of customer loyality programs work? How can customer data be captured and used to create customer value? The professional experience of students will be drawn upon through case analyses, group work, symposiums and involvement from industry.

MARK5986 Strategic Innovation and Marketing Management
School of Marketing
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S1

The theme of this course is how can innovative competitive strategies be developed and implemented. It draws on recent research and thinking in strategic management, entrepreneurship, and strategic marketing to provide frameworks and ways of thinking that will lead to the creation of highly differentiated, market driven strategies. Specific topics include: understanding and influencing the changing business environment, identifying current and emergent competitors, the process of creating innovative strategies, segmentation and brand positioning, the internal marketing of strategic innovation, and implementing and managing these programs. The course integrates materials from other sections of the program.

MARK5991 Introduction to the Media Sales Environment
School of Marketing
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S1

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
Enrolment requires school approval
UOC6 HPW3 S1

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 practicen(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

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

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) program 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) program 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) program 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) program 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

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 Optimization
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Analysis, solution and application of optimization problems where the variables change continuously. Topics selected from: nonlinear programming, convex optimization, nonsmooth analysis and optimization, variational inequalities and complementarity problems, infinite dimensional optimization, stochastic optimization, and numerical optimization.

MATH5170 Nonsmooth Optimization
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

MATH5175 Topics in Optimization and Optimal Control
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Special topics in the analysis, solution and application of optimization and optimal control problems.

MATH5185 Topics in Modern Applied Mathematics A
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

A selection of topics from optimization, 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 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.

MATH5255 Waves
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Hyperbolic waves, the first-order wave equation, Burgers equation, hyperbolic systems, gas dynamics and the wave equation. Dispersive waves, linear dispersive waves, wave patterns, linear and nonlinear theories of water waves, modulated waves including the weakly nonlinear theory, stability and wave resonances.

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
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

Topics covered are chosen from the following: stability of timestepping schemes, iterative methods for elliptic equations, including multigrid techniques, special treatment of nonlinear terms and outflow/radiation conditions. The emphasis is on finite differences, and the course involves a computer project.

MATH5315 High Performance Numerical Computing
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

MATH5325 Computational Mesh Generation and Data Visualization
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
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
School of Mathematics
Staff Contact: School Office
UOC6 HPW2

MATH5535 Topics in 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
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

Topics from: abelian, nilpotent and solvable groups, further representation theory, Euclidean reflection groups, Chevalley groups, group homology and cohomology, group extensions.

MATH5755 Mathematical Foundations of Quantum Theory
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 TBA

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 (Mrtingale Methods in Finance)
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.

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 and analysis of dispersion. Tests based on roots, distribution theory.

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.

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.

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
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 S1 S2

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.

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

MATS6203 Materials and Design (Unit 1) Design for Corrosion
School of Material Science and Engineering
Staff Contact: School Office
UOC3 HPW2 S1 S2

Electrochemical corrosion, types of corrosion, influence of alloying and heat treatment, influence of stress. Corrosion prevention, cathodic protection, passivation and inhibitors, selection of materials, designing against corrosion.

MATS6495 Corrosion Materials
School of Material Science and Engineering
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S1 S2

Properties and efficient selection of materials for corrosion resistance. Applications in manufacturing, mining and process industries, in transportation equipment and in structures. Materials selection for service in particular environments.

MATS6535 Industrial Coatings for Corrosion Protection
School of Material Science and Engineering
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S1 S2

Special topics on heavy-duty organic, inorganic and metallic coatings used in atmospheric, marine and industrial environments.

MATS6545 Corrosion Technology
School of Material Science and Engineering
Staff Contact: School Office
Enrolment requires school approval
UOC6 HPW3 S1 S2

Environmental fracture; corrosion in specific environments; corrosion of specific equipment types; principles of materials selection and design; surface preparation and maintenance coatings; polymeric

materials and linings, inhibitors and electrochemical tests methods; cathodic protection.

MATS6605 Professional Communication and Presentation
School of Material 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 Material 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 Material 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 Material 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 Material 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 Material 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 Material 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 Material 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 Material 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 Material 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: C Chesher
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: G Hawkins
UOC8 HPW2 S2

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 S1

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: B Costello
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: P Bell
UOC8 HPW2 S1

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: C Chesher
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.

MDCM5010 New Media Production in Focus
School of Media and Communications
Staff Contact: B Costello
Enrolment requires school approval
UOC8 HPW2 S2

Overviews emerging trends in production in new media with a particular focus on either web site design, digital video production or interactive authoring.

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 in New Media Contexts
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: R Ford
UOC6 S1
Excluded: MEHC9311

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: R Randall
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: J Challen
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: J Challen
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.

MECH8730 Two Phase Flow and Heat Transfer
School of Mechanical and Manufacturing Engineering
Staff Contact: M Behnia
UOC6 TBA

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.

MECH9000 Research Thesis Mechanical Engineering (Full time)
Staff Contact: M Behnia
UOC48 HPW0 S1 S2

MECH9001 Research Thesis Mechanical Engineering (Part time)
Staff Contact: M Behnia
UOC24 HPW0 S1 S2

MECH9010 Project Mechanical Engineering
School of Mechanical and Manufacturing Engineering
Staff Contact: R Randall
UOC12 S1 S2

Note/s: The project must be completed in no more than two sessions.

MECH9131 Advanced CAD Modelling and Applications
School of Mechanical and Manufacturing Engineering
Staff Contact: A Barratt
UOC6 HPW3 TBA
Excluded: MECH4131

Development of CAD modelling systems, 2D and 3D, wire frame, surface representation and solids. Advanced modelling techniques of complex geometry, surfaces, bodlean operations and solids manipulation. Programming and database interfacing in a CAD environment. Development of engineering based applications using these facilities.

MECH9310 Advanced Vibration Analysis
School of Mechanical and Manufacturing Engineering
Staff Contact: R Randall
UOC6 HPW3 S2
Excluded: 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.

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: J Challen
UOC6 HPW3 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.

MECH9361 Lubrication Theory and Design
School of Mechanical and Manufacturing Engineering
Staff Contact: E Hahn
UOC6 HPW3 TBA
Excluded: MECH4361

Types of hydrodynamic bearings and bearing operation; properties of lubricants; theory of steady state hydrodynamic lubrication; hydrostatic and squeeze film lubrication applied to slider and journal bearings; bearing design with side leakage; thermal balance. Journal bearing dynamics; instability analysis. Elastohydrodynamic lubrication. Bearing materials; friction and wear. Grease lubrication.

MECH9400 Mechanics of Fracture and Fatigue
School of Mechanical and Manufacturing Engineering
Staff Contact: K Zarrabi
UOC6 HPW3 TBA
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: AERO9415

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: School Office
UOC6 HPW3 TBA
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: M Behnia
UOC6 HPW3 S1
Excluded: MECH8730

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: M Behnia
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 S2
Excluded: MECH4751

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: I Maclain-Cross
UOC6 HPW3 TBA
Prerequisite/s: 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.

MECH9753 Refrigeration and Air Conditioning Design 1
School of Mechanical and Manufacturing Engineering
Staff Contact: I Maclaine-Cross
UOC6 HPW3 TBA

Design of refrigeration equipment compressors; throttling devices; condensers; evaporators. Cooling towers: evaporative condensers; air conditioning coils. Piping systems. Air ducts. Steam raising and water heating equipment.

MECH9754 Refrigeration and Air Conditioning Design 2
School of Mechanical and Manufacturing Engineering
Staff Contact: I Maclaine-Cross
UOC6 HPW3 TBA
Prerequisite/s: MECH9753.

Generators and absorbers for absorption systems. Calculation of transient heating and cooling loads. Air conditioning systems. Load analysis and system capability.

MECH9757 Ambient Energy Air Conditioning
School of Mechanical and Manufacturing Engineering
Staff Contact: I Maclaine-Cross
UOC6 HPW3 TBA

Prediction of heat storage effects in air conditioned structures. Performance of passive and active ambient energy heating and cooling systems using correlations and simulation. Use of TRNSYS program package. Simple evaporative cooling. Open cooling cycles: single and double regenerative evaporative cooling and applications; nearly reversible evaporative cooling; adiabatic desiccant open cooling cycles.

MECH9761 Internal Combustion Engines 1
School of Mechanical and Manufacturing Engineering
Staff Contact: B Milton
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.

MECH9920 Special Topic In Mechanical Engineering
Staff Contact: R Randall
UOC6 HPW3 S2

The syllabus changes to allow presentation of a special topic of current interest particularly by visitors with recognised expertise in the topic.

MECH9920 Special Topic in Mechanical Engineering
School of Mechanical and Manufacturing Engineering
Staff Contact: School Office
UOC6 HPW3 S2

The syllabus changes to allow presentation of a special topic of current interest particularly by visitors with recognised expertise in the topic.

MEED9002 Independent Study (4 Units of Credit)
School of Medical Education
Staff Contact: A Rotem
Enrolment requires school approval
UOC4 S1 S2

Independent studies are designed to provide opportunities for candidates to pursue interests and areas not adequately addressed in existing subjects. They are recommended particularly for candidates who wish to explore solutions to specific educational problems within their own institutions or disciplines. Students enrol in different course codes depending on supervisor and size of project. Correct course code will be advised on enrolment.

MEED9010 Community Development
School of Medical Education
Staff Contact: S Nathan
UOC4 HPW2 S2

This course explores the meaning and conceptual frameworks of community development as an approach to improving the health of individuals and the broader community. The role of community development within the wider health development scene is critically examined and case studies of its various forms in practice are explored. Community development as an approach to the promotion of health is based on different principles from those in the clinical professions, and the course encourages health professionals to explore this different perspective and to consider its different skills. For those with field experience, this course will provide a strong theoretical basis and 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.

MEED9012 Health Promotion
School of Medical Education
Staff Contact: J Ritchie
UOC4 HPW2 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.

MEED9013 Influencing Health Beliefs and Health Behaviours
School of Medical Education
Staff Contact: I Eisenbruch
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.

MEED9015 Health Services Development and Implementation
School of Medical Education
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.

MEED9108 Program Evaluation and Planned Change
School of Medical Education
Staff Contact: A Rotem
UOC4 HPW2 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.

MEED9111 The Consultation Process
School of Medical Education
Staff Contact: A Rotem
UOC4 HPW2 S2

The course is designed to explore the conceptual frameworks, processes and practices used by internal and external change agents and consultants in the implementation of organisation and community wide health initiatives. The course focuses on internal processes of change as well as 'third party' interventions. Managers and professional staff responsible for developing and implementing education and health programs are increasingly required to initiate and manage change. Change is also being driven by new technology, resource constraints and shifts in community needs. Knowledge and practical experience in the use of consultation processes is vital to ensure programs are well accepted and effectively delivered.Note: Offered as series of workshops or as an external course.

MEED9120 Qualitative Research Methods
School of Medical Education
Staff Contact: L Maher
UOC4 HPW2 S1 S2

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 major projects using qualitative methods.

MEED9122 Primary Health Care: Policies, Programs & Perspectives
School of Medical Education
Staff Contact: V Nossar
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.

MEED9125 Designing Short Courses and Workshops
School of Medical Education
Staff Contact: P Youngblood
UOC4 HPW2 S1 S2

This course is designed to help academic staff and graduate students learn to plan, conduct and evaluate short courses and workshops. It is intended for health professionals who are responsible for providing staff development, continuing education or special purpose training sessions for other health professionals, trainees or for the community. It is particularly relevant for clinicians who are responsible for planning and conducting orientation or training sessions for medical students, interns, RMO staff, and vocational trainees.

MEED9129 Primary Health Care: Issues in Implementation
School of Medical Education
Staff Contact: E Murphy
UOC4 HPW2 S2

This course guides participants through a detailed analysis of both the theory and the practice of implementing Primary Health Care programs. Problems and issues encountered in implementation are examined and practical solutions explored. The course is designed for health professionals who have had some prior exposure to the concepts and practice of Primary Health Care, and draws upon relevant case studies for the analysis.

MEED9131 Formulating Academic Proposals and Projects
School of Medical Education
Staff Contact: A Whelan
UOC4 HPW2 S1 S2

This course aims to explore concepts and develop skills related to formulating academic projects and proposals. 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.

Note/s: Weekly classes or workshop.

MEED9133 Learning, Teaching and Assessment
School of Medical Education
Staff Contact: L Bloomfield
UOC4 S1

This course explores the current views about the conditions which support learning in the health professions and the requirements these imply for teaching. It focuses on adult learning in various settings commonly encountered in health professions education, ie universities, hospitals and the community.

MEED9136 Culture, Health and Illness
School of Medical Education
Staff Contact: I 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.

MEED9140 Project Design and Monitoring in International Health
School of Medical Education
Staff Contact: A Rotem
UOC4 S2
Prerequisite/s: HEAL9751

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.

MEED9144 Project
School of Medical Education
Staff Contact: A Rotem
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.Students can enrol in alternative course codes HEAL9971 or CMED9507 depending on supervisor. Appropriate course code will be advised on enrolment.

MEED9302 Learning in Small Groups
School of Medical Education
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.

MEED9303 Clinical Practice as a Discipline
School of Medical Education
Staff Contact: School Office
Enrolment requires school approval
UOC4 TBA

This course explores the nature of professional expertise within clinical practice as a skilled discipline within the streams of general and specialist practice and within nursing and the therapies. Course matter includes the varieties of working knowledge (applied knowledge, strategic knowledge, intuitive knowledge, local, situational knowledge, predictive and decision making knowledge, people management knowledge and judgment), of skills in managing logical processes and skills in managing people and procedures. The course also analyses the profession's philosophy, the professional's tasks, roles and responsibilities, and the perspectives and expectations within the health system and community. Assignments are expected to contribute to the understanding and development of the discipline in each health profession.

Note/s: External Course.

MEED9304 Learning Clinical Reasoning
School of Medical Education
Staff Contact: P Harris
Enrolment requires school approval
UOC6 S1

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.

MEED9306 Clinical Supervision
School of Medical Education
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.

MEED9307 Exploring and Managing Ethical and Moral Dilemmas
School of Medical Education
Staff Contact: C Berglund
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.

MEED9308 Learning Clinical Decision Making
School of Medical Education
Staff Contact: P Harris
Enrolment requires school approval
UOC4 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.

MEED9309 Assessment of Clinical Performance
School of Medical Education
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.

MEED9312 Research Into Clinical Education
School of Medical Education
Staff Contact: C Berglund
Enrolment requires school approval
UOC6 S1 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.

MEED9313 Planning Educational Programs
School of Medical Education
Staff Contact: School Office
Enrolment requires school approval
UOC4 TBA

This course will focus on educational planning issues at the macro level (i.e. courses and programs). Participants will use an educational planning model to identify and analyse an educational problem, design an educational program to address the problem, and plan a strategy for evaluating the success of the program. Using case studies, students will learn to apply the model in a range of educational settings, including formal courses in medical and nursing schools, as well as continuing professional development programs for practicing health professionals. This course is particularly relevant for clinicians who are responsible for planning and conducting orientation or training sessions for medical students, interns, RMO staff and vocational trainees. It is offered in external mode, with an on campus workshop at the beginning of the session.

Note/s: External Course.

MEED9314 The Ward (or Office) as a Social and Learning Environment
School of Medical Education
Staff Contact: A Smith
Enrolment requires school approval
UOC4 S1

This course uses the clinical setting of the ward, or the office, or the clinic as the unit of study of the formal and informal communication and management processes, professional role definition and socialisation into sub-cultural belief patterns, sharing of decision making, expectations and stresses, coping strategies and stress management, analysis of social pathology, relation between task and maintenance functions and the resolution of conflict, staff job satisfaction and turnover, and effectiveness for learning. Assignments include a report on the candidate s working environment.

Note/s: External Course.

MEED9315 Clinical Teaching
School of Medical Education
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.

MEED9316 Learning Consulting Skills
School of Medical Education
Staff Contact: C Holmwood
Enrolment requires school approval
UOC6 S1 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/s: External Course/Workshop.

MEED9317 Clinicians as Managers
School of Medical Education
Staff Contact: A Rotem
Enrolment requires school approval
UOC4 S1

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.

Note/s: External Course/Workshop.

MEED9351 Independent Study (2 Units of Credit)
School of Medical Education
Staff Contact: P Harris
Enrolment requires school approval
UOC2 S1 S2

Candidates may contract to undertake an Independent Study on a particular field of interest or clinical educational research. The number of credit points may range from two to eight, according to the size of the independent study. *These courses are part of the Master of, and Graduate Diploma in Clinical Education, and are available on a full fee paying external basis only.

MEED9360 Major Project
School of Medical Education
Staff Contact: P Harris
Enrolment requires school approval
UOC24 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

MEED9401 Introduction to University Learning and Teaching
School of Medical Education
Staff Contact: P Harris
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 on learning and teaching offered at UNSW as a staff development activity. Topics such as planning for classes, student and adult learning, lecturing, small group teaching, online teaching, and assessment are addressed. The workshop sessions are highly interactive and are designed 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 presenting 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.

MEED9402 Student Learning in Higher Education
School of Medical Education
Staff Contact: P Harris
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, reflective practice, and educational psychology. 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 issues presented in the Introduction to University Learning and Teaching course.

MEED9403 Teaching Strategies for Effective Learning
School of Medical Education
Staff Contact: P Harris
UOC4 S1 S2
Prerequisite/s: MEED9401, MEED9402

This course provides a degree of flexibility for academics who wish to focus on strategies most appropriate for the settings in which they teach. Participants choose two from a series of workshops which include Teaching Small Groups, Teaching Large Groups, Teaching in the Studio, Teaching in the Laboratory and Teaching On-Line. Workshops 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.

MEED9404 Course Planning and Assessment
School of Medical Education
Staff Contact: P Harris
UOC4 S1 S2
Prerequisite/s: MEED9401, MEED9402

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 Introduction to University Learning & Teaching program, 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.

MEED9405 Innovations in Education
School of Medical Education
Staff Contact: P Harris
UOC4 S1 S2
Prerequisite/s: MEED9401, MEED9402

This course has been designed to integrate with the staff development programs available in your institution and to encourage you to investigate trends in teaching in your discipline area. Participants will identify an issue or trend that is currently affecting teaching in their discipline, 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 their investigations.

MEED9406 Educational Technology in Learning and Teaching
School of Medical Education
Staff Contact: P Harris
UOC4 S1 S2
Prerequisite/s: MEED9401, MEED9402

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.

MICR5033 Graduate Diploma (Microbiology)
School of Microbiology and Immunology
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.

MICR6043 Postgraduate Qualifying (Microbiology)
School of Microbiology and Immunology
Staff Contact: A Collins
UOC48 S1 S2

Similar in standard to MICR4013 Microbiology Honours, but designed for students who cannot regularly attend the University.

MINE8110 Mining Processes and Systems
School of Mining Engineering
Staff Contact: C Daly
UOC6 S1 S2

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: C Daly
UOC6 S1 S2

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: C Daly
UOC6 S1 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; ergonomic factors and occupational health and safety implications of technology changes relative to skill levels.

MINE8140 Mining Geomechanics
School of Mining Engineering
Staff Contact: C Daly
UOC6 S1 S2

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: C Daly
UOC6 S1 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: C Daly
UOC6 S1 S2

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: C Daly
UOC6 S1 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: C Daly
UOC6 S1 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: C Daly
UOC6 S1 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: C Daly
UOC6 S1 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: C Daly
UOC6 S1 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: C Daly
UOC6 S1 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: C Daly
UOC6 S1 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: C Daly
UOC6 S1 S2

The course provides a comparison between different legislative philosophies from the fully prescriptive to the totally enabling perspective. The roles of specialist mining law and regulation, in addition to common law, including occupational health and safety - duty of care legislation is reviewed. Other topics to be covered with this course include: definitions of 'minerals' and 'mining' ; common law; ownership; Aboriginal land rights, miners rights and claims; exploration titles; production titles; private land/Crown land; administrative processes; environmental protection and royalties. Topics will be illustrated by reference to case histories.

MINE8780 Environmental Management for the Mining Idustry
School of Mining Engineering
Staff Contact: C Daly
UOC6 S1 S2

Topics addressed are: environmental regulation as a constraint on business operations; environmental planning and management as a component of overall business planning; financial costs and benefits of environmental management and their timing; environmental risks and uncertainty; integrated design strategies; emission control technologies; formal environmental impact assessment procedures, including public submissions and hearings; lease and license conditions; compliance with planning and pollution control legislation; developing and using environmental operations manuals; in-house environmental training programs; corporate environmental audit procedures; liaison with public and community groups; particular environmental applications in mining, oil, manufacturing, petrochemical, civil engineering and infrastructure, building and construction, coastal management and other industries; environmental issues and concerns in Asia-Pacific nations and the region as a whole.

MINE8790 Advanced Mineral Economics and Commodity Marketing
School of Mining Engineering
Staff Contact: C Daly
UOC6 S1 S2

Commodities: supply and demand; business cycles; exchange rates; metal and coal markets and hedging; long-term contracts and the spot market; commodity pricing. Project financing including: joint ventures; types of capital; company financial statements and reporting requirements; feasibility studies and mine evaluation; determination of cut-off grades; project sensitivities to grades/quality and pricing. Marketing as applied to the mineral industry; sources and types of market-related information; particular international market characteristics; political, social and economic; trade barriers; cartels, regional and sub-regional economic groups; marketing to Asia; buyer behaviour, private and government sectors; design, conduct and analysis of surveys of overseas markets for mineral products; factors related to particular mineral commodities. The recognition of export opportunities; stages in the development of a market strategy; market decision-making under conditions of uncertainty; the relationship between corporate and marketing strategy for mineral products; value added mineral products and export marketing; sources of assistance for export marketing.

MINE9901 Mine Atmospheric Behaviour
School of Mining Engineering
Staff Contact: School Office
UOC6 S1

SI Units of velocity, quantity, density, pressure and force. Pressure - gauge, absolute, velocity, static, total. Airway resistance (Atkinson's equation). System inlet, outlet and shock losses. Flow and pressure measurement. Steady Flow Energy and Bernoulli's equations Orifice plates and venturis Reynold's number, viscosity, turbulent - laminar flow. Further shock losses, airway junctions, shaft drag coefficients Surface roughness and resistance. Introduction to Boyles & Charles Laws, Universal gas laws & Avagadro's Hypothesis. Natural ventilation pressure and buoyancy

MINE9902 Mine Ventilation Networks and Analysis
School of Mining Engineering
Staff Contact: School Office
UOC6 S1

Airways in series and parallel. Mine balance, splits, leakage and efficiency. Ventilation control devices and design requirements. Dynamics of ventilation networks. Quantifying mine and district ventilation requirements. Failure modes and purging. Kirchoff's laws. Linear graph theory, mesh selection and mesh correction. Ventilation and environmental simulation packages. Mathematical treatment of fan curves. Development of ventilation simulation models. Application of model to example networks.

MINE9903 Mine Fans and Airflow Distribution
School of Mining Engineering
Staff Contact: C Daly
UOC6 S2

Distribution Fan characteristic curves. Types of fans. Fan laws. Fans in series and parallel. Fans in ducts with leakage. Principles of fan design and selection. Fan control and monitoring. Fan testing, selection and maintenance Fans in complex networks. Duct leakage calculations and auxiliary ventilation design. Stoppings, Overcasts, Regulators and Doors.

MINE9904 Underground Hazards
School of Mining Engineering
Staff Contact: C Daly
UOC6 S2

Gas types, sources, hazards. Gas makes and ventilation requirements. Respirable dust - sources, hazards, control. Causes, propensity and control of outbursts. Windblast causes, effects and control. Gas drainage system design and practice. Rib, face and longwall gas surveys and interpretation. Gas management plans. Ignition sources. Spontaneous combustion. Sources of heat and humidity in mines.

MINE9905 Instrumentation/Monitoring and Spontaneous Combustion
School of Mining Engineering
Staff Contact: C Daly
UOC6 S2

Selection, limitations and use of; Handheld gas instruments. Telemetry and tube bundle systems. Air velocity measurement. Pressure measurement. Thermography. Interpretation of sealed area monitoring results gas mixtures with Coward's and Ellicott's diagrams. Gas analysis and monitoring software. Installation, calibration and maintenance of systems. Monitoring, recording and reporting procedures. Fault finding, alarm settings and response. Pressure balancing and control. Seal construction and practice. Inertisation methods and requirements.

MINE9906 Ventilation Planning and Management
School of Mining Engineering
Staff Contact: C Daly
UOC6 S2

Historical experience in the Australian coal industry. Risk assessment process. Generic structure of plans. Alarm and emergency response plans. Ventilation Management Plan. Spontaneous combustion management plan. Review of fundamental ventilation theory. Methods for determining ventilation requirements. Complete worked planning example. Auxiliary ventilation circuits and practice. Ventilation economics. Optimisation of fans and airway size. Future technology and overseas practice. Further worked examples and planning scenarios.

MINE9910 Mine Ventilation
School of Mining Engineering
Staff Contact: C Daly
UOC6 S1 S2

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: School Office
UOC6 HPW4 S2

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: School Office
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: School Office
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: School Office
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: School Office
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: School Office
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: School Office
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: School Office
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: 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.

MTRN9201 Digital Logic Fundamentals for Mechanical Engineers
School of Mechanical and Manufacturing Engineering
Staff Contact: M Tordon
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: J Katupitiya
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 S2
Excluded: MECH9221

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 TBA
Excluded: 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: 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.

MTRN9300 Mechanics of Manipulators
School of Mechanical and Manufacturing Engineering
Staff Contact: J Baker
UOC6 HPW3 S2

Three-dimensional kinematics and kinetics of a particle and a rigid body: coordinate transformations, finite and infinitesimal rigid-body motion, Eulerian angles, motion composition, angular acceleration, relative motion, momentum and inertia, work-energy principle, equations of motion, impulse. Screw motor notation. Application to systems of rigid bodies. Spatial linkage analysis.

MUSI5107 Traditional Aboriginal and Contemporary Australian Music
School of Music and Music Education
Staff Contact: G Stubington
UOC8 HPW2 S2

Musicological and linguistic bases for the concept of music areas as applied to Aboriginal Australia and Oceania; the distribution of vocal and instrumental styles; the function of music in Australian Aborginal and Oceanic cultures; the relationship between music, art and dance in ceremonial contexts.

MUSI5122 Research in Music Education
School of Music and Music Education
Staff Contact: G McPherson
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.

MUSI5123 Curriculum in Music Education
School of Music and Music Education
Staff Contact: G McPherson
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.

MUSI5126 Musical Performance: Learning Theory and Pedagogy
School of Music and Music Education
Staff Contact: G McPherson
UOC8 HPW2 S2

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.

MUSI5131 Research in Performance Studies
School of Music and Music Education
Staff Contact: D Fabian
UOC8 HPW2 S1

Designed to investigate ways in which research in music informs musical performance. Examines numerous resources for performers which have resulted from the interaction of music scholarship and performance over the centuries and discusses how they can find practical application. Discussion of historical treatises, editions and editing as well as many detailed issues in performance practice research (including rhythmic interpretation, tempi, rubato, ornamentation, etc), will be supported by wide range of resources for performers including manuscripts, printed materials and sound recordings.

MUSI5402 Suzuki Pedagogy
School of Music and Music Education
Staff Contact: C Watts
UOC8 HPW2 S2

Practical examination consisting of a recital of approved items from both within the published Suzuki repertoire and from outside the repertoire for one of the following instruments: piano, violin, viola, cello, guitar or harp. Attendance at an approved Suzuki training program or major conference with, as a sequel, a detailed report as an evaluation of the experience. An essay on an approved topic of Suzuki pedagogy.

Note/s: For programs 5226 and 7326.

OCEA5115 Experimental Project in Physical Oceanography
School of Mathematics
Staff Contact: School Office
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 TBA

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 TBA

OCEA5155 Theoretical Project in Physical Oceanography
School of Mathematics
Staff Contact: School Office
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. Defective colour vision.

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 need to have access to a variety of optometric patients, including children. Overseas students can arrange this with the course controller. 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: School Office
UOC6 HPW4 S1

This course provides lectures, seminars and practical workshops on topics underlying an advanced knowledge of contact lens practice and research. Subjects covered in the course include: research concepts and opportunities in private clinical practice; accessing the contact lens literature and other relevant databases; clinical photography and videography; 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 of 14 hours each, during Session 1 only.

OPTM7105 Advanced Contact Lens Practice
School of Optometry and Vision Science
Staff Contact: School Office
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: School Office
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. Subjects 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. Comitant 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 towards an 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.

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. The neuroscience of form, colour, motion and depth processing, spatial and temporal effects, shape and object perception. Sub-cortical pathways. Parallel processing in the visual system: the magno and parvocellular systems. Organisation of the cerebral cortex. Parietal function, its inputs and vision. Frontal cortex and visually directed activities. Visual cognition. Cerebral lateralisation. Visuo-motor co-ordination. After effects and apparent motion, interocular transfer, perceptual constancies. Visual neuro-pharmacology. Fixation and attention. Oculomotor control system. Visually directed activities. Non-visual influences on visual function.

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 need to have access to a variety of optometric patients, including children. Overseas students can arrange this with the course controller. 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: School Office
UOC6 HPW4 S2
Prerequisite/s: OPTM7104

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. Subjects covered in the course 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; tinted contact lenses; 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 of 14 hours each, during Session 2 only.

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 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. Comitant 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 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 either the Pennsylvania College of Optometry (PCO) in Philadelphia, USA or the LV Prasad Eye Institute in Hyderabad, India. This posting is for a 4 week period, with travel and accommodation costs to be met by the candidate. Posting to PCO attracts an additional fee.

Note/s: Short course format - overseas posting

OPTM7307 Clinical Imaging
School of Optometry and Vision Science
Staff Contact: B Junghans
UOC6 HPW4 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. 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: P Anderton
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 will involve distance learning activities.

PAED8103 Child Health Services
Paediatrics, School of Women's and Children's Health
Staff Contact: School Office
UOC4 HPW2 S1 S2

The child care delivery system, parent education, screening programmes, immunisations, accidents and poisoning, dental care, care of physically and mentally disabled children.

PAED8104 The Effect of Social Adversity in Childhood
Paediatrics, School of Women's and 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
Paediatrics, School of Women's and 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
Paediatrics, School of Women's and 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
Paediatrics, School of Women's and Children's Health
Staff Contact: S Russell
UOC8 S1 S2

Growth and development. Systemic diseases in childhood. Prevention and early detection. Community services available for the care of children with various disorders. Exmphasis is placed on the understanding of principles especially physiological principles. Prenatal development and prenatal experiences, which affect the growing foetus and infant. Necessary professional supervised experience is obtained by clinical attachment to appropriate hospitals. Candidates are given increasing professional responsibility. There are lectures, seminars, discussion groups and demonstrations on manikins. Family dynamics and family interactions in the causation of developmental, behavioural and emotional problems in children. Students without adequate clinical experience have a clinical attachment in paediatric psychiatry during the first two years of training. There are lectures, seminars, case conferences and assignments.

PAED9102 General Paediatrics and Child Health 2
Paediatrics, School of Women's and Children's Health
Staff Contact: S Russell
UOC8 S1 S2

Growth and development. Systemic diseases in childhood. Prevention and early detection. Community services available for the care of children with various disorders. Exmphasis is placed on the understanding of principles especially physiological principles. Prenatal development and prenatal experiences, which affect the growing foetus and infant. Necessary professional supervised experience is obtained by clinical attachment to appropriate hospitals. Candidates are given increasing professional responsibility. There are lectures, seminars, discussion groups and demonstrations on manikins. Family dynamics and family interactions in the causation of developmental, behavioural and emotional problems in children. Students without adequate clinical experience have a clinical attachment in paediatric psychiatry during the first two years of training. There are lectures, seminars, case conferences and assignments.

PAED9617 Community Paediatrics
Paediatrics, School of Women's and Children's Health
Staff Contact: School Office
UOC4 HPW2 TBA

A broad view of Community Paediatric Services in contemporary Australia, how paediatrics is practised and the rationale behind these practices. Explores the practical and theoretical background behind the development of Community Paediatrics, as well as the principles that underpin its practice. Examines some key aspects of that practice.

PDCS3003 Independent Study Project A
Faculty of Medicine
Staff Contact: School Office
UOC8 S1 S2
Prerequisite/s: 32 units of credit in PDCS courses

Planning of a research project, including completion of a critical review of the relevant literature, articulation of appropriate research questions and design of any protocols and/or processes required, on a research topic approved by the Program Co-ordinator. Involves students in preparation for an investigation of teaching and student learning related issues within their own discipline of professional area. Students may implement the planned research project by undertaking PDCS3004, after satisfactorily completing this course.

Note/s: Workload 210 postgraduate assessable hours.

PDCS3004 Independent Study Project B
Faculty of Medicine
Staff Contact: School Office
UOC8 S1 S2
Prerequisite/s: PDCS3003

Completion of a research project, including gathering data, analysis, interpretation and reporting, on a research topic approved by the Program Co-ordinator. Involves students in an investigation of teaching and student learning related issues within their own discipline or professional area. Students will have planned the research project and conducted a critical review of the relevant literature while completing PDCS3003.

Note/s: Workload 210 postgraduate assessable hours.

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: S Cohen
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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.

PHPH5433 Medical Applications of Exercise 1
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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.

PHPH5471 Advanced Pharmacology
Department of Physiology and Pharmacology
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.

PHPH5501 Basic Principles of Drug Actions Module 1 - Distance Education M.App.Sc. in Biopharmaceuticals
Department of Physiology and Pharmacology
Staff Contact: L Wakelin
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
Department of Physiology and Pharmacology
Staff Contact: L Wakelin
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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 - Module 3 - Distance Education M.App.Sc. in Biopharmaceuticals
Department of Physiology and Pharmacology
Staff Contact: School Office
UOC6 S1 S2

This module extends the concepts raised and discussed in the Basic Pharmacokinetics section of Module 1. More advanced pharmacokinetic problems, such as compartmentation, kinetics of effect and problems solving are included. The technique fo measuring receptor binding is shown in some detail on video, with explanation of how the technique is set up, and how and why it is much used in new drug development. Also included in this module is a section on techniques used in the assay of drugs. The determination of molecular structure, and quantitation of drugs in the body are vital areas of drug development, and indeed pharmacokinetics depends upon such quantitation.

PHPH5523 Sports Injuries 2
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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.

PHPH5531 Discovery and Development of New Medicines - Module 4 - Distance Education MAppSc
Department of Physiology and Pharmacology
Staff Contact: School Office
UOC6 S1 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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
Staff Contact: D Garlick
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
Department of Physiology and Pharmacology
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
Department of Physiology and Pharmacology
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 optimization. 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
Department of Physiology and Pharmacology
Staff Contact: R Day
UOC6 S1

This course begins with an introduction to Pharmaceutics, which is the science of preparing and evaluating dose forms for the administration of medicines. Topics to be covered include the manufacture of new compounds, the choice of formulations and pharmaceutical labelling. The influence of pharmockinetics and pharmodynamics on product development. Methods of testing for bioequivalence, stability, impurity and incompatibility. Formulation for toxicology and the quality control. Preparation of materials for clinical trials including distribution and disposal of remaining stock. Long-term stability studies. Principles of labelling for clinical use. Problems associated with scaling pilot syntheses and production fabrication to large-scale production.

Note/s: The course is compulsory for programmes 5504, and 9060.

PHPH9104 Law, Ethics and the Regulation of Medicines
Department of Physiology and Pharmacology
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 organization 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
Department of Physiology and Pharmacology
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
Department of Physiology and Pharmacology
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
Department of Physiology and Pharmacology
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
Department of Physiology and Pharmacology
Staff Contact: R Day
UOC6 S1

This course consists of coursework only and will extend the principles covered in Pharmaceutical Development of New Medicines and will include the following topics: (a) the formulation and in vitro assessment of oral controlled-release products; (b) the formulation and in vitro assessment of novel dosage forms such as transdermal therapeutic systems and osmotic pumps; (c) principles of accelerated stability testing of conventional dosage forms including the techniques for using data from accelerated stability tests for prediction of shelf life; (d) the pharmaceutics of multiphase formulations such as microemulsions and liposomes; (e) selected topics in bioavailability including statistical design and analysis of bioavailability studies and the design and interpretation of studies designed to assess the bioavailability of controlled-release products; (f) the preparation of biotechnology products by recombinant techniques, their physical and chemical properties, including stability and compatibility, and approaches to their formulation (an alternative to this last topic will be provided for students taking the Biopharmaceuticals electives).

PHPH9112 Advanced Pharmacokinetics
Department of Physiology and Pharmacology
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
Department of Physiology and Pharmacology
Staff Contact: R Day
UOC6 S2

This course will extend the core course PHPH9104 Law, Ethics and the Regulation 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 subject, such as issues relating to pharmaceutical chemistry, will be considered in more detail. However, the major emphasis of the subject 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-marking processes. It is envisaged that some students may choose to undertake projects that would require some time to be spent at the Therapeutic Goods Administration.

PHPH9114 Pharmacoeconomics
Department of Physiology and Pharmacology
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. The real cost of any health care budgetary decision is not the dollars spent but the loss of benefits that would have been obtained by using the money in different ways. This realisation has led to the application of economic evaluation to the health care choices in an attempt to maximise the value obtained from limited health-care budgets. Economists have developed a number of techniques and concepts which, although not providing the answer , can assist the decision maker in identifying, setting out and analysing the many factors that influence such difficult but necessary choices. Pharmacoeconomics is a subdiscipline of health care economics and is concerned with the methods used by economists in the evaluation of choices in the allocation of pharmaceuticals. This module consists of two parts: (a) Basic Concepts and (b) Applications and Decision. Part (a) covers methodological issues, cost-of-illness studies, types of economic analysis which are relevant to drugs, calculation of economic cost, decision analysis, examples of published analyses, and economic analysis in developing countries. Part (b) covers budgetary constraints, managing future budgets, use of economic analysis in policy making, policy developments, Australian policies, The Australian Guidelines, and the need for an evidence-based approach.

PHPH9116 Advanced Clinical Trials Management
Department of Physiology and Pharmacology
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.

PHPH9117 Pharmaceutical Manufacturing & Quality Control
Department of Physiology and Pharmacology
Staff Contact: School Office
UOC6 TBA
Prerequisite/s: PHPH9100, PHPH9102, PHPH9120

An understanding of manufacturing in the pharmaceutical industry will be provided by describing the way in which raw materials are processed into particular dose forms. Using examples of enteral, parenteral and topical producs, sampling of raw mateials and their subsequent characterisation, followed by the common manufacturing operations and stability and bioavailability will be explored. For example, how

particle size or shape or crystal polymorphism can effect mixing of powders and the flow of the powders into the tablet machine as well as dissolution behaviour will be reviewed. Since the aim of manufacturing is to produce a product of a high quality, the principles involved in good manufacturing practice and good laboratory practice and optimizing processess will be studied. This will be both qualitative and quantitative in nature (latter includes statistical methods for process optimization). The relevant national and internatinal codes andguidelines and their relationships to each other and the ongoing process of harmonizing standards will be introduced.

PHPH9118 Therapeutics and the Molecular Basis of Disease 2
Department of Physiology and Pharmacology
Staff Contact: R Day
UOC6 S1 S2
Prerequisite/s: PHPH9107

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
Department of Physiology and Pharmacology
Staff Contact: R Day
UOC6 S2

Provision of drug information to General Practitioners has been largely undertaken by the Pharmaceutical Industry. One of the most practised and effective methods of providing independent drug information to GPs in Educational Visiting / Academic Detailing. 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. This course involves a three-day residential workshop, with pre-workshop preparation and a post-workshop task, followed by two assignments. A minimum of 3 students is required for the course to be available.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 as part of academic detailing.The residential workshop aims to provide communication and interaction skills training in the techniques of Educational Visiting/Academic Detailing. Over the course of the workshop you can expect to; Identify the strategies that are effective in promoting changes in clinical behaviour; Implement these strategies effectively in a one-to-one setting; Identify where gains can be made for doctors and patients in quality use of medicine and cost effective prescribing; Identify how the use of data on the prescribing pattern of an individual doctor can affect the development of a productive working relationship with the doctor.

PHPH9120 Clinical Development of Medicines
Department of Physiology and Pharmacology
UOC 6 S2

This course provides an introduction to clinical epidemiology, statistics, clinical trial management and data management. A brief introduction to the principles of clinical epidemiology is provided as a basis for measurement of drug effects in humans, including sources of error, types of research studies, and study design. Introduction to statistics includes methods for descriptive statistics, normal distributions and methods for expressing probability distribution parameters including *t*, chi-square and *F*. Inferential statistics covers application of distribution parameters to decision making, hypothesis testing, choosing an inferential test, comparison of two means, the two-sample *t* test, analysis of variance, chi-square test, correlation, non-parametric tests, and calculation of confidence intervals.

Clinical trails management reviews all stages involved in conducting a clinical trial. The stages covered include the initial project proposal; development of the protocol and other trial related documentation required to gain ethical and regulatory approval for a clinical trial; planning of all trial related material s required to commence the study; conduct of the trial during patient recruitment and treatment; data management and analysis of the data generated from the study; reporting of the data and finally close out of the trial. Responsibilities of the sponsor in trial planning, approval, investigator selection, monitoring and auditing are discussed. The International Conference on Harmonisation (ICH) code of Good Clinical Practice (GCP) is emphasised throughout the module.

Note/s: This course is compulsory for program 7370, 5504 and 9060.

PHPH9121 Postmarketing Development of Medicines
Department of Physiology and Pharmacology
UOC 6 S1

The object of this module is to review and understand the responsibilities of the Sponsor and its employee's, the Investigator, the Clinical Trials facility and its staff, the Research Ethics Committee, the Contract Research Organisation and finally the participants in a clinical trial. Issues relevant to each of the partners will be covered. These include: for the Sponsor; CTN or CTX scheme, preparation of the data package (covering letter to research ethics committee, investigators brochure, protocol, indemnity release, patient information sheets, and detailed budgeting) monitoring responsibilities, investigators meetings; for the Research Ethics Committee, review of the initial data package, review of quality of informed consent and monitoring responsibilities; for the Investigators, recruitment, education , involvement in protocol development, role in data collection and recruiting, collection of adverse events data, and methodology for gaining consent; for the CRO, overall trial management choosing a site, and auditing a trial. A common theme will be implementation of guidelines for Good Clinical Research Practice. Student will review data packages for research ethics committees. Assessable activities will include a critical appraisal of a range of data packages for presentation to the ethics committee, presentation of an investigator's start up meeting, and a simulated trial monitoring experience. An assignment focusing on monitoring clinical trials from a Sponsor's point of view will be undertaken. Experiential activities undertaken might include attendance at an investigator's meeting, a protocol development meeting, and a research ethics committee meeting.

Note: This course is compulsory for program 5504 and 9060.

PHPH9122 Quality Use of Medicines - Best Practice for Prescribing
Department of Physiology and Pharmacology
Staff Contact: School Office
UOC6 S2

Best Practice in Prescribing is designed to help practising GPs review and continually improve their clinical skills and performance in the area of prescribing. Participants complete a core unit on Quality Use of Medicines then they choose three areas for further study. Participants effectively set their own standards for good practice in the three therapeutic areas, chosen from six on offer. They read and analyse key studies, guidelines and systematic reviews identified by expert faculty. The course texts also provide accepted guidelines for best practice in the therapeutic areas. Participants also use peer referencing as a standard when they discuss their conclusions about best practice in the web-based tutorials. The web-based tutorial enhances self-learning with the opportunity to receive feedback from specialists and peer review. Standards are derived from research literature; the Therapeutic Guidelines series and the Australian Medicines Handbook in the six therapeutic areas. Course requirements: 1) Completion of a full cycle clinical audit of your own prescribing practice, with the final data collection and self-analysis due in week twelve of the course. 2) Satisfactory participation in four web-based tutorials, with specific exercises in each section based on prescribed readings and discussed

at the tutorials. 3) A written assignment due at the end of week twelve of the course. 4) Self-assessment and evaluation in two brief written reports. A detailed manual is provided and the web-based tutorials will allow peer group/faculty resource people to provide feedback. This course is available for Medical Practitioners in practice. A minimum of 5 students is required to allow delivery.

PHPH9123 Master's Project by Coursework
Department of Physiology and Pharmacology
Staff Contact: School Office
UOC12 S1 S2

Students proceeding to the Masters degree may replace two modules, i.e. 12 Units of Coursework (12 UOCs) with a project. The project should involve the generation of an original contribution, either in an experimental setting or by way of a literature search. Students should spend about 300 hours on the project including writing the report. The project can run through the whole year or even into the long vacation, provided this does not adversely affect the time limit on completing the degree. The topic can be associated with the student's place of employment but should not be a project that the student is being paid to perform and would have performed regardless of whether enrolled for the degree. Suitable projects include laboratory work, field studies, and in some cases, literature surveys. See course organizers for further details.

PHPH9171 Physiology for Medical Physics 1
Department of Physiology and Pharmacology
Staff Contact: G Simonetta
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
Department of Physiology and Pharmacology
Staff Contact: G Simonetta
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.

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.

PHYS9411 Medical Physics 1
School of Physics
Staff Contact: R Stening
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: R Stening
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: R Stening
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: R Stening
UOC3 HPW2 S1 S2

A report or literature survey on a topic relevant to the program of study.

PHYS9583 Advanced Theoretical Physics
School of Physics
Staff Contact: R Stening
UOC3 HPW2 S1 S2

A field theory approach to condensed matter physics. Field theory and critical phenomena, exactly soluble models, low-dimensional quantum spin models. Content may vary from year to year.

PHYS9683 Advanced Astrophysics
School of Physics
Staff Contact: R Stening
UOC3 HPW2 S1 S2

Radio astronomy and interferometry; the structure of the galaxy; optical and infrared astronomy - instrumentation and data reduction; the extragalactic distance scale. Content may vary from year to year.

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.

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.

PHYS9761 Optoelectronics Laboratory I
School of Physics
Staff Contact: M Gal
UOC6 HPW5 S1 S2

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 II
School of Physics
Staff Contact: M Gal
UOC6 HPW5 S1 S2

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.

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.

POLS5106 Crisis Diplomacy: The Origin and Termination of War
School of Politics and International Relations
Staff Contact: R Lucy
UOC8 HPW2 S2

An examination of models of the origins of war, especially those of Geoffrey Blainey, Paul Huth and John Arquilla. These models will be tested by examining the origins of particular wars. The origins of some of the following wars will be examined: WW1, WW2, earlier global wars, the Korean War, the Vietnam War, the Falklands War, the Iran-Iraq War, the Gulf Wars of 1990-1991, the Arab-Israeli Wars and the wars of the former republic of Yugoslavia. The relation of arms races, the distribution or balance of power and the contribution of nationalism to the outbreak of war will also be addressed. Unlike POLS5103, international law is not a major focus.

Note/s: Previously known as Politics and War.

POLS5108 Regional Orders in the Asia Pacific
School of Politics and International Relations
Staff Contact: School Office
UOC8 HPW2 S1

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. The approach is to examine 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: M Williams
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 Co-ordinator 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. It explores the contribution of the main approaches in International Relations to an understanding of the contemporary world. It 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. It 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: M Williams
UOC8 HPW2 S2

Analyses the nature and dynamics of the international political economy. It 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. It investigates the relationship between the growth of international economic activity and the domestic economic and social policy objectives of states. It 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 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.

Note/s: Previously known as International Law.

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.

POLS5128 Australia and the Global Political Economy
School of Politics and International Relations
Staff Contact: M Williams
UOC8 HPW2 S1

Introduces the principal themes in Australia's international political economy, including the historical development of Australia's external economy, the development of policy, the theories and interests behind policy, involvement with relevant international institutions and treaties, regional developments and current issues. Topics include trade, resource exploitation and conservation, foreign investment, the Australian dollar and balance of payments, immigration, foreign aid, relations with Northeast and Southeast Asia, global warming, Australia and East Timor, and APEC and the WTO.

POLS5129 Great Powers and World Orders
School of Politics and International Relations
Staff Contact: M Williams
UOC8 HPW2 S2

Explores some of the major themes and key institutions in the history of the rise and consolidation of the modern nation-state system. Focuses particularly on the relationships between the history of capitalism, the formation of modern nation-states and the rise and fall of world orders. Also looks at the historical background to, and changing character, of national sovereignty and the significance of revolution in the history of successive world orders. Finally it addresses questions about the future of the nation-state system in an era of globalisation and whether the post-Cold War era represents a fundamentally new type of world order or the latest round in the history of the rise and fall of Great Powers.

POLY5000 Polymer Science
School of Chemical Eng and Industrial Chemistry
Staff Contact: R Burford
UOC19 HPW6 S2

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: B Hayes
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: A Pirola-Merlo
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: A Pirola-Merlo
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: A Pirola-Merlo
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 S1

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 S2

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: J Bright
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

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 4 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 4 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

Working as a forensic psychologist involves assessing and managing a range of psychological problems. This course seeks to provide an introduction to a range of assessment and intervention methods applicable to forensic psychology. The emphasis is on the scientist-practioner model, and how evidence-based interventions can manage presentations within forensic settings. Topics that will be covered include assessment and management of anxiety and depression, assessment and prevention of suicide risk, and management of posttraumatic stress disorder, substance abuse and gambling.

PSYC7401 Interventions in Forensic Psychology 2
School of Psychology
Staff Contact: K Salmon
UOC6 HPW2 S2

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

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: R Kemp
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: R Bryant
UOC6 S1

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 4 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: R Bryant
UOC6 S2
Prerequisite/s: PSYC7409

This course continues with the training of psychological skills and ethical practices required in the professional context. Attendance at 4 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.

PSYC7411 Professional and Ethical Practice (Forensic) 3
School of Psychology
Staff Contact: R Bryant
UOC6 S1
Prerequisite/s: PSYC7410

Across PSYC7411 and PSYC7412 students must complete three field placements, totalling 800 hours. These will normally comprise placements of approxiately 35 days in settings that may include the courts, police, prisons, or other related forensic settings. Students will also attend once-monthly meetings that will continue reviews of professional ethical issues. Assessment will be conducted by audio and videotaped practice, case presentations, and formal reports.

PSYC7412 Professional and Ethical Practice (Forensic) 4
School of Psychology
Staff Contact: R Bryant
UOC6 S2
Prerequisite/s: PSYC7410

In addition to field placements, students will also attend once-monthly meetings that will continue reviews of professional and ethical issues. Assessment will be conducted by audio and videotaped practice, case presentation, and formal reports.

Note/s: See under PSYC7411

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: School Office
UOC6 S1 S2

PTRL5003 Well Pressure Testing
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL5004 Numerical Reservoir Stimulation
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL5007 Reservoir Engineering
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL5008 Petroleum Production Economics
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL5009 Well Drilling Equipment and Operations
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL5012 Drilling Mud - Formulation, Selection & Maintenance
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL5016Well Completions and Stimulation
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL5021 Reservoir Characterisation
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL5022 Drilling Systems Design & Optimisation
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL5107 Formation Evaluation
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL6001 Reservoir Engineering 1
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL6003 Well Pressure Testing
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL6004 Numerical Reservoir Stimulation
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL6007 Reservoir Engineering 2
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL6008 Petroleum Production Economics
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL6009 Well Drilling Equipment and Operations
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL6012 Drilling Mud - Formulation, Selection & Maintenance
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL6016Well Completions and Stimulation
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL6021 Reservoir Characterisation
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL6022 Drilling Systems Design & Optimisation
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL6025 Well Control & Blowout Prevention
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL6027 Casing Design & Cementing
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL6028 Practical Aspects of Well Planning & Drilling Cost Estimates
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL6029 Directional Horizontal and Multilateral Drilling
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL6030 Advanced Recovery Methods
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

PTRL6107 Formation Evaluation
School of Petroleum Engineering
Staff Contact: School Office
UOC6 S1 S2

REST0001 Real Estate Investment Analysis
Building Construction Management Program
Staff Contact: J Kim
UOC6 HPW3 S2

This course focuses on the economic aspects of real estate investment market. The course incorporates relevant applications of statistical tools and the use of electronic information search. Topics include analysis of urban growth and change, and analysis of market segmentation. The course also emphasises a systematic approach to the real estate investment process, investment environment, financial analysis, and investment criteria and application.

REST0002 Information Technology and Data Analysis in Real Estate
Building Construction Management Program
Staff Contact: R Cardew
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: R Cardew
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: R Cardew
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.

REST0005 Real Estate Valuation
Building Construction Management Program
Staff Contact: R Cardew
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: R Cardew
UOC6 HPW3 S1

This course introduces the key issues in facilities management and how it relates to organisational strategies within the context of coprorate real estate. Topics include facility planning, financial forecasting, real estate considerations, property management, maintenance and operation, and general administrative services.

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 S2

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 Working with People
Building Construction Management Program
Staff Contact: R Cardew
UOC6 HPW3 S1
Prerequisite/s: REST0010 and 24 UOC in the postgraduate program

This course examines the way people behave and relate to each other in organisations and to their environment. It presents the methods required for effective communication and the organisation of human resources to meet the strategic interests of the firm and society. Topics covered include, ethics and social responsibility, change management, motivation, communication, leadership, teams, the interactions of people and the buildings they occupy, how buildings impact upon health and productivity, changing trends in work-place practices.

REST0012 Generating and Executing Ideas
Building Construction Management Program
Staff Contact: R Cardew
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 do people of different backgrounds and interests participate in this process is the core of this subject? The course not only considers how to be creative and solve problems, but explores how having obtained solutions they 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 change and the influence of IT.

REST0013 Strategic Management of IT in FM
Building Construction Management Program
Staff Contact: D McGeorge
UOC6 HPW3 S2
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: R Cardew
UOC6 HPW3 S1

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.

SAED9001 Education Studies
School of Art Education
Staff Contact: School Office
UOC6 HPW3 TBA

This course aims to explore and analyse the history, philosophy and psychology of education in Australia and overseas for the purposes of the art teacher, the art administrator, and the art educator in a whole school environment. Course content will include - analysis of the distinctions between models of explanation, models and methodologies (e.g. anthropological, analytic); overview of the theories and methods involved in studying the history, philosophy, psychology, sociology, and politics of education. Issues for examination are drawn from whole school change; disadvantaged education; accountability in the school - financial, social, educational; community involvement.

SAED9002 Practices of Research in Art, Design and Education
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S1

Clifford Geertz says that those who wish to understand what a science is should look not, in the first instance, to its theories or its findings but to what the practitioners of it do. 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 the 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 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 of Habermas and the genealogical archeology of Foucault as appropriate to an interpretation of the visual arts in education.

SAED9006Theoretical 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.

SAED9008 Introduction to Art Therapy
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S2

This course aims to explore the integration of art and therapy in theory and practice. Subject matter will include theories of personality and self development; theoretical approaches to psychotherapy including - psychodynamic - Jungian humanistic - existential - gestalt - transactional - cognitive/behavioural - systematic - implosive/flooding - rational. The history of art therapy - the difference and relationships between art teaching and art therapy. The use of metaphor - images and symbols in conscious and unconscious messages. Perceptual processes and their implications for the art therapist. An examination of mythical and archetypal in art. The notions of primary events as causal antecendents in behaviour. Overview of possible applications and appropriate settings for the use of art therapy by the art educator.

SAED9009 Applying the Conceptual Framework in the Art Museum
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S1 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.

SAED9010Dialogues Communities and Cultural Developments
School of Art Education
Staff Contact: School Office
UOC6 HPW3 X2

This course aims to develop in students an understanding of the cultural field of the visual arts, and an appreciation of the values and forces which shape art practices within the community. Course matter will address concepts of social development and social structure including selected issues of - class, gender, race, and age; in relation to the theorists - Hegel, Marx, Weber, Benjamin, Adorno, Horkheimer, Tonnies, Lukacs, Althusser, Habermas. Cultural.

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 S1 S2

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 S1 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.

SAED9028 Educating Artistically Talented Students
School of Art Education
Staff Contact: School Office
UOC6 HPW3 TBA

This course examines teaching and curriculum for educating artistically talented visual arts students, and the policies and politics of the gifted and talented. It may be argued that talent will never be actualized without the means to identify gifted students, teaching strategies and resources, educational programs, settings and curriculum that serve their needs. Alternative positions of equity and inclusion are introduced as a counter to the discourse of excellence.

SAED9029 Bodies of Work and the Practice of Art Making
School of Art Education
Staff Contact: School Office
UOC6 HPW3 S1

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 S2

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 S2

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 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 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.

SAHT9116Research 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.

SAHT9124 Arts and Cultural Policy
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S1

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 S2

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 S1

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 S2

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. Conser-vators 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 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 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 considered include: how objects and images come to have meaning and how stable the 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.

SAHT9129 The Development of Art Criticism in Australia
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S2

This course examines the history of art criticism and writing about art in an Australian context and considers how these practices reflect, diagnose and affect the nature of the visual arts. There is a constant evaluation of recent art criticism from a variety of sources and a questioning of what actually constitutes criticism. At the same time, the subject goes back to the start of writing about art in Australia and looks at the practice from the beginning of European settlement to recent times in an historical context.

SAHT9130 Art Galleries and Collections in Australia
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S1

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: D Losche
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.

SAHT9133 Pornography, Art and Politics
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S1

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 S1

This course traces contemporary ideas of body and subjectivity through the work of a range of artists and writers. Its major focus is on the experience of memory and self-understanding. It addresses the questions of how memory is constituted and how it is crucial to our sense of self; of how memory affects our relations to images and objects, and how memory is represented. The course also examines human relations to space, the themes of horror and humour, and the topics of gesture, performativity and mimesis. Contemporary art and writing practices will be used as the basis for a creative engagement with theoretical ideas. Focus texts include writing by Christian Boltanski, Georges Perec, Oliver Sacks, Dori Laub, Julia Kristeva, Jeff Wall, Judith Butler and the stories of the 'stolen children'.

SAHT9136The 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 S1

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, clas 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 students 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

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.

SAHT9693 Museum Development- fundraising and philanthropy
School of Art History and Theory
Staff Contact: School Office
UOC6 HPW3 S1

This subject considers the issues surrounding the development of alternate funding streams for arts organizations, 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 Printmedia 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 Printmedia 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 Printmedia 3
School of Art
Staff Contact: School Office
UOC6 HPW3 S1

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 Printmedia 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.

SART9713 Photomedia 1
School of Art
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.

SART9714 Photomedia 2
School of Art
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.

SART9715 Photomedia 3
School of Art
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.

SART9716 Photomedia 4
School of Art
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.

SART9717 Time-Based Art 1
School of Art
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.

SART9718 Time-Based Art 2
School of Art
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.

SART9719 Time-Based Art 3
School of Art
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.

SART9720 Time-Based Art 4
School of Art
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.

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.

SART9725 Introduction to Multimedia Computing
School of Art
Staff Contact: School Office
UOC6 HPW3 S2

This course will develop knowledge and awareness of concepts and techniques involved in online multimedia computing within a visual arts context. The focus of the course will be on utilising the web 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.

SART9726Introduction to Animation
School of Art
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.

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 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.

SART9730 Introduction to Analogue Photomedia
School of Art
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

SART9731 Introduction to Digital Imaging
School of Art
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.

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 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.

SART9736 Analogue Photomedia Elective
School of Art
Staff Contact: School Office
UOC6 HPW3 S2 S1

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.

SART9737 Digital Illustration and Text Elective
School of Art
Staff Contact: School Office
UOC6 HPW3 S1

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.

SART9738 Sculpture Elective
School of Art
Staff Contact: School Office
UOC6 HPW3 S1

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 students' personal creative enquiries, foster an awareness and recognition of historical precedents and sculptural theory, and with an inter disciplinary focus, further the students' 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.

SART9739 Multimedia Computing Elective
School of Art
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.

SCTS5315 Society, Environmental Policy and Sustainability
School of Science and Technology Studies
Staff Contact: P Brown
UOC8 HPW2 S1

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.

SCTS5316Environmental and Technological Risk Controversies
School of Science and Technology Studies
Staff Contact: P Brown
UOC8 HPW2 S2
Prerequisite/s: SCTS5315

Reviews understandings of environmental and technological risk controversies, frequently associated with new resource and technological developments. It emphasises the role of varying conceptions of rationality, forms of knowledge and uncertainty, different cultural conceptions of risk, and questions of fairness, credibility and trust, putting a spotlight on the weaknesses of traditional Quantitative Risk Analysis and underlining the rationale for broader community involvement and participation. Students will develop a case study on a controversy of their choosing, elaborating on the lecture and reading material so as to develop their own capacity to communicate and negotiate in such controversies as they arise in environmental management, in the workplace and in daily life.

SCTS5317 Fundamental Knowledge in Environmental Management: Social Science
School of Science and Technology Studies
Staff Contact: P Brown
UOC6 HPW3 S1

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.

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 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.

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 candidates' 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 candidates 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 candidates' 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: D Mendex an dG Low
UOC6 HPW3 S1 S2
Prequisites: 48 units of credit from program 8508/3000, including COMP9331 andCOMP9332

Students will complete a substantial project individually or in small groups, under the supervision of a member of the academic staff. Project areas include netwrok design.

SESC6010 Descriptive Statistics
School of Safety Science
Staff Contact: D Gardner
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 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 the principles of statics and dynamics as it applies to safety and ergonomic issues. Topics include materials handling, equilibrium and balance, biomechanics, and linear motion.

Note/s: May not be taken as part of 48UOC Masters program. Also offered in off campus mode in S2.

SESC6120 Physical Principles of Safety 2
School of Safety Science
Staff Contact: J Cross
UOC3 HPW3 S2

This course builds on SESC6110 and aims to give students the confidence and vocabulary to understand an engineers report in safety issues and to understand technical standards and codes of practice. Topics include collisions and impacts, properties of solids, fluids ventilation, rotation and vibration.

Note/s: Also offered in off campus mode in S2.

SESC6800 Fundamentals of Toxicology
School of Safety Science
Staff Contact: C Winder
UOC3 HPW3 S2

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 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.

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.

Note/s: Short Course mode only.

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.

Note/s: Also offered in off campus mode.

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.

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.

Note/s: Also offered in off campus mode.

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.

Note/s: Also offered in off campus mode.

SESC9010 Research Methods
School of Safety Science
Staff Contact: D Gardner
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 and the analysis of quantitative data. 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 a basic understanding of statistics is required.

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 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.

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: Core courses

Note/s: Also offered in off campus mode.

SESC9091 Safety, Health and Environmental Practice
School of Safety Science
Staff Contact: B Markovic
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: SESC6120

SESC9100 Physical Hazards
School of Safety Science
Staff Contact: A Green
UOC3 HPW3 S2

Introduction to physical hazards in the workplace. Machine hazards and machine guarding. Noise injury, measurement and control. Ionising and non-ionising radiation and management. Electrical injuries and management of hazards. Fire and explosion hazards. Construction hazards.

Assumed knowledge: Core courses

Note/s: Also offered in off campus mode in S1.

SESC9121 Fire and Explosion
School of Safety Science
Staff Contact: A Green
UOC6 X2

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.

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. 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.

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.

Note/s: Off campus mode only.

SESC9160 Plant and Construction Safety
School of Safety Science
Staff Contact: School Office
UOC3 HPW2.5 S1

This course examines current issues and problems in ensuring the occupational safety and health of workers in building, construction and manufacturing industry. Topics include OHS act, 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 safety management, audit reviews, hazards in building and construction work, human behaviour and occupational safety and incident investigation. Best practice initiatives in the construction sector.

SESC9200 Hazard and Risk Assessment
School of Safety Science
Staff Contact: J Cross
UOC3 HPW3 S2

Principles of OHS risk management and systems safety, the legal context of OHS risk managment, hazard identification, risk assessment, accident models, accident reporting, auditing. Each topic will be illustrated by practical examples and case studies.

Note/s: Also offered in off campus mode in S1 and S2 and short course mode in X1 and X2.

SESC9211 Risk Management
School of Safety Science
Staff Contact: J Cross
UOC6 HPW3 S1 S2

This course gives an overview of Risk Management following the format of the Australian Standard in Risk Management (AS4360). Tools and techniques applicable to each step of the risk management process are discussed using examples 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 and short course mode in S1. Web delivery mode in S2 with optional tutorials.

SESC9221 Major Hazards Management
School of Safety Science
Staff Contact: A Green
UOC6 HPW3 S1

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.

Note/s: Also offered in off campus mode.

SESC9231 Risk Analysis
School of Safety Science
Staff Contact: J Cross
UOC6 HPW3 S1 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.

SESC9261 Introduction to Environmental Risk Assessment
School of Safety Science
Staff Contact: D Leonte
UOC6 HPW3 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.

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.

Note/s: Short course mode only.

SESC9300 Effective Behaviour in Organisations
School of Safety Science
Staff Contact: D Gardner
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: D Gardner
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.

Note/s: Also offered in off campus mode in S1 and S2.

SESC9331 Technology Management
School of Safety Science
Staff Contact: D Gardner
UOC6 HPW3 S2

This course covers a range of issues in the management of technology. Topics include legal responsibilities of managers, industrial relations, project management, management of contracts and the management of technological change.

SESC9341 Occupational Health and Safety Management Systems Auditing
School of Safety Science
Staff Contact: D Gardner
UOC6 X1 X2

This course outlines the requirements of an effective OHS management system. It develops practical skills in the auditing of such management systems. A working knowledge of industry practices, OHS principles and relevant legislation is required.

Note/s: Short course mode only

SESC9350 Safety, Health and Environmental Management
School of Safety Science
Staff Contact: D Gardner
UOC3 HPW3 S2

This course covers a range of issues in the management of workplace and environmental risks in industry. Topics include cost benefit analysis of safety, rehabilitation and workers' compensation, enterprise agreements, industrial relations in the workplace and environmental management.

SESC9400 Ergonomics 1
School of Safety Science
Staff Contact: A McIntosh
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.

Note/s: Also offered in off campus mode in S1 and S2.

SESC9410 Ergonomics 2
School of Safety Science
Staff Contact: A McIntosh
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.

SESC9411 Principles of Ergonomics
School of Safety Science
Staff Contact: A McIntosh
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.

Note/s: Also offered in off campus mode in S1 and S2.

SESC9421 Applied Ergonomics
School of Safety Science
Staff Contact: R Hall
UOC6 HPW3 X2

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: Five day short course mode only.

SESC9431 Physical Ergonomics
School of Safety Science
Staff Contact: K Kothiyal
UOC6 X2

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: Three day workshop followed by off campus study.

SESC9441 Ergonomics and New Technology
School of Safety Science
Staff Contact: R Hall
UOC6 HPW3 X1

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: Five day short course mode only.

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.

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 in S1 and S2.

SESC9510 Occupational Hygiene Hazards
School of Safety Science
Staff Contact: School Office
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.

Note/s: Also offered in off campus mode in S1 and 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.

Note/s: Short Course Mode. This course may not run every year.

SESC9541 Assessment of Workplace Environment
School of Safety Science
Staff Contact: K Kothiyal
UOC6 HPW3 X1

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: Core courses.

Note/s: Three day workshop followed by off campus study.

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 modein S1 and S2.

SESC9581 Industrial Pollution Control
School of Safety Science
Staff Contact: School Office
UOC6 S2

This course introduces environmental and pollution issues of relevance to people with responsibility for ensuring pollution control in industry. The course starts with an introduction to environmental assesment processes and environmental management systems then considers contaminated sites, pollution from liquid, solid and gaseous wastes and their control.

Note/s: Only offered in off campus mode. This course may not run every year.

SESC9600 Introduction to Occupational Health
School of Safety Science
Staff Contact: C Winder
UOC3 HPW3 S1

Introduction to occupational health, including 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

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, SESC9600

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

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.

Assumed knowledge: SESC9600

Note/s: This course may not run every year.

SESC9640 Occupational Epidemiology
School of Safety Science
Staff Contact: C Winder
UOC3 HPW3 X1

This course provides an introduction to epidemiology of the workplace. The course covers concepts of epidemiology, including relative risk, odds ratio, confidence limits, confounding, bias, types of epidemiological studies and their design. Interpretation of the results of epidemiology studies. A significant feature of the course is the study of case studies in various occupational health and safety areas.

Assumed knowledge: SESC9600. Medical health or allied health background desirable.

Note/s: Short course mode. This course may not run every year.

SESC9651 Occupational Rehabilitation
School of Safety Science
Staff Contact: A McIntosh
UOC6 HPW2.5 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: Medical or allied health background desirable.

SESC9711 Environment Planning and Assessment
School of Safety Science
Staff Contact: B Markovic
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: B Markovic
UOC6 HPW2.5 S1

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.

SESC9741 Environmental Management Systems
School of Safety Science
Staff Contact: B Markovic
UOC6 X2

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.

Note/s: Short course mode only.

SESC9751 Introduction to Environmental Science
School of Safety Science
Staff Contact: B Markovic
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: B Markovic
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.

Note/s: Short course mode only.

SESC9810 Introduction to 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.

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.

Note/s: 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

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: 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.

Note/s: Only offered in off campus mode. This course may not run every year.

SESC9871 Environmental and Toxicological Laboratory Science
School of Safety Science
Staff Contact: B Markovic
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: D Gardner
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: A Green
UOC3 S1 S2

A 3 units of credit report on a topic relevant to the study program.

SESC9906Project (6 Units of Credit)
School of Safety Science
Staff Contact: A Green
UOC6 S1 S2

A 6 units of credit report on a topic relevant to the study program.

SESC9912 Project (12 Units of Credit)
School of Safety Science
Staff Contact: A Green
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

SESC9918 Project (18 Units of Credit)
School of Safety Science
Staff Contact: A Green
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

SESC9924 Major Project (24 Units of Credit)
School of Safety Science
Staff Contact: A Green
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

SLSP5001 Policy Analysis
School of Social Science and Policy
Staff Contact: H Colebatch
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: R Pe-Pua
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: H Colebatch
UOC8 HPW2 S2
Excluded: SLSP7006

This course is concerned with management, both as a group of people and as a process. It also stresses the broader context in which organisations are located and explores general issues of governance.

SLSP5013 Program Evaluation
School of Social Science and Policy
Staff Contact: R Hall
UOC8 HPW2 S2
Excluded: SLSP5003

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: A Morris
UOC8 HPW2 S2
Excluded: SLSP5011

The course is concerned with the foundation and practice of social polcy 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.

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.

SLSP5050 Linkage Project
School of Social Science and Policy
Staff Contact: H Colebatch
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: H Colebatch
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

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

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.

SLSP7001 Policy Analysis
School of Social Science and Policy
Staff Contact: H Colebatch
UOC8 HPW2 S1
Excluded: SLSP5001

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.

SLSP7003 Housing Culture Studies
School of Social Science and Policy
Staff Contact: School Office
UOC8 HPW4 S1

Introduces the broad concerns that an effective housing delivery policy and practice needs to take into account. Includes an introduction to Australian housing at both policy and practice levels, with a focus on understanding its history, the social context of housing, and skills necessary in the provision of housing in a complex market structure. Issues will be approached from a variety of perspectives, from policy maker to architect to consumer.

SLSP7004 Housing Development Studies
School of Social Science and Policy
Staff Contact: School Office
UOC8 HPW4 S2

Introduction to housing economics: the nature, structure and operation of housing markets, the determinants of supply of and demand for housing, factors affecting house prices, rents and tenure choice. Planning for housing: strategic and physical planning, the distribution of demand, the supply of physical and social infrastructure. Background to housing: the historical development of Australian housing, the demand for detached owner-occupied houses, building technologies, the tradition of owner-building. The housebuilding industry: the nature and structure of the industry, the finance and management of housebuilding, the importance of subcontracting, the influence of large firms and building material manufacturers, industrial relations. Asset management: project review and evaluation, asset valuation, monitoring asset utilisation and performance, lifecycle costing, building maintenance.

SLSP7006 Management and Policy in Organisations
School of Social Science and Policy
Staff Contact: H Colebatch
UOC8 HPW2 S2
Excluded: SLSP5004

This course is concerned with management, both as a group of people and as a process. It also stresses the broader context in which organisations are located and explores general issues of governance.

SLSP7011 Program Evaluation in Housing
School of Social Science and Policy
Staff Contact: R Hall
UOC6 HPW2 S2
Excluded: SLSP5003, SLSP7010

An introduction to program evaluation with application to housing. The nature and scope of evaluation will be outlined including theoretical approaches to evaluation, types of evaluation, the problem of utilisation of evaluations, evaluation methodologies and their problems. Case studies of evaluation of housing programs will be conducted.

SLSP7012 Housing Policy
School of Social Science and Policy
Staff Contact: School Office
UOC6 HPW2 S2
Excluded: SLSP7002

An examination of policy relating to housing provision in Australia. Issues include the role of government and intergovernmental arrangements; relations between the public and private sectors; funder-provider distinctions and their relevance to housing; comparative studies of housing policy. Contributions will be made by experts in housing drawn from the public and private sectors.

SLSP7022 Housing Asset Management
School of Social Science and Policy
Staff Contact: School Office
UOC6 HPW4 S1 S2
Excluded: SLSP7020

Examines asset management practices designed to ensure priorities are established in line with organisational objectives, development options and feasibility studies are fully explored, financing and expenditure related to property is planned and controlled in accordance with these objectives and resources are used effectively and appropriately. Topics include: economic appraisal, value management, statutory requirements, private sector participation, asset valuation, asset capitalisation, asset life cost, demand management, heritage assets, monitoring asset utilisation and performance, maintenance of asset registers and energy management.

SLSP7023 Housing Development and the Market
School of Social Science and Policy
Staff Contact: School Office
UOC6 HPW4 S2
Excluded: SLSP7021

International policy and market considerations and case studies in Southeast Asia and the Pacific, together with the needs of certain sub-markets, followed by Australian local market housing studies and data management requirements.

SLSP7091 Housing Studies Project
School of Social Science and Policy
Staff Contact: R Hall
UOC4 S1 S2
Excluded: SLSP7008

A research project on an approved topic in housing studies in an appropriate organisation connected either directly or indirectly with housing provision. The project will be supervised by both academic and workplace supervisors and will have an applied focus which will contribute to the goals of the organisation in which the research is undertaken as well as satisfying criteria for academic research. The work will be presented in the form of a project report.

SOCW7850 Issues in International Social Development
School of Social Work
Staff Contact: B Ferguson
UOC8 HPW2 S1 S2

Introduces students to conceptual, structural and pragmatic issues in social development as process and goal. It offers a knowledge base and analytical framework for working with a global perspective in Australia or overseas. Controversies in development theory are examined as well as the complexities of the geopolitical, cultural and economic contexts in which international aid is delivered. Global problems addressed in relation to a range of social theories 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 and human rights. A problem analysis exercise is designed to enhance understanding of the inter-relationship of issues.

SOCW7851 Community Development
School of Social Work
Staff Contact: E Pittaway
UOC8 HPW2 S1 S2

Begins with 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. As part of the coursework, students undertake an individual analysis of a local community development project.

SOCW7852 Politics of International Aid
School of Social Work
Staff Contact: School Office
UOC8 HPW2 S2

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. It then 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: School Office
UOC8 HPW2 S1 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 followed by a piece of action research.

SOCW7854 Social Development Policy and Planning
School of Social Work
Staff Contact: E Baldry
UOC8 HPW2 S2

Provides a framework for understanding social development looking at the aims of social development in international, regional, national and local settings. Social development affords a different perspective from orthodox economic models. Introduces policy models and the skills of policy development and analysis needed to plan and implement social development. The social impact of the global policies of world powers is also examined. Students undertake a major policy analysis exercise and link the skills of policy development and analysis with the skills of community development, advocacy, program planning, administration and evaluation needed to maintain social development.

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.

SOCW7860 Theory of Couple and Family Therapy A
School of Social Work
Staff Contact: C Flaskas
UOC4 HPW2 S1

This course 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.

SOCW7861 Clinical Studies A
School of Social Work
Staff Contact: C Flaskas
UOC8 HPW3 S1

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.

SOCW7862 Theory of Couple and Family Therapy B
School of Social Work
Staff Contact: C Flaskas
UOC4 HPW2 S2

This course extends the study undertaken in Theory of Couple and Family Therapy A. There is a development of the Milan framework and of topics of generic processes of therapy selected to support the learning in Clinical Studies B. A wider historical context is given in the second half of this course, and representative models from the earlier first-order systemic therapies will be presented, as well as other current second-order approaches. The latter will include the study of Michael White's narrative framework.

SOCW7863 Clinical Studies B
School of Social Work
Staff Contact: C Flaskas
UOC8 HPW5 S2

Develops clinical knowledge and students work directly with families or couples using the 'live' supervision facilities of Relationships Australia (NSW). All the clinical work is done in small teams with a Senior Clinical Supervisor. Theoretical and clinical understandings of systemic assessment, therapeutic management and systemic interviewing are facilitated in this learning environment. Practice skills, the capacity to critically reflect on practice, and the capacity to analyse therapeutic situations are core teaching and assessment themes in this course.

SOCW7864 Contemporary Theory and Practice Issues
School of Social Work
Staff Contact: C Flaskas
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.

SOCW7865 Research Issues and Methodologies A
School of Social Work
Staff Contact: M Wearing
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.

SOCW7866 Research Issues and Methodologies B
School of Social Work
Staff Contact: M Wearing
UOC4 HPW1 S2

This course is designed to accompany and support study for the dissertation. Topics include use of supervision, planning and time-lines in independent study, undertaking literature reviews, and structure in the presentation of longer pieces of work. Students will be expected to present their own progress in their dissertation study, and to be part of a group discussion process with respect to other students' work.

SOCW7867 Social Work Dissertation (Couple and Family Therapy)
School of Social Work
Staff Contact: C Flaskas
UOC8 S2

In this course, a dissertation of 10,000 words is undertaken on a theory or practice topic chosen by the student. The topic should be directly related to the social work context of couple and family therapy, and requires the approval of the Course Co-ordinator. The independent study is supported by regular individual supervision, and the teaching program in the concurrent course, Research Issues and Methodologies B. Though the dissertation is primarily designed to allow the sustained exploration of a specific theory or practice issue, it is also possible to use this course to undertake and present the findings of a small piece of empirical research.

SOCW7868 Couple and Family Dissertation
School of Social Work
Staff Contact: C Flaskas
UOC8 S2

In this course, a dissertation of 10,000 words is undertaken on a theory or practice topic chosen by the student. The topic should be directly related to the field of couple and family therapy, and requires the approval of the Course Co-ordinator. The independent study is supported by regular individual supervision, and the teaching program in the concurrent course, Research Issues and Methodologies B. Though the dissertation is primarily designed to allow the sustained exploration of a specific theory or practice issue, it is also possible to use this course to undertake and present the findings of a small piece of empirical research.

SOLA9001 Photovoltaics
Centre for Photovoltaic Engineering
Staff Contact: S Wenham
UOC6 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.

SOLA9002 Solar Cells and Systems
Centre for Photovoltaic Engineering
Staff Contact: School Office
UOC6 S2

Photovoltaics systems harness sunlight by using solar cells to convert it directly into electricity. This course covers factors important in the design of solar cells which are studied with regard to their effects on spectral response, temperature sensitivity, resistive losses, current generation and open circuit voltages. A range of solar cell technologies are considered both at the laboratory and commercial levels, including advanced concepts and designs for photovoltaic modules. Significant emphasis is placed on applications including systems design, construction and operation with this subject building on the material introduced in the subject Applied Photovoltaics. Relevant types of systems receive particular attention. Experience will be gained with the computer-aided design procedures for photovoltaic systems. Management and entrepreneurial approaches in relation to starting a small business within the photovoltaic industry are also considered.

SOLA9003 High Efficiency Silicon Solar Cells
Centre for Photovoltaic Engineering
Staff Contact: School Office
UOC6 HPW2.5 TBA

This is an advanced level subject for those with a good background in semiconductor device physics and an interest in silicon colar cells or related devices. After a brief review of the crystal structure, energy bands and phonon spectra of silicon, the course examines silicon's optical, recombination and transport properties in some detail. Next comes a discussion of efficiency limits upon photovoltaic energy conversion, with particular emphasis upon light trapping and the potential for exceeding conventional limits. After discussion of presently achieveable surface and bulk material properties, the final section of the course studies in detail the design of silicon cells upon both crystalline and multicrystalline substrates and under concentrated and non-concentrated sunlight.

SOLA9004 Solar Energy
Centre for Photovoltaic Engineering
Staff Contact: School Office
UOC6 TBA

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.

SOLA9005 Advanced Semiconductor Devices
Centre for Photovoltaic Engineering
Staff Contact: School Office
UOC6 TBA

Theory and operating characteristics of a range of semiconductor devices including bipolar diodes and transistors, MOS devices and circuit connections, solar cells, light emitting diodes and semiconductor lasers.

SOLA9006 Solar Cell Technology and Manufacturing
Centre for Photovoltaic Engineering
Staff Contact: School Office
UOC6 TBA

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 optimization, fault diagnosis and maximizing of yields.

SOLA9007 Grid-Connected Photovoltaics
Centre for Photovoltaic Engineering
Staff Contact: School Office
UOC6 TBA

Traditionally, solar cells have been used to provide small amounts of power for "stand alone" systems in remote areas. However, over recent years, the most rapidly growing market sector has been in applications that are connected to the standard electricity supply network, particularly grid-connected private homes. Other significant applications of this type include central station and building integrated photovoltaics. This course explores the technical and broader issues relevant to such applications. System components, principally inverters, and operational issues, such as "islanding" and its prevention, are treated in detail.

SOLA9008 Special Topic in Photovoltaics
Centre for Photovoltaic Engineering
Staff Contact: School Office
UOC6 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
Staff Contact: School Office
UOC6 HPW3.5 TBA

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.

SOLA9010 Wind Energy
Staff Contact: School Office
UOC6 HPW4 TBA

This course will cover the principles of wind energy and wind power, as well as the design and operation of different types of wind energy

converters. It will include machines for water pumping, remote area power supply and grid electricity generation. It will cover issues of site selection, monitoring and analyzing wind data, estimating output from wind generators, integrating wind generators into hybrid power systems or the grid, economics, standards and environmental impacts.

SOLA9011 Biomass Energy Sources
Staff Contact:School Office
UOC6 HPW4 TBA

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
Staff Contact: School Office
UOC6 HPW3.5 TBA

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.

SOLA9018 Special Topic Renewable Energy
Staff Contact: School Office
UOC6 HPW0 TBA

This syllabus changes to allow presentation of a special topic of current interest particularly by visitors with recognised expertise in the topic.

SOLA9020 Semiconductor Laboratory Operation and Development
Centre for Photovoltaic Engineering
Staff Contact: S Wenham
UOC6 HPW6 S2

This course will cover the development, operation and maintenance of a semiconductor processing laboratory. In particular, issues of safety including OH&S, cleanliness and operating procedures will be covered. Major emphasis is placed on providing students with practical experience of laboratory operation through direct involvement with state of the art equipment in one of the world's leading photovoltaic research laboratories.

SOLA9021 Advanced Semiconductor Lab Design and Operation
Staff Contact: School Office
UOC6 HPW6 TBA

This course will build on the material from SOLA9020 with emphasis on the factors that contribute to successful laboratory design and operation. Students will learn how to operate and maintain key equipment and will learn processing skills relevant to the fabrication of the world's most efficient silicon photovoltaic devices. Major emphasis is placed on providing students with hands-on experience with students given the opportunity to take responsibility for the operation of sections of the laboratory (under the guidance of a supervisor).

SOLA9022 Solar Cell Design, Fabrication & Characterisation
Staff Contact: School Office
UOC6 HPW1.5 TBA

This course provides a strong practical component to students interested in photovoltaic devices. Students will design and fabricate buried contact silicon solar cells using the laboratory facilities of the Centre for Photovoltaic Engineering. Thus, training in semiconductor device fabrication will be a significant component of this course. Another significant component of the course will be device electrical and optical characterisation, including the major solar cell measurement and analysis techniques. Students will also simulate their working solar cells on PC-1D in order to extract key device parameters, and use their model to optimise solar cell efficiency.

SOLA9028 Special Topic in PV Systemsand Applications
Centre for Photovoltaic Engineering
Staff Contact: School Office
UOC6 TBA

This syllabus changes to allow presentation of a special topic of current interest particularly by visitors with recognised expertise in the topic.

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: W Lawson
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: D Prasad
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

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.

Assumed knowledge: MARK5900

TAHM5002 Strategic Tourism and Hospitality Management
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S1

This is a 'micro' tourism course that examines tourism marketing channels as commercial linkages between demand and supply forces, with an emphasis 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.

Assumed knowledge: Mark5900 and HOSP5901

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.

Assumed knowledge: MARK5900 and HOSP5901

TAHM5004 Hospitality Strategy and Asset Management
School of Marketing
Staff Contact: School Office
UOC6 HPW3 S2

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.

Assumed knowledge: MARK5900 and HOSP5901

TELE9301 Switching System Design
School of Electrical Engineering and Telecommunications
Staff Contact: A Seneviratne
UOC6 HPW3 S1

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 Engineering and Telecommunications
Staff Contact: A Seneviratne
UOC6 HPW3 S1

This course provides an introduction to fundamental concepts in the design and implementation of computer communication networks, their protocols, and applications. Examples will be drawn primarily from the Internet (e.g., TCP, UDP, and IP) protocol suite. A student who successfully completes this course will be able to demonstrate an understanding of the types of local area networks, and their performance characteristics, develop an understanding of issues associated with network layer addressing, and concepts such as subnetting and masquerading, appreciate the differences and limitations of different routing algorithms, understand the issues of end-to-end delivery of data and presentation of data and setup and configure Internets and Intranets. Topics include: Introduction of Computer Networking; Network Applications; Data Link Controls & LANs; Network Layer Service Models - Internetworking with IP; Internet Routing; Transport Layer Design Issues; Case Studies: WWW.

TELE9303 Network Management
School of Electrical Engineering and Telecommunications
Staff Contact: A Seneviratne
UOC6 HPW3 S2

This subject 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 Engineering and Telecommunications
Staff Contact: H Mehrpour
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), Wanclength Division Multipleting (WDM) and Multimedia Communications.

TELE9343 Principles of Digital Communication
School of Electrical Engineering and Telecommunications
Staff Contact: P Rapajic
UOC6 HPW3 S1

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 Engineering and Telecommunications
Staff Contact: P Rapajic
UOC6 HPW3 S1

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 Limitted Capacity of a Single Cell CDMA Sytem; Adaptive Mutiuser Detection on Multipath Fading Channel; Diversity and Smart Antennas ;Antenna Beam-Forming, and Space Division Multiple Acces ; 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 Engineering and Telecommunications
Staff Contact: V Solo
UOC6 HPW3 TBA

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
School of Electrical Engineering and Telecommunications
Staff Contact: School Office
Enrolment requires school approval
UOC12 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. At the end of the work a comprehensive project report giving an account of the student's own research must be submitted. Information on the preparation of project reports is contained in the University Calendar.

THST5103 Performance Arts in Australia Since 1950
School of Theatre, Film and Dance
Staff Contact: J McCallum
UOC8 HPW2 S2

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 Davis
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 Co-ordinator 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: School Office
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.

THST5113 Period Theatre Styles
School of Theatre, Film and Dance
Staff Contact: J Golder
UOC8 HPW2 S2

Studies selected periods of Western theatre history, in which attention is paid to both specific matters, such as theatre architecture, performance conditions, acting style etc., and also to broader contextual issues, such as the social, political and artistic developments of the period. The historical period/s examined in this course will vary from year to year.

THST5122 Research Project
School of Theatre, Film and Dance
Staff Contact: J Davis
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.

THST5125 Theatre Historiography: Analysing and Interpreting the Theatrical
School of Theatre, Film and Dance
Staff Contact: J Davis
UOC8 HPW2 S1

Encourages students to engage with innovatory approaches to the study and interpretation of the theatrical past through a series of case studies drawn from classical and popular forms of theatre. Explores current issues in theatre historiography in relation to acting, audiences, theatrical space and dramatic literature.

THST5126 Performance Theory and Cultural Studies
School of Theatre, Film and Dance
Staff Contact: D 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
UOC12 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: A Cuthbert
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: A Cuthbert
UOC18 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: A Cuthbert
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.

UDES0006Case Studies in Urban Development and Design
Faculty of the Built Environment
Staff Contact: School Office
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.

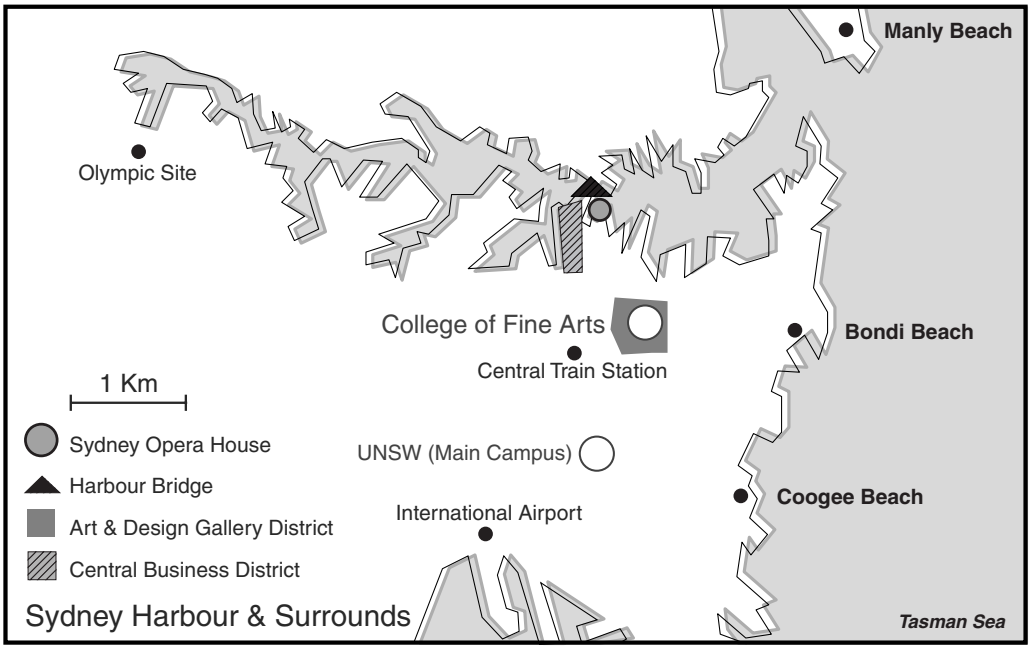
UDES0008 Real Estate Development
Faculty of the Built Environment
Staff Contact: R Cardew
UOC3 HPW2 S1
Excluded: REST0006

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.

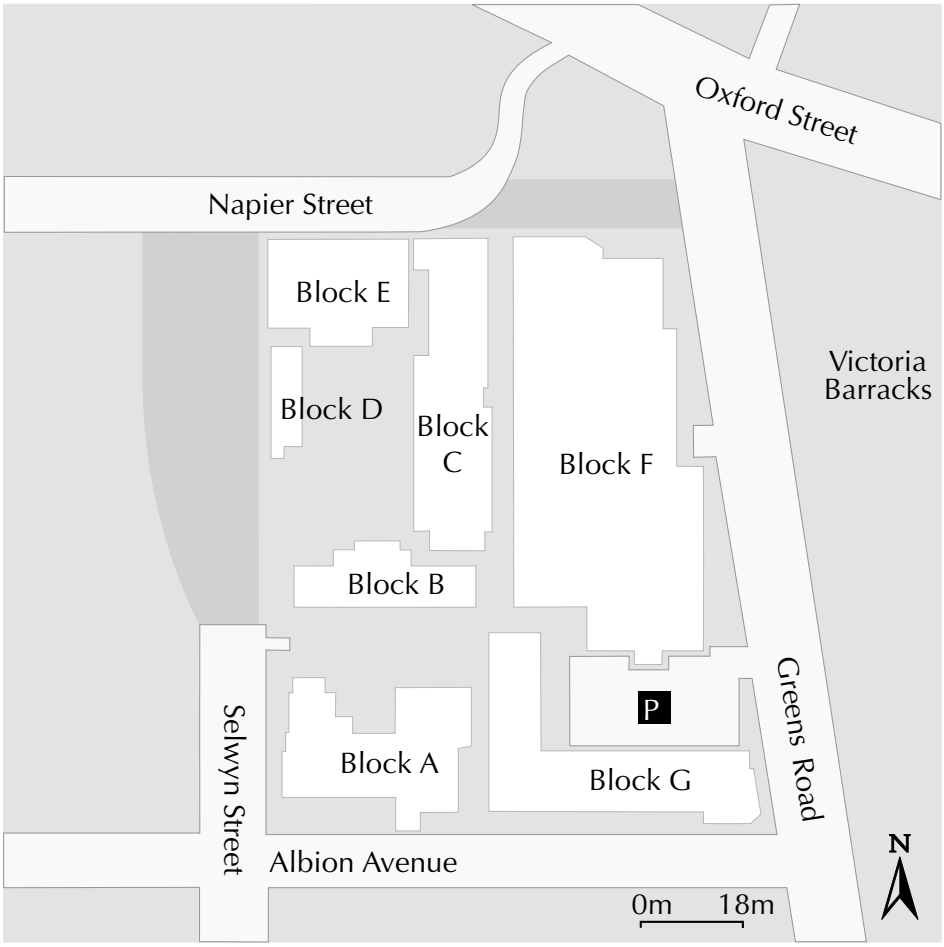
UDES0009 Urban Landscape
Faculty of the Built Environment
Staff Contact: J Weirick
UOC3 HPW2 S2

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.

COFA Campus Location



Paddington



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**
lo 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**