

Postgraduate Calendar



POSTGRADUATE

CALENDAR

1996

Calendar of Dates

Session Dates

Summer Session

4 December 1995 - 11 February 1996

Lectures Commence	4 December
Christmas Recess	18 December - 30 December
Lectures Re-commence	2 January
Examinations	3-10 February

Autumn Session

26 February - 30 June

Orientation Week	19 - 25 February
Lectures Commence	26 February
Easter Recess	8 - 14 April
Lectures Re-commence	15 April
Study Recess	10 June - 14 June
Examinations	15 - 30 June
Mid Year Recess	1 - 14 July

Spring Session

July 15 - 1 December

Lectures Commence	15 July
Recess	23 September - 6 October
Lectures Re-commence	7 October
Study Recess	4 - 8 November
Examinations	9 - 1 December

Important Dates

HECS Census Dates and Internationals Student Audit Dates	18 December 1995 31 March 31 August
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Enrolment

Last day for Re-enrolments (postal)	5 January
Enrolment of New Undergraduates	30 January - 5 February
Last day for late Re-enrolments	16 February
Last day for Payment of Compulsory Charges of Re-enrolling Students	23 February

Subject Withdrawal

Last Day to Withdraw from

Summer Session Subjects	5 January
Autumn Session Subjects	26 April
Double Session (Code A) Subjects	26 July
Spring Session Subjects	6 September
Double Session (Code B) Subjects	13 September

University of Wollongong



ARMS OF THE UNIVERSITY

The principal elements incorporated in the arms of the University are the blue of the sea, the gold of the sand and the red of the Illawarra flame tree. The open book often used for educational institutions has also been included.

The blazon is "Azure a book expanded Argent bound and clasped Or on a Chief of the last three Cinquefoils pierced Gules".

The University of Wollongong occupies a large site at the foot of Mt Keira. It is about three kilometres from the centre of Wollongong and 80 kilometres south of Sydney.

The University had its foundation in 1951 when the New South Wales University of Technology established a division at Wollongong. In 1961 the division became a College of the University of New South Wales. In 1975, by Act of New South Wales Parliament, the University became an autonomous institution. In 1982 it was amalgamated, again by Act of New South Wales Parliament, with the adjoining Wollongong Institute of Education. This latter institution had its origin as the Wollongong Teachers' College which was founded in 1962.

The University provides courses and undertakes research and other activities of accepted university standard.

The total student enrolment now exceeds 11,000. The student body is diverse and stimulating, yet small enough to retain a friendly and relaxed atmosphere.

Students and intending students are advised to contact the Student Enquiries Office at the University for any further information they may require.

Postgraduate Calendar 1996

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University of Wollongong Calendar

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General Information Calendar

University of Wollongong Undergraduate Calendar 1996

University of Wollongong Postgraduate Calendar 1996

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Cashier: Monday to Friday 9.30 am - 4.30 pm

The University attempts to ensure that the information contained in this publication is up to date at the time of printing but sections may be amended without notice by the University in response to changing circumstances or for any other reasons. Classes in any subject may be cancelled if enrolments do not reach the levels approved for the effective presentation of the topic area. Students should check with the University at the time of application/enrolment whether any later information is available in respect of any material contained in this Calendar.

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FACULTY OF
ARTS

FACULTY OF ARTS

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MEMBER UNITS

The Faculty of Arts is made up of the following Units

English

History and Politics

Modern Languages

Multicultural Studies

Philosophy

Science and Technology Studies

Sociology

RESEARCH COURSES AVAILABLE

The Faculty offers Honours Master of Arts and Doctor of Philosophy degrees by research.

POSTGRADUATE PROGRAMS

Postgraduate programs are available in the Faculty in the following areas:

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4 Faculty of Arts

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CULTURAL STUDIES

COURSES OFFERED

The following postgraduate courses are available:

1. Honours Master of Arts
2. Master of Arts

POSTGRADUATE PROGRAM

Cultural Studies

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN CULTURAL STUDIES

leading to the Master of Arts or Honours Master of Arts

Number	Subject	Credit Points
(i) Master of Arts		
<i>Core:</i>		
ENGL920	Theories of Text, Discourse, Subjectivity and Culture	8
ENGL925	Writing the Gendered Body	8
SOC946	Practical Communication and Communications Theory	8
SOC947	Cultural Theory	8
<i>Electives:</i>		
ENGL912	Cross-cultural Perspectives. Experiences of Asia	8
ENGL918	Directed Study either Session 1 or 2	8
ENGL936	Sexuality and Representation	8
ENGL938	Australian Screen	8
SOC918	Advanced Sociology of Development	8
SOC921	Special Topic in Sociological Studies	8
SOC942	Advanced Race & Ethnic Studies	8
SOC950	Advanced Studies of the Individual in Society	8
SOC959	Advanced Studies in Gender & Society	8
STS915	Master Narratives, Myth & Symbolic Politics in Science	8
(ii) Honours Master of Arts		
<i>Core:</i>		
ENGL920	Theories of Text, Discourse, Subjectivity and Culture	8
SOC947	Cultural Theory	8
SOC990/ ENGL902	Minor Thesis	24
<i>and either:</i> SOC946	Practical Communication and Communications Theory	8
<i>or:</i> ENGL925	Writing the Gendered Body	8
<i>Electives:</i>		
ENGL912	Cross-Cultural Perspectives. Experiences of Asia	8
ENGL918	Directed Study either Session 1 or 2	8
ENGL925	Writing the Gendered Body	8
ENGL936	Sexuality and Representation	8
ENGL938	Australian Screen	8
SOC921	Special Topic in Sociological Studies	8
SOC942	Advanced Race & Ethnic Studies	8
SOC946	Practical Communication and Communications Theory	8
SOC950	Advanced Studies of the Individual in Society	8
SOC959	Advanced Studies in Gender & Society	8
STS915	Master Narratives, Myth & Symbolic Politics in Science	8

For further details, see *Course Requirements* below.

* Not on offer in 1996.

COURSE REQUIREMENTS

1. HONOURS MASTER OF ARTS
2. MASTER OF ARTS

(Administered jointly by the Departments of English, Sociology and Science and Technology Studies.)

The objectives of this program are to provide students with the ability to analyse and decode cultural phenomena and to examine communication practices within contemporary society. The Masters program is an interdisciplinary course – taught mainly by English and Sociology staff and supported by other Departments within the Faculty of Arts. The course prepares

graduates to enter business, government, academic and media fields, and related professions.

Pass degree entry

Pass graduates or equivalent may undertake a 48 credit point Master of Arts course, choosing 6 subjects (which in normal circumstances will include the four

prescribed subjects) from the Schedule, excluding the minor thesis. The degree will run over one year full-time or two years for part-time students.

Honours degree entry

- (i) Honours graduates with a grade of at least Class II, Division 2 or its equivalent in an appropriate area (as assessed by a course panel) may enter this coursework MA with a notional accreditation of 48 credit points. Candidates will undertake each of the prescribed topics and choose two of the Optional Topics from the schedule above. (One year full-time, two years part-time.)
- (ii) Pass graduates or equivalent with a credit average or better may undertake a 96 credit point Honours MA coursework program. The initial 48 credit point part of the program will be considered a qualifying course, with subjects at the appropriate level being chosen from offerings in the English and Sociology schedules in consultation with the course co-ordinator. The subsequent 48 credit points will be undertaken according to the rubric applying to the MA Honours course. See (ii) below. (Two years full-time, three years part-time.)

Description

This program brings together teaching and research from the Departments of English, Sociology and Science and Technology Studies, and the Centre for Multicultural Studies.

The program aims to:

- (i) introduce students to the central theoretical and critical issues (both historical and contemporary) in Cultural Studies;
- (ii) develop in students the ability to analyse cultural context and communicate accurately within it, and to lead students to consider historical changes (and to develop innovative approaches) to communication practices. The development of new kinds of communication practices has become crucial for organisation and productivity in both government and commerce;
- (iii) provide students with conditions in which they can employ practical analyses of cultural conditions;
- (iv) develop a critical awareness of analytic skills and the underlying cultural dimensions which make communication effective.

SUBJECT DESCRIPTIONS

ENGL912 Cross-cultural Perspectives: Experiences of Asia
Spring session; 8 credit points (3 hr seminar per wk).

Assessment: 3 essays 33.3% each.

A survey of the various kinds of texts concerned with representing other cultures (travel writing, ethnography, colonial fiction, etc); analysis of the interaction of language and culture, literary conventions, modes of textual production, socio-cultural perceptions and critical reactions; theorising on constructions of culture as essence and interchange.

Textbooks:

- Anand, M R, *Untouchable*, Penguin.
 Desai, A, *Bye Bye Blackbird*, Orient.
 Ezekiel, N, *Selected Poems*, OUP.
 Forster, E M, *A Passage to India*, Penguin.
 Harrex, S (ed), *Kamala Das*, CRNLE.
 Jhabvala, R P, *A Backward Place*, Penguin.
 Kipling, R, *Kim*, Oxford.
 Koch, C J, *Across the Sea Wall*, Angus & Robertson.
 Naipaul, V S, *An Area of Darkness*, Penguin.
 Narayan, R K, *The Vendor of Sweets*, Penguin.
 Newbey, E, *A Short Walk in the Hindu Kush*, Picador.
 Rao, R, *The Serpent and the Rope*, Orient/VIKAS.
 Rushdie, S, *Shame*, Picador.
 Said, E, *Orientalism*.
 Assorted critical readings will be available in class.
 Co-ordinator: Dr P Sharrad.

ENGL918 Directed Study

Autumn or Spring session; 8 credit points (3 hr seminar).

Assessment: 4 written assignments 25% each.

Directed reading, research and other investigative activities leading to the production of a major essay/report in the field of study selected by the student in consultation with the Co-ordinator of Postgraduate Studies in English and the Head of Department.

Textbooks: to be advised.

Co-ordinator: Dr P Sharrad.

ENGL920 Theories of Text, Discourse, Subjectivity and Culture

Autumn session; (3 hrs seminar per wk).

Assessment: 1 major essay 50%; 1 seminar paper 25%; 1 textual analysis exercise 25%.

This subject aims to provide an introduction to contemporary critical theories of text, discourse, subjectivity and culture. Students will be introduced to a range theoretical approaches and methodologies which question fundamental assumptions about culture, knowledge and relations of power. The assessment work is designed to establish connections between the theoretical methodologies and the student's own research interests.

Textbook:

Reader available from the English Department office.

Co-ordinator: Dr J Pugliese.

ENGL925 Writing the Gendered Body

Spring session; (2 hr seminar per wk).

Assessment: 2 essays 33.3% each, and 1 seminar project 33.3%.

A study of a series of texts with special reference to their representation of the human body as socially and culturally constructed through race, social class and gender, with particular emphasis on the latter. At the same time the subject will examine the part literary texts themselves play in bodily construction.

Textbooks:

- Atwood, M, *Bodily Harm*, Virago, 1983.
 Carter, A, *The Passion of New Eve*, Virago, 1982.
 Jolly, E, *The Sugar Mother*, Penguin.
 Jonson, B, *Epicoene or The Silent Woman*, Holdsworth R V (ed), Ernest Benn, 1979.

Kafka, F, *Metamorphosis and other Stories*.

Shakespeare, W, *Twelfth Night*, Penguin.

Winterson, J, *Written on the Body*.

Woolf, V, *Orlando*.

Woolf, V, *A Room of One's Own*.

Note: The program for the subject will specify further "readings" for each week:

- (i) primary material poems, short fiction;
- (ii) critical/theoretical articles and chapters.

Co-ordinator: Associate Professor D Jones.

ENGL936 Sexuality and Representation

Autumn session; (2 hr seminar per wk).

Assessment: two essays 50% each.

This subject will introduce students to the analysis of cultural production through theories of gender and sexuality. It is divided into three sections. The first will introduce students to current models of sexuality and the relationship between sexuality and representation. It will investigate the relationship between theories of sexuality, culture and history. The second section will analyse three contemporaneous texts which explicitly problematise the relationship between culture, representation, sexuality and sexual difference. The third section will examine the discourse of "camp" as an exemplary instance of the complex relationship-cultural, historical, theoretical-between sexuality and textual production.

Textbooks:

Lawrence, D, H, *Lady Chatterley's Lover*, Penguin.

Forster, E M, *Maurice*, Edward Arnold.

Radclyffe Hall, *The Well of Loneliness*, Virago.

Jacqueline Susann, *Valley of the Dolls*.

Other materials will be supplied.

Co-ordinator: Dr M Hardie.

ENGL938 Australian Screen

Spring session; 6 credit points (3 hr lecture/screening; 1hr seminar per week).

Assessment: 1 major essay/video project 40%, 2 minor essays 30% each.

This subject covers the history of the Australian film industry, from the silent period, through the decline of the 1950s and 1960s and the government-assisted revival in the 1970s, to the present day. Arguments for and against a national cinema are considered, and the cooperation between Australian television and cinema in the production of a national image is explored. In addition, we will look at the critical role played by non-mainstream and avant-garde filmmakers in challenging the dominant myths of the Australian screen. Students who successfully complete this subject will be conversant with the industrial and social history of Australian cinema, and will be able to position this history within a discussion of the development of world cinema. They will be able to relate policy initiatives in cultural nationalism to economic and political imperatives, and will have explored the viability of such efforts in the era of global media ownership.

Textbooks:

Moran, A and O'Regan, T (eds), *The Australian Screen*, Penguin, Melbourne, 1989.

Moran, A and O'Regan, T (eds), *An Australian Film Reader*, Currency, Sydney, 1985.

Co-ordinator: Ms K Bowles.

SOC918 Advanced Sociology of Development

Autumn session; 8 credit points (2 hrs seminar).

Assessment: 2 seminar papers, one major essay.
This subject examines the interaction between rich and poor nations, and theoretical explanations for the emergence of international disparities of wealth. In particular it will focus on the Asia-Pacific region, and the role that Australia plays in this part of the world. Development programs conducted by both government and non-government agencies will be studied, with illustrative examples from current development debates.

Co-ordinator: Dr A Cornish.

SOC921 Special Topic in Sociological Studies

Autumn/Spring session; 8 credit points (variable combination of individual supervision and seminars).

Assessment: one essay of approximately 4,000 words plus tutorial assignments.

Topics for this subject may be chosen from any area of Sociology which the Head of the Department considers to be of suitable substance and level to be offered as a SOC 900 subject. This will be a reading course offered under the direct supervision of a member of staff. For details of topics offered, students should consult the Head of the Department.

Co-ordinator: Refer to Head of Department.

SOC942 Advanced Race and Ethnic Studies

Spring session; 8 credit points (3 hrs lecture/seminars).

Assessment: 2 seminars and long essay.

This subject introduces students to theories of ethnicity, 'race' and racism, in relation to other dimensions of social structure, in particular class and gender relations. Within an analysis of the Australian context the significance of culture and ideology is explored. This includes an analysis of the subjective and structural dimensions of racial oppression and liberation movements, as well as an analysis of the broader theoretical and substantive relationship between culture, identity and resistance. These theories and issues will relate to the situation of ethnic minorities in Australia, and international and historical comparisons will be made.

Co-ordinator: Professor S Castles.

SOC946 Practical Communication and Communications Theory

Autumn session; 8 credit points (3 hrs lectures/seminar).

Assessment: major sessional essay, seminar paper and participation.

This subject aims to lift professional communication skills and understanding by relating practical issues to theoretical models, concepts, and ideas. It does this by exploring various debates, and theoretical constructs which help relate individuals to society. Practical work includes: interviewing, participant observation, role-playing, analysing visual and phenomenological material. The theoretical traverse examines various accounts, models and theories of communication and aims to raise students' ability to encode and decode communication issues.

Co-ordinator: Dr T Jagtenberg.

SOC947 Cultural Theory

Spring session; 8 credit points (2 hrs seminar/wk).

Assessment: major essay/research paper, seminar project and participation.

This subject aims to introduce students to the work of leading cultural theorists. A number of perspectives are covered ranging from structuralism, neo-marxism and phenomenology through to feminism and post-modernism. Key concepts to be explored include cultural production, transmission, and reception of cultural forms; hegemony; the notions of "High" and "Popular culture; discourse in cultural contexts; forms and modes of cultural production within the Media; the relationship between 'race'/ethnicity and culture; gendered cultures; the relationship between feminism and culture; the technological mediation of culture; cultural production as social/political intervention, visual culture, culture and the environment, and post-modernism. Students will explore the implications, value and impact of particular cultural theories and will be encouraged to construct their own interventions.

Co-ordinator: Dr T Jagtenberg & Dr E Vasta.

SOC950 Advanced Studies of the Individual in Society

Spring session; 8 credit points (3 hrs lecture/seminar/workshop).

Assessment: major essay, seminar project, and participation.

This subject examines fundamental aspects of human identity and explores the extent to which an individual is 'socially constructed'. The individual is located in the historical, cultural, and institutional context of 'modern'/'post-modern' times through a consideration of contemporary myths, ideologies and practices which provide structure and meaning to daily life (eg. love, gender, truth). The course broadly addresses the question of how personal identity is achieved in the context of change and uncertainty. These issues involve cross-cultural exploration of different models of self, identity and relationship. Students have the opportunity to explore a range of perspectives including interactionist, structuralist, post-structuralist and post-modern approaches to questions of identity. This also involves some consideration of 'non-western' traditions and questions about the ecological status of human identity.

Co-ordinator: Dr T Jagtenberg.

SOC959 Advanced Studies in Gender in Society

Autumn session; 8 credit points (3 hrs lecture/seminar).

Assessment: Participation, seminar papers and long essay: maximum of 7000 words.

This subject takes as its focus current debates about the constitution of humans as gendered subjects. Through the reading of key texts students will explore the debates within contemporary sociological thought on the complex inter-relation of social structures, social institutions and social practices in the constitution of femininity and masculinity. The debates to be addressed include those about the sexual division of labour, the contradictory position of women in relation to the family and the

state, and the nature and role of sexuality in the constitution of femininity and masculinity. Each year the subject concentrates on a particular aspect of gender relations in Australia. The focus will be on the interaction of the state and other social institutions of gender division. Examples will be drawn from current literature.

Please Note: Students with little or no background in the study of gender relations must consult the lecturer for preliminary reading.

Co-ordinator: Ms R Albury.

SOC990/ENGL902 Minor Thesis

24 credit points.

Students will be required to engage in an extensive program of study - reading, research and fieldwork that will explore in depth and detail one issue (or a set of issues) that arises from or is related to the concepts and material dealt with in coursework subjects. This program will result in the submission of an essay of 15,000 words, OR a fieldwork report of 15,000 words (or equivalent taking into account diagrams, tables and other graphics) OR some other equivalent body of work, as arranged with the course administrative panel. Whilst the dissertation can be nominated by the student, they will require the approval of the Management Committee six weeks into the course and this has to be validated by the ninth week; when a formal supervisor will be allocated. The dissertation will be examined by one internal and one external examiner.

Co-ordinator: Refer to Head of Department.

STS915 Master Narratives, Myth and Symbolic Politics in Science

Spring session; 8 credit points (3 hrs per wk).

Assessment: 1 essay 4,000 words; 1 seminar 1,500 words, 2 oral seminar commentaries.

The past generation has witnessed the demise, in some quarters, of virtually the entire corpus of traditional frameworks of cultural meaning about the history and nature of science, elaborated over the past 350 years. What previously counted as master narratives of, and signposts to, the essence of scientific progress and rationality have come to be seen as problematic, historically contingent discursive weapons and strategies for the defense (or sectional co-optation) of the institution of science, by practitioners and their cultural allies. Accordingly, the previously received cultural meanings of science have become objects of study in the newer critical history and sociology of science. This subject surveys the previously received wisdom - including some of its internal conflicts - and examines the grounds of its deconstruction and collapse, as seen from within recent critical theoretical developments in the history, philosophy and sociology of science.

Topics will include:

- (1) Traditional master narratives of the history of science - idealist/Marxist/functionalist - and their deconstruction from Bachelard, through Kuhn to post-Kuhnian history and sociology of science; the common 'whiggish' discursive 'deep structure' of formally opposed 'internalist' and 'externalist' narratives of science.
- (2) The lingering cult and symbolism of method: the discursive dynamics and rhetorical functions of method

8 Faculty of Arts

discourse (Feyerabend/Schuster); the abortive careers of 'born-again' method narratives from Popper to Lakatos and Laudan.

- (3) Science as inscription: scientific discoveries, facts and tests as textual and rhetorical accomplishments; the textuality and historicity of scientific hardware.
- (4) The possibility and desirability of new master narratives for old in the 17th century rise of modern science and the 18th century emergence of experimental fields.
- (5) Myth, symbol and master narrative in current science policy discourse and the wider public politics of science.

Textbooks:

Various books and articles will be used.

Co-ordinator: Associate Professor J Schuster.

ENGLISH

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Arts by Research
3. Honours Master of Arts (Cultural Studies)
4. Master of Arts (Cultural Studies)
5. Honours Master of Arts by Research (Post-Colonial Literatures)
6. Honours Master of Arts by Coursework (Post-Colonial Literatures)
7. Master of Arts (Post-Colonial Literatures)
8. Master of Arts (English Studies)
9. Graduate Certificate in Textual Studies, Media and Linguistics
10. Master of Arts (Women's Studies)

POSTGRADUATE PROGRAMS

Post-Colonial Literatures

English Studies

Textual Studies, Media and Linguistics

Cultural Studies (See Cultural Studies section of this Calendar)

Women's Studies (See Women's Studies section of this Calendar)

CURRENT RESEARCH AREAS

The following areas of research are available to candidates for the degrees of Honours Master of Arts and Doctor of Philosophy. Areas currently available to candidates for the MA in Post-Colonial Literatures are *italicised*.

Alternative and community theatre/drama

Aboriginal writing

Australian literature

Australian screen studies

Australasian theatre

Canadian literature

Canon formation and literary history

Caribbean literature

Cinema studies

Communication studies

Contemporary screen theory

Cross cultural literature

Cultural theory and literature

Dramaturgy

Early seventeenth-century literature and culture

Early women writers

Eighteenth-century literature

Elizabethan literature

Fantasy and utopian writing

Gender and genre

The Gothic

Hypertexts and computer-produced multimedia

Indian writing in English

Middle English language and literature

Modern European theatre

Modern poetry and fiction

New literatures in English (Commonwealth/Post-Colonial literatures)

New Zealand literature

Nineteenth-century literature

Nineteenth and twentieth century popular theatre

Old English language and literature

Old Icelandic language and literature

Pacific literature

Popular media and popular culture

Popular literature

Post-colonial theory

Post-colonial Women's Writing

Radical, alternative and independent cinema

Screen theory, practice and criticism

Sexuality and representation

Shakespeare

Systemic functional linguistics

Text-to-performance studies in theatre

Textual criticism and computer-generated editions

Theories of the modern stage

Victorian cultural studies

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAMS IN POST-COLONIAL LITERATURES

leading to the Master of Arts or Honours Master of Arts.

Number	Subject	Credit Points
(i) Master of Arts by Coursework		
<i>Prescribed subject:</i>		
ENGL903	Post-Colonial Literary issues	8
<i>Optional subjects:</i> Students must choose 5 subjects from the list of Optional Subjects below.		40
(ii) Honours Master of Arts by Coursework		
<i>Minor Thesis</i>		
ENGL902	Dissertation (20,000 words)	24
<i>Prescribed subjects:</i>		
ENGL903	Post-Colonial Literary issues	8
<i>Optional subjects:</i> Students must choose 2 subjects from the list of Optional Subjects below.		16
(iii) Honours Master of Arts by Research		
<i>Prescribed subject:</i>		
ENGL903	Post-Colonial Literary issues	8
<i>Minor Thesis</i>		
ENGL902	Dissertation (30,000 words)	32
<i>Optional subject:</i> Students must choose 1 subject from the list of Optional Subjects below.		8
<i>Optional subjects:</i>		
ENGL906	Twentieth Century Post-Colonial Writers*	8
ENGL908	Literature from Colonised Societies*	8
ENGL909	Deconstructing Australia	8
ENGL910	Twentieth Century Women Writers	8
ENGL912	Cross-Cultural Perspectives: Experiences of Asia	8
ENGL915	Drama and Theatre in other Cultures*	8
ENGL916	United States Literature of the Nineteenth and Early Twentieth Centuries*	8
ENGL918	Directed Study	8
ENGL921	Turning Points: Selected Post-Colonial Fiction	8
ENGL922	Research Methods	8
ENGL923	Indigenous Literature in Canada, Australia and New Zealand	8
ENGL931	Contemporary Australian Drama	8
ENGL934	Africa and the New World*	8
ENGL935	Pacific Literature	8
ENGL937	New Zealand Literature*	8
ENGL938	Australian Screen	8
HIST933	Culture and Politics in Indonesia, 1865-1988	12

For further details, see *Course Requirements* below.

POSTGRADUATE PROGRAM IN ENGLISH STUDIES

leading to the degree of Master of Arts or the Graduate Certificate in Textual Studies, Media and Linguistics.

Number	Subject	Credit Points
(i) Master of Arts		
<i>Core subjects:</i> Students must take all three core subjects		
ENGL920	Theories of Text, Discourse, Subjectivity and Culture	8
ENGL927	Media Studies: Analysing Mass Media	8
ENGL928	Introduction to Language in a Social Context	8
<i>Optional subjects:</i> Students must select three subjects from this category.		
ENGL910	Twentieth Century Women Writers	8
ENGL912	Cross-Cultural Perspectives	8
ENGL915	Drama and Theatre in other Cultures*	8
ENGL916	United States Literature of the Nineteenth and Early Twentieth Centuries*	8
ENGL918	Directed Study	8
ENGL921	Turning Points: An Introduction to Post-Colonial Fiction	8
ENGL922	Research Methods	8
ENGL923	Indigenous Literatures in Canada, New Zealand and Australia	8
ENGL925	Writing the Gendered Body	8
ENGL926	Technologies of the Alien	8
ENGL929	Reason, Revolution and Reform: Themes in Eighteenth and Nineteenth Century Writing*	8
ENGL930	History and Romance in Early Modern Britain	8
ENGL931	Contemporary Australian Drama	8
ENGL932	Introduction to Publishing Studies*	8
ENGL933	Early Women Writers	8

*Not on offer in 1996.

POSTGRADUATE PROGRAM IN ENGLISH STUDIES (cont'd).

leading to the degree of Master of Arts or the Graduate Certificate in Textual Studies, Media and Linguistics.

Number	Subject	Credit Points
ENGL936	Sexuality and Representation	8
ENGL938	Australian Screen	8
EDGA973	Language, Ideology and Culture	8
EDGA975	Educational Linguistics	8

(ii) Graduate Certificate in Textual Studies, Media and Linguistics*Core subjects:* Students must take all three core subjects

ENGL920	Theories of Text, Discourse, Subjectivity and Culture	8
ENGL927	Media Studies: analysing Mass Media	8
ENGL928	Introduction to Language in a Social Context	8

For further details see Course Description below.

(Optional subjects are offered subject to the availability of staff.)

*Not on offer in 1996.

OTHER POSTGRADUATE SUBJECT

Number	Subject	Credit Points
ENGL999	Major thesis	48

COURSE REQUIREMENTS**1. DOCTOR OF PHILOSOPHY***Time Limits*

A full-time candidate shall complete the Doctoral Dissertation in not less than four (4) consecutive sessions, not including Summer sessions and not more than eight (8) consecutive sessions, not including Summer sessions, from the date of registration.

A part-time candidate shall complete the Doctoral Dissertation in not less than six (6) consecutive sessions, not including Summer sessions and not more than twelve (12) consecutive sessions, not including Summer sessions, from the date of registration.

Length of Dissertation

The Doctoral Dissertation shall be a minimum of 80,000 words in length.

Candidates for the PhD degree enrol in ENGL999.

2. HONOURS MASTER OF ARTS BY RESEARCH*Entry to the Degree*

Entry to the degree is normally from the BA Honours. Students having a degree with Class II division ii or higher will normally be accepted into the Masters Honours programme.

Qualification Requirements

Students who do not have an Honours degree in an appropriate area may be admitted to the Masters Honours program by completing a "Master of Arts (Preliminary)".

Master of Arts Preliminary

Students enrolling in the Master of Arts (Preliminary) will normally be required to take six (6) subjects chosen from the subjects on offer in ENGL400 (English Honours) and Postgraduate coursework subjects. Students who do not have a background in literary theory should include ENGL920 Theories of

Text, Discourse, Subjectivity and Culture, in their programs.

Time Limits

A full-time candidate shall complete the Honours Masters Dissertation in not less than two (2) consecutive sessions, not including Summer sessions, from the date of registration.

A part-time candidate shall complete the Honours Masters Dissertation in not less than three (3) consecutive sessions, not including Summer sessions and not more than eight (8) consecutive sessions, not including Summer sessions, from the date of registration.

Length of Dissertation

The Honours Masters Dissertation shall be approximately 50,000 words in length.

Candidates for the Master of Arts (Honours) degree enrol in ENGL999.

3. HONOURS MASTER OF ARTS (CULTURAL STUDIES)**4. MASTER OF ARTS (CULTURAL STUDIES)**

For details of these courses, please refer to the "CULTURAL STUDIES" entry in the Faculty of Arts section.

5. HONOURS MASTER OF ARTS BY RESEARCH (POST COLONIAL LITERATURES)**6. HONOURS MASTER OF ARTS BY COURSEWORK (POST-COLONIAL LITERATURES)****7. MASTER OF ARTS BY COURSEWORK (POST COLONIAL LITERATURES)***Pass degree entry*

Entry will normally be from the BA, or equivalent qualification. Students will undertake a 48 credit point Master of Arts course. Students will take ENGL903, Post-

colonial Literary Issues (8cp), and five optional subjects from the Schedule (40 cp), excluding the minor thesis. The degree will run over two sessions (excluding Summer Session) full-time or four sessions for part-time students.

*Honours (Coursework and Research) degree entry**Coursework degree:*

BA (or equivalent) Honours graduates with a grade of at least Class II, Division ii in an appropriate area may undertake a 48 credit point course. They will take one prescribed subject ENGL903, Post-colonial Literary Issues (8cp), and two optional subjects from the Schedule (16 cp), and will complete a 20,000-word dissertation on a topic agreed on with a supervisor (24 cp). The duration of the course will be two sessions (full-time) not including Summer Session, or four sessions for part-time students.

Research degree:

BA (or equivalent) Honours graduates with a grade of at least Class II, Division ii in an appropriate area may undertake a 48 credit point course made up of the prescribed subject ENGL903, Post-colonial Literary Issues (8cp), one optional subject from the Schedule (8cp) and a 30,000-word dissertation (32cp). The duration of the course will be two sessions (full-time) not including Summer Session, or four sessions for part-time students.

Description

The area of focus for studies will be critical approaches to the literature in English appearing from a history of colonial presence in various nations, mostly (but not entirely) belonging to the British Commonwealth.

Once regarded as peripheral and culturally derivative, this writing has produced some of the modern greats of 'English' literature - VS. Naipaul, Margaret Atwood, Patrick White, Salman Rushdie, Nadine Gordimer, Derek Walcott and, of course, writers from that other former colony, the United States. The course will consider those complex interactions of culture, politics and

aesthetics common to the whole field and particular to each of its regions.

8. MASTER OF ARTS (ENGLISH STUDIES)

The discipline of English has undergone considerable change over the last fifteen years. The traditional 'canon' of predominantly English/British literature is being questioned, new readings are being produced, and Universities are admitting an ever wider range of texts to the 'English' curriculum. Australian Literature and Postcolonial studies are now major fields of study. Films and television programs are now recognized texts for study. At the same time, theoretical studies in textual analysis and linguistics have developed rapidly, to the point that it is crucial to have an academic training in English which includes theoretical studies.

Entry to the degree:

Students possessing a BA or equivalent qualification will take a total of 48 credit points in course work subjects: 24 of these will be from three 'core' subjects:

- ENGL920 Theories of Text, Discourse, Subjectivity and Culture
 ENGL927 Media Studies: analysing Mass Media
 ENGL928 Introduction to Language in a Social Context.

The remaining 24 credit points will be made up of 3 subjects chosen from the options section of the schedule.

Description

The aims of this course are:

1. to satisfy the need in a student group for an upgrading in their level of knowledge about the discipline of English Studies;
2. by structuring the core to include subjects dealing with textual theory, language theory and media, the aim of the degree is to offer students a systematic training in new developments;
3. by providing options outside the core, the course aims to allow students to develop areas of their own interest, applying the theoretical concepts encountered in the core of the course.

9. GRADUATE CERTIFICATE IN TEXTUAL STUDIES, MEDIA AND LINGUISTICS

Theoretical studies in textual analysis, media and linguistics have developed rapidly in the discipline of English, to the point where it is crucial for English graduates to have an academic training which includes theoretical studies. The Graduate Certificate represents a response to a demand for a systematic training in recent developments in the discipline of English studies: in textual studies, media and linguistics. It provides an opportunity for graduates to upgrade their skills and to increase their present level of knowledge in the areas.

Candidates for the Certificate will be required to take a total of 24 credit points in

the following three subjects:

- ENGL920 Theories of Text, Discourse, Subjectivity and Culture
 ENGL927 Media Studies: analysing Mass Media
 ENGL928 Introduction to Language in a Social Context.

The course will run over one year full-time, or two years for part-time students.

10. MASTER OF ARTS (WOMEN'S STUDIES)

For full details of this course, please refer to the "WOMEN'S STUDIES" entry in the Faculty of Arts section.

SUBJECT DESCRIPTIONS

ENGL902 Dissertation

Double session; 24 credit points (coursework degree); 32 credit points (Research Degree).
 Assessment: students undertaking the degree must submit a dissertation of 20,000 words (coursework degree) or 30,000 words (research degree) on a research topic to be determined in consultation with the supervisor.

ENGL903 Post-Colonial Literary Issues

Autumn session; 8 credit points (3 hrs per wk seminar).

Assessment: 3 written assignments 33.3% each.
 A survey of relationships between culture, politics and literary constructions; the connection between British and other literatures in English; the question of 'universal' standards; nationalism and aesthetics; the formation of a field of study. Discussion will be based on selected fiction and critical readings.

Textbooks:

- Ashcroft, Griffith and Tiffin (eds), *The Empire Writes Back*, Methuen.
 Buchan, J, *Prester John*, Penguin.
 Gilbert, K, (ed), *Inside Black Australia*, Penguin.
 Harris, W, *The Palace of the Peacock*, Faber.
 Williams, P, and Chrisman, L (eds), *Colonial Discourse and Postcolonial Theory*, Harvester Wheatsheaf.

Co-ordinator: Dr P Sharrad.

ENGL906 Twentieth Century Post-Colonial Writers*

8 credit points (3 hrs per wk seminar).
 Assessment: 4 written assignments 25% each.
 A Study of the poetry of a group of modern writers.

Textbooks:

- Atwood, M, *Selected Poems (The Journals of Susanna Moodie)*.
 Ezekiel, N, *Selected Poems*, OUP.
 Hope, A D, *Collected Poems 1942-1970*, Angus & Robertson, 1975.
 Okigbo, C, *Collected Poems*, Heinemann Educational Books.
 Curnow, A, *Collected Poems*, OUP/Reed, 1974, or *Selected Poems*, Penguin.
 Walcott, D, *Another Life*, Three Continents Press, 1982.
 Walcott, D, *Selected Poems* (ed) Brown, Heinemann, 1981.
 Wieland, J M, *The Enspiring Mind*, Three Continents Press.

Co-ordinator: Professor J Wieland.

ENGL908 Literature from Colonised Societies*

8 credit points (3 hrs per wk seminar).
 Assessment: 3 written assignments 33.3% each.
 The subject provides a survey of writing emerging from experiences of colonialism and post-colonial modes of colonisation. It aims to promote an understanding of socio-cultural dynamics and their representation in literary themes, forms and styles common to the field. There will also be a discussion of recurrent problems in the criticism of this literature.

Textbooks:

- Ellison, R, *Invisible Man*, Penguin.
 Fuentes, C, *Distant Relations*, Arena.
 Grace, P, *Potiki*, Penguin, NZ.
 Harrex and O'Sullivan, (eds) *Kamala Das*, CRNLE.
 Joaquin, N, *Tropical Gothic*.
 Maniam, KS, *The Return*, Skoob Books.
 Moore & Beier (eds), *Modern Poetry from Africa*, Penguin.
 Ogali, O, *Veronica my Daughter*, Three Continents.
 Rushdie, S, *Shame*, Picador.
 Soyinka, W, *Aké*, Arrow.
 Burnett, P (ed), *The Penguin Book of Caribbean Verse*, Penguin.
 Co-ordinator: Dr P Sharrad.

ENGL909 Deconstructing Australia

Autumn session; (2 hr seminar per wk).
 Assessment: one seminar paper 20%, two essays 40% each.

Drawing upon poststructuralist, feminist and postcolonial theories, this subject will focus upon a range of texts which, in the context of Australian culture, raise questions concerning the construction of nation, the politics of identity, ethnicities, gender, sexualities and history.

Textbooks:

- Fiction/Poetry*
 Bonutto, O, *A Migrant's Story*, UQP.
 Derrida, J, *Positions.*, University of Chicago Press.
 Jolley, E, *The Well*, Penguin, 1987.
 Langley, E, *The Pea-Pickers*, Sirius.
 Tsiolkas, C, *Loaded*, Vintage.
 Narogin, M, *Doin' Wildcat*, Hyland House.
 Stow, R, *Visitants*, Minerva.
 Walwicz, A, *Boat*, UQP.
 White, P, *The Twyborn Affair*, Penguin.
Short Films:
 Moffat, T, *Night Cries*.
 Pavlou, K, *The Killing of Angelo Tsakos*.
 Pellizzari, M, *Rabbit on the Moon*.
 Teck Tan, *Silk Dreams*.
 Thomas, S, *Blackman's Houses*.
 Co-ordinator: Dr J Pugliese.

ENGL910 Twentieth Century Women Writers

Spring session; 8 credit points (3 hrs per wk seminar).

Assessment: 4 written assignments 25% each.
 This subject examines poetry, short stories and novels by a number of twentieth century women writers from a variety of countries: Australia, USA, Southern Africa, New Zealand, Canada, and gives particular emphasis to the theme of the woman as artist.

Textbooks:

- Atwood, M, *The Handmaid's Tale*, London, Virago, 1988.
 Dobson, R, *Collected Poems*, Sydney, A&R, 1991.
 Frame, J, *Living in the Maniototo*, London,

* Not on offer in 1996.

The Women's Press, 1982.
 Grace, P, *Electric City*, Penguin, 1987.
 Jolley, E, *Miss Peabody's Inheritance*, St Lucia, UQP, 1984.
 Laurence, M, *The Diviners*, Toronto, Bantam Books, 1982.
 Lessing, D, *The Golden Notebook*, London, Panther, 1973.
 Masters, O, *The Home Girls*, St Lucia, UQP, 1984.
 Melville, P, *Shape-shifter*, London, Picador, 1991.
 Plath, S, *Ariel*, London, Faber, 1965.
 Extra texts to be advised.
 Co-ordinator: Associate Professor DLM Jones.

ENGL912 Cross-cultural Perspectives: Experiences of Asia

Spring session; 8 credit points (3 hr seminar per wk).

Assessment: 3 essays 33.3% each.
 A survey of the various kinds of texts concerned with representing other cultures (travel writing, ethnography, colonial fiction, etc); analysis of the interaction of language and culture, literary conventions, modes of textual production, socio-cultural perceptions and critical reactions; theorising on constructions of culture as essence and interchange.

Textbooks:
 Anand, M R, *Untouchable*, Penguin.
 Desai, A, *Bye Bye Blackbird*, Orient.
 Ezekiel, N, *Selected Poems*, OUP.
 Forster, E M, *A Passage to India*, Penguin.
 Harrex, S C, *Kamala Das*, CRNLE.
 Jhabvala, R P, *A Backward Place*, Penguin.
 Kipling, R, *Kim*, Oxford.
 Koch, C J, *Across the Sea Wall*, A&R.
 Naipaul, V S, *An Area of Darkness*, Penguin.
 Narayan, R K, *The Vendor of Sweets*, Penguin.
 Newby, E, *A Short Walk in the Hindu Kush*, Picador.
 Rao, Raja, *The Serpent and the Rope*, Orient/Vikas.
 Rushdie, S, *Shame*, Picador.
 Said, E, *Orientalism*, Penguin.
 Assorted critical readings will be available in class.
 Co-ordinator: Dr P Sharrad.

ENGL915 Drama and Theatre in Other Cultures*

8 credit points (3 hr seminar/workshop per wk).
Assessment: 4 written assignments 25% each.
 An examination of examples of drama and theatre from cultural traditions other than the 'western'. The examples used each time the course is presented will be drawn from: Asian Drama (Japanese Noh and Kabuki; Indonesian Wayang and its modern developments); Traditional; forms from tribal cultures (Australian Aboriginal, Melanesian, Oceanic, African, New Zealand); new drama by indigenous peoples in post-colonial cultures (Black Theatre in Australia), plus examples from Africa, the Pacific, the Caribbean, India, Canada.
 (Note: At each presentation of this subject there will be a pre-announced emphasis on specific topics and sub-topics, eg. Aboriginal drama and other examples of Post-Colonial 'indigenous' drama in Commonwealth countries.)

Textbooks:
 Davis, J, *No Sugar*, Currency.
 Davis, J, et al, *Plays from Black Australia*,

Currency.
 Gilbert, K, *The Cherry Pickers*, Barrambinga Books.
 Halford, J S and G M, *The Kabuki Handbook*, Tuttle, 1976.
 Hereniko, V, *Two Plays*, Mana Fiji, 1987.
 Merritt, R, *The Cake Man*, publication details to be advised.
 Ngema, M, *Asinimali in Woza Africa!*, Naloun, D (ed), Georges Brazillier.
 Rendra, *The Struggle of the Naga People*, QUP, 1980.
 Soyinka, W, *Collected Plays 1*, Oxford, 1986.
 Walcott, D, *The Joker of Seville* and *O' Babylon*, Johnathan Cape, 1978.
 Waley, A, *The Noh Theatre of Japan*, Tuttle, 1976.
 Co-ordinator: Mr M Scott.

ENGL916 United States Literature of the Nineteenth and Early Twentieth Centuries

8 credit points (3 hrs per wk lecture and seminar).

Assessment: 3 essays 35%, 35% and 30%.
 This subject studies the development of a national literature in the United States during the 19th century and the first two decades of the 20th century. What makes American Literature distinctively American? How did America shake off the cultural domination of Britain? What conditions exist in a post-colonial society, and what conditions are needed to stimulate the growth of an independent literature?

Textbooks:
 Chopin, K, *The Awakening*, Penguin.
 Dickinson, E, *Selected Poems*.**
 James, H, *Daisy Miller*, Penguin.
 Dreiser, T, *Sister Carrie*, Signet.
 Hawthorne, N, *The Scarlet Letter*, Signet.
 Melville, H, *Moby-Dick*, Signet.
 Poe, E A, *The Gold Bug and other Tales*, Dover Thrift.
 Whitman, W, *Selected Poems*.
 Co-ordinator: Dr R Harland.

ENGL918 Directed Study

Spring or Autumn session; 8 credit points (3 hr seminar per wk).

Entry to this subject depends on the availability of staff.

Assessment: 4 written assignments 25% each.
 Directed reading, research and other investigative activities at an advanced level in a field of study selected by the student in consultation with the Co-ordinator of Postgraduate Studies in English and approved by the Head of Department.
 Co-ordinator: Dr P Sharrad.

ENGL920 Theories of Text, Discourse, Subjectivity and Culture

Autumn session (3 hrs seminar per wk).
Assessment: 1 major essay 50%; 1 seminar paper 25%; 1 textual analysis exercise 25%.

This subject aims to provide an introduction to contemporary critical theories of text, discourse, subjectivity and culture. Students will be introduced to a range of theoretical approaches and methodologies which question fundamental assumptions about culture, knowledge and relations of power. The

assessment work is designed to establish connections between the theoretical methodologies and the student's own research interests.

Textbooks:
 Course Reader, available from the English Department office.
 Co-ordinator: Dr J Pugliese.

ENGL921 Turning Points: Selected Post-Colonial Fiction

Autumn session; 8 credit points (3 hr seminar per wk).

Assessment: 3 essays 33.3% each.
 A survey of major fiction texts of post-colonial writing in English, especially 'first' novels from emerging nations and fiction that has, by virtue of critical attention or popular regard, become seminal in creating the literary corpus of post-colonial studies. Texts will be placed in cultural and historical context. Attention will be paid to the interaction between colonial experience and literary form and technique, and critical responses surveyed for various constructions of a post-colonial 'tradition'. Students will also undertake a special area study with texts to be arranged.

Textbooks:
 Achebe, C, *Things Fall Apart*.
 Cooper, J F, *The Last of the Mohicans*.
 Edgeworth, M, *Castle Rackrent*.
 Eri, V, *The Crocodile*.
 Schreiner, O, *The Story of an African Farm*.
 Rao, R, *Kanthapura*.
 Lamming, G, *In the Castle of my Skin*.
 Ihimaera, W, *Pounamu, Pounamu*.
 Atwood, M, *Surfacing*.
 Co-ordinator: Dr P Sharrad.

ENGL922 Research Methods

Autumn session; 8 credit points (3 hr seminar per wk).

Assessment: 1 essay 30%, class exercises 70%.
 This subject is concerned with the practicalities of research at postgraduate level: development of a research topic, appropriate research models and techniques, planning and writing the dissertation, advanced bibliographic and textual study skills, computer skills, and editing. A theoretical component will examine the relationship between critical theory and research method in English studies.

Part-time students are advised to take this subject in the year in which they intend to submit the dissertation.

Textbooks:
 Kellehear, A, *The Unobtrusive Researcher*.
 Osland, D, et al, *Writing in Australia*, Harcourt Brace Jovanovich.
 Readings from the Department.
 Co-ordinator: Dr KM Newey.

ENGL923 Indigenous Literature in Canada, New Zealand and Australia

Spring session; 8 credit points (3 hr seminar per wk).

Assessment: 4 assignments 25% each.
 In recent years attention has turned towards the questions which teaching indigenous writing in the academy raises. Who can teach the literature of Aborigines, Maoris, Inuits and Native Indians? Who has the right to speak for them? Is there a common voice for all indigenous cultures? How do we approach the literature as outsiders

** These will be distributed in handout form.

* Not on offer in 1996.

without appropriating the right of indigenous peoples to speak for themselves? These critical questions will be addressed through the literature produced by indigenous writers themselves. This subject will study indigenous writing in the context of world movements, but it will focus on insights which can be achieved through a comparative process – specifically, on the experiences of Australian, New Zealand and Canadian indigenous critics and artists. The subject will also attempt to place such literature in the context of wider cultural and critical investigations – such as weighing up the impact of Afro-American literary theory on "Black" studies generally; and by studying the impact and damage homogenizing theoretical frameworks such as post-colonialism produce on indigenous literature and politics.

Textbooks:**Anthologies:**

Grant, A (ed), *Our Bit of Truth: An Anthology of Canadian Literature*, Pemmican Publications.

(Other texts will be supplied)

Novels:

Armstrong, J, *Slash*.

King, T, *Medicine River*, Penguin.

Grace, P, *Mutuwhenua*, Penguin.

Marism H and Borg, S, *Women of the Sun*.

Recommended Reading:

Hodge and Mishra, *Dark Side of the Dream: Australian Literature & the Postcolonial Mind*.

Mudrooroo, *Writing from the Fringe: a Study of Modern Aboriginal Literature*.

Co-ordinator: Dr G Turcotte.

ENGL925 Writing the Gendered Body

Spring session (2 hr seminar per wk).

Assessment: 2 essays 33.3% each, 1 seminar project 33.3%.

A study of a series of texts with special reference to their representation of the human body as socially and culturally constructed through race, social class and gender, with particular emphasis on the latter. At the same time the subject will examine the part literary texts themselves play in bodily construction.

Textbooks:

Atwood, M, *Bodily Harm*, Virago, 1983.

Carter, A, *The Passion of New Eve*, Virago, 1982.

Jolley, E, *The Sugar Mother*. Penguin.

Jonson, B, *Epicoene or The Silent Woman*, ed R V Holdsworth, Ernest Benn, 1979.

Kafka, F, *Metamorphosis and other Stories*.

Shakespeare, W, *Twelfth Night*.

Winterson, J, *Sexing the Cherry*, Virago, 1989.

Woolf, V, *Orlando*.

Woolf, V, *A Room of One's Own*.

Winterson, J, *Written on the Body*.

Note: The program for the subject will specify further 'readings' for each week: (i) primary material poems, short fiction; (ii) critical/ theoretical articles and chapters.

Co-ordinator: Associate Professor DLM Jones.

ENGL926 Technologies of the Alien: Representations of the 'other' in Science Fiction Film

Autumn session; one 2hr seminar per week.

Assessment: 1 essay 60%, 1 seminar paper 40%.

This subject will focus on Science Fiction film as an exploration of definitions of 'otherness'. It will examine the ways in which Science Fiction, as a genre, has been

used to explore social issues and conflicts such as the relationship between technological development and social responsibility, the bodily inscription of gender, the Cold War, and the construction of the postmodern subject. It will also analyse the effectiveness of the Science Fiction film in the 20th century in dramatising these explorations.

Films:

Attack of the 50ft Woman.

Forbidden Planet (1956).

2001: A Space Odyssey (1968).

Star Wars (1977).

Alien (1979).

Blade Runner (1982).

The Terminator (1984).

And others.

Textbooks:

Kuhn, A (ed), *Alien Zone: Cultural Theory and Contemporary Science Fiction Cinema*, Verso, London, 1990.

Sobchak, V, *Screening Space: The American Science Fiction Film*, 2nd ed, Ungar, NY, 1987.

Co-ordinator: Dr G Turcotte.

ENGL927 Media Studies:

Analysing Mass Media

Spring session (one 3 hr lecture/seminar per wk).

Assessment: 3 written assignments, 30%, 30% and 40%.

This subject is concerned with the construction and reception of the wide range of media texts which are produced by the communication industries, and it will focus on key theoretical areas which open these texts up for analysis. While there will be a necessary emphasis on the dominant forms, the audio-visual texts of television and film, other significant media texts will be covered. The popular film and documentary text appear completely different, but they are demonstrably similar. It may seem as though there is no common ground while there is actually significant convergence between the popular entertainment film and reportage (the newspaper story, the current affairs program on television, the documentary actuality) in the area of narrative. The subject will investigate this central concept of *narrative*; how it operates in media texts, and the ideological implications of its structure.

The second focus of the subject will be on the related concept of *realism*, which will also be investigated across a representative number of media texts. Critical judgements are constantly being made about the realism of popular films, and whether or not there is a faithful representation in documentaries and news reports, but can the concept have meaningful application? The subject will study this problem term, the ways it has been interpreted in the past and how it is viewed today.

Textbooks:

Cummingham, S, and Turner, G (eds), *The Media in Australia*, Allen & Unwin, 1993.

Other texts to be advised.

Co-ordinator: Mr M Scott.

ENGL928 Introduction to Language in a Social Context

Autumn session; one 3 hr lecture/seminar per wk).

Assessment: 1 essay, 40%, 2 seminar papers, 30% each.

(Note: students who have successfully completed

EDGA976 *Test and Context*, may not enrol in this subject.)

This subject explores language as a resource for making meaning. It provides an introduction to a functional model of language. It will outline the functions which language serves, the grammatical choices associated with these functions, and how these choices are influenced by the context. Reference will be made to teaching implications in the primary and secondary context.

Textbooks:

Eggins, S, *Language as Context: an Introduction to Systemic Functional Linguistics*.

de Beaugrande, R, *Linguistic Theory*, Longmans, 1991.

Co-ordinator: Dr L Ravelli.

ENGL929 Reason, Revolution and Reform: Themes in Eighteenth and Nineteenth Century Writing*

2 hr seminar per wk.

Assessment: 1 major essay 60%, 1 seminar paper 40%.

The subject consists of three segments, looking at representative texts from the Age of Reason, the Romantics, and Victorian reformist writing. The subject incorporates a significant amount of poetry, and introduces non-fictional prose as material for analysis and interpretation alongside imaginative writing.

Textbooks:

Carlyle, T, *Signs of the Times*.

Dickens, C, *A Tale of Two Cities*.

Gaskell, E, *North and South*.

Johnson, S, *The Vanity of Human Wishes*.

Mill, J S, *The Subjection of Women*.

Pope, A, *An Essay on Man*.

Shelley, P B, *Poetry*, Penguin.

Swift, J, *A Modest Proposal*.

Wollstonecraft, M, *Vindication of the Rights of Woman*.

Wordsworth, W, *The Prelude*.

Co-ordinator: Dr K Newey.

ENGL930 History and Romance in Early Modern Britain

Autumn session (2 hr seminar per wk).

Assessment: 1 long essay 60% and 1 short essay 40%.

In a period when free speech was unknown, contentious contemporary issues could be dealt with under the guise of history (national or foreign) or through the location of the action in romantic, often pastoral worlds. The subject will focus on texts which deal with history and romance in late Tudor and Stuart Britain and will look particularly at the ways in which such texts deliberately lend themselves to varying readings, how they become part of the ideology of a culture, legitimating or questioning the powerful, and how both well-known and less familiar men and women writers (and readers) of the period dealt with issues presented in the trappings of history and romance.

Textbooks:

Jonson, B, *Five Plays*, ed Wilkes, OUP.

Salzman, P (ed), *An Anthology of Seventeenth-Century Fiction*, OUP, 1991.

Shakespeare, W, *The Complete Works*, Wells and Taylor (ed), Compact Edition, OUP, 1988.

or separate editions of *King Lear*; *Richard II* and *The Tempest*.

* Not on offer in 1996.

Spenser, E, *The Faerie Queene*, ed T P Roche Jr, Penguin.

Additional Jonson texts will be supplied by the Department.

Co-ordinator: Dr G Barwell.

ENGL931 Contemporary Australian Drama

Autumn session (3 hr seminar per wk).

Assessment: 1 5,000 word essay 40%; 1 seminar paper 2,000 words 30%; practical project 30%.

This subject examines the central issues in Australian drama and theatre from 1970. The emphasis of the subject is on the theatrical, social and literary contexts of contemporary Australian drama, and will include reference to the current production and performance practices and conditions of the theatrical profession in Australia. To this end, texts for discussion will include (when available) first and second draft manuscripts in pre-production preparation, rehearsal texts and published plays, and class work will emphasise the discussion of the performance text as well as the literary text.

Textbooks:

Balodis, J, *Too Young for Ghosts*.

Brown, Paul, *Aftershocks*.

Chi, Jimmy and Kuckles, *Bran Nue Dae*.

de Groen, A, *The Girl Who Saw Everything*.

Gow, M, *Furious*.

Enright, N, *Daylight Saving*.

Hewett, D, *Mrs Porter and the Angel*.

Nowra, L, *Summer of the Aliens*.

Morris, Mary / Morris Gleitzman, *Two Weeks with the Queen*.

Rayson, H, *Hotel Sorrento*.

Romeril, J, *The Floating World*.

Sewell, S, *Hate*.

Thomson, K, *Diving For Pearls*.

White, P, *Signal Driver*.

Williamson, D, *Dead White Males*.

Co-ordinator: Mr J Senczuk.

ENGL932 Introduction to Publishing Studies*

8 credit points (1hr lecture, 2hr seminar/workshop per wk).

Assessment: 1 tutorial paper 20%, 1 sessional essay 40%, 1 publication exercise 40%.

A study of the organisations, practices and products of contemporary publishing, with the emphasis on the acquisition by students of the knowledge and skills required for effective operation in the publishing industry, including the processes involved in achieving the publication of their own work. It is planned to have a number of seminar/workshops conducted by visiting professionals in the various field of specialisation.

Areas to be treated include:

- Why publish?
- A brief history of the publishing process and its industry.
- The organisation and commercial practices of the contemporary publishing industry.
- The legal aspects of publishing.
- The editorial function.
- Production - print design, lay-out, graphics, book production;
- Journal publication - newspapers, magazines, pamphlets;
- Desktop publishing.

Textbooks:

Apple Co, *The Apple Book of Desktop*

Publishing.

Clarke, G, *Inside Book Publishing*.

Warlock, P, *The Desktop Publishing Book*.

Williamson, H, *Methods of Book Design*.

Co-ordinator: Mr M Scott.

ENGL933 Early Women Writers

Spring session; (3 hr lecture/seminar per wk).

Assessment: 1 long essay 60%, 1 seminar paper 40%.

This subject looks at the work of selected women writers from the mid-fifteenth century to the early eighteenth century. The texts represent a variety of different types of writing: fiction, poetry, diaries, letters and autobiographical writings. The subject will examine the establishment of the female writing self within the appropriate cultural structure and historical context, and the engagement of that self with the social and literary conventions of the time.

Students who complete this subject successfully will be able to analyse a selection of early women's writing and examine its relationship to its social and cultural context. They will understand the concept of the female writing self in relation to the works studied. They will be able to analyse the strategies the chosen writers used to engage with conventional forms like poetry and novel, which have been largely appropriated by men, and will be able to evaluate the uses these writers made of other forms of writing - journals, diaries, autobiography.

Textbooks:

Behn, A, *Oroonoko*.

Graham, Hinds, Hobby, Wilcox (eds), *Her Own Life: Autobiographical Writings by Seventeenth Century English Women*.

Greer, Hastings, Medoff and Sansone, (eds), *Kissing the Rod: An Anthology of Seventeenth Century Women's Verse*.

Kempe, M, *The Book of Margery Kempe*.

Selected writings in handout form.

Co-ordinator: Dr A Lear.

ENGL934 Africa and the New World*

8 credit points; (3 hrs seminar per wk).

Assessment: 3 essays 33.3% each.

A survey of major texts of African, Caribbean and Afro-American writing in English. Texts will be placed in cultural and historical context. Attention will be paid to the interaction between slave and colonial experience and literary form and technique, to regional differences in constructing identity, and to critical strategies for the construction of a "Black aesthetic" and literary tradition.

Common Texts:

Jacobs, H, *Incidents in the Life of a Slave Girl*.

Ellison, R, *Invisible Man*.

Morrison, T, *Beloved*.

Armah, A K, *The Beautiful Ones are Not Yet Born*.

Soyinka, W, *Aké*.

Ogali, O, *Veronica My Daughter*.

Moore, G, and Beier, U (eds), *The Penguin Book of Modern African Poetry*.

The Harder They Come. (Film)

Mordecai, P, *Her True-True Name*.

Philips, C, *Cambridge*.

Plus selected material in handout form.

Texts for special study:

(Students choose one area)

EAST AFRICA

Chinodya, S, *Harvest of Thorns*.

Head, B, *When the Rainclouds Gather*.

Ngugi, *Petals of Blood*, USA.

Baldwin, J, *Giovanni's Room*.

Brown, W W, *Clotel*.

Larson, N, *Passing*.

CARIBBEAN

Braithwaite, E K, *The Arrivants*.

Burnett, P (ed), *The Penguin Book of Caribbean Verse*.

Césaire, A, *Cahier d'un retour au pays natal*.

Co-ordinator: Dr P Sharrad.

ENGL935 Pacific Literature

Spring session; 8 credit points (1 hr lecture, 2 hrs seminar per wk).

Assessment: 2 essays 70%, 1 historical/cultural test 15%, 1 take-home commentary on a poem 15%.

An introduction to leading works of Pacific Literature from a representative range of genres and geographical sources. The subject will focus on themes and literary techniques common to the region as well as specific qualities related to the societies from which these works emerge.

Textbooks:

Ballantyne, R M, *The Coral Island*, OUP.

Bamboo Ridge, 36, Bamboo Ridge Press, Honolulu, 1987.

Campbell, A, *The Frigate Bird*, Heinemann Reed.

Crocombe, Vaai, *Te Rau Maire*, IPS, Suva, 1992.

Dansey, H, *Te Raukura*.

Howard, C P, *Mariquita: a Tragedy of Guam*, Suva, Institute of Pacific Studies, 1986.

Pule, J, *The Shark that Ate the Sun*, Penguin.

Wendt, A, *Nuanua*, Auckland UP.

Wendt, A, *Ola*, Penguin.

Reference:

Sharrad, P (ed), *Readings in Pacific Literature*, NLRC.

Other poems, stories and plays will be supplied, and films will be shown as the subject progresses.

Co-ordinator: Dr P Sharrad.

ENGL936 Sexuality and Representation

Autumn session (3 hr seminar per wk).

Assessment: 2 essays 50% each.

This subject will introduce students to the analysis of cultural production through theories of gender and sexuality. It is divided into three sections. The first will introduce students to current models of sexuality and the relationship between sexuality and representation. It will investigate the relationship between theories of sexuality, culture and history. The second section will analyse three contemporaneous texts which explicitly problematise the relationship between culture, representation, sexuality and sexual difference. The third section will examine the discourse of "camp" as an exemplary instance of the complex relationship-cultural, historical, theoretical-between sexuality and textual production.

On successfully completing this subject, students will be able to analyse major theoretical models of representation and of sexuality. They will have gained historical, cultural and generic understandings of the ways in which theories of representation and theories of sexuality operate. They will have developed their skills in the sustained analysis of theoretical paradigms.

* Not on offer in 1996.

Textbooks:

Lawrence, D H, *Lady Chatterley's Lover*, Penguin

Forster, E M, *Maurice*, Edward Arnold.

Radclyffe Hall, *The Well of Loneliness*, Virago.

Jacqueline Susann, *Valley of the Dolls*.

Other materials will be supplied.

Co-ordinator: Dr M Hardie.

ENGL937 New Zealand Literature*

8 credit points (one 3 hr seminar per wk).

Assessment: 3 essays, 33.3% each.

A survey of major texts of Maori and Pakeha writing in English. Texts will be placed in cultural and historical context. The texts have been chosen to allow consideration of issues such as identity, (national, racial, sexual), relationship to the land, and the role of conventions and the development of stereotypes. The texts will be supplemented by films where possible and the course is designed to supplement those already offered in Australian and other post-colonial writing.

Textbooks

Baxter, J K, *Selected Poems*, OUP.

Davis & Haley (eds), *Contemporary New Zealand Short Stories*, Penguin.

Frame, J, *An Angel at my Table*, Random.

Gee, M, *Plumb*, Angus & Robertson.

Grace, P, *Cousins*, Women's Press.

Grace, P, *Potiki*, Penguin.

Hulme, K, *The Bone People*, Picador.

Hyde, R, *The Godwits Fly*, Auckland UP.

Ihimaera, W, *Dear Miss Mansfield*, Viking.

Mansfield, K, *Collected Stories of Katherine Mansfield*, Penguin.

Mason, B, *The End of the Golden Weather*, Victoria U.P. 937 N.

Morrison, R, *Scarecrow*, Penguin.

Ruby and Rata (FILM).

Sargeson, F, *Sargeson*, Penguin.

Wedde, I and McQueen, H (eds), *The Penguin Book of New Zealand Verse*, Penguin.

Co-ordinators: Associate Professor D Jones and Dr G Barwell.

ENGL938 Australian Screen

Spring session; 8 credit points (3hr lecture/screening; 1hr seminar per week).

Assessment: 1 major essay/video project 40%, 3 minor essays (2,000 words) 20% each.

This subject covers the history of the Australian film industry, from the silent period, through the decline of the 1950s and 1960s and the government-assisted revival in the 1970s, to the present day. Arguments for and against a national cinema are considered, and the cooperation between Australian television and cinema in the production of a national image is explored. In addition, we will look at the critical role played by non-mainstream and avant-garde filmmakers in challenging the dominant myths of the Australian screen. Students who successfully complete this subject will be conversant with the industrial and social history of Australian cinema, and will be able to position this history within a discussion of the development of world cinema. They will be able to relate policy initiatives in cultural nationalism to economic and political imperatives, and will have explored the viability of such efforts in the era of global media ownership.

Textbooks:

Albert Moran and Tom O'Regan (ed) *The Australian Screen*, Melbourne, Penguin, 1989.

Albert Moran and Tom O'Regan (ed) *An Australian Film Reader*, Sydney, Currency, 1985.

Co-ordinator: Ms K Bowles.

EDGA973 Language, Ideology and Culture

Autumn or Spring session; 8 credit points (3 hr lecture/seminar per wk).

Pre- or co-requisite: MA students please note: this prerequisite applies only to MEd students EDGA970 for students specialising in the Language and Literacy Program.

Assessment: seminar 25%, text analysis 30%, project 45%.

This subject will draw on current writing in sociology, cultural studies, semiotics and linguistics to study the relationship between language, ideology and culture. Students will examine the contribution of language to the (re)production of cultural values and social meanings through an analysis of written and spoken texts such as curriculum documents, journal articles, school text books and other resource materials, teacher/student talk and interaction in other educational settings. It has particular relevance to those teaching in literacy and/or literature contexts but with a more general relevance to those examining policy or curriculum documents and other written and spoken texts. Topics to be covered include: theories of ideology; the relationship between discourse(s) and ideology, subjectivity and language; power and language; the operation of ideology through texts and developing a critical reading position.

Textbook:

Kress, G, *Linguistic Processes in Sociocultural Practice*, Geelong, Deakin University, 1985.

Co-ordinator: Dr J Wright.

EDGA975 Educational Linguistics

Autumn or Spring session; 8 credit points (1 hr lecture, 2 hr tutorial per wk)

Pre- or co-requisite: MA students please note: this prerequisite applies only to MEd students EDGA970 and EDGA976 for students specialising in the Language and Literacy Program.

Assessment: assignments 50%, text analyses 50%.

This subject will extend the understandings about language introduced in EDGA976 Text and Context through a more detailed study of language and how it works. It will draw principally on a functional model of language which focuses on the effective use of language in order to understand the world and to interact socially. This knowledge will be applied to classroom contexts and deal with issues such as programming with a language focus, assessing students' language and evaluating teaching materials. It will also be applied to research, particularly with a view to developing analytic techniques which can be used in studies where texts and language are the data base.

Textbooks: no set text.

Co-ordinator: Dr B Winsler.

HIST933 Culture & Politics in Indonesia, 1865 - 1988

Autumn session; 12 credit points (3 hrs per wk).

Assessment: 2 tutorial papers of 2000 words each, 1 research essay of 5000 words.

The subject is designed around the issue of becoming modern, focussing on the upheaval and violence of Indonesia's transition into the modern world and the politics of culture in Indonesia. This course will look at Indonesian cultural history through Pramoedya Ananta Toer's novel *This Earth of Mankind*. The subject begins with the Javanese background of the novel, particularly aspects of Javanese culture, starting with the late nineteenth century. It will then discuss, at an advanced level, aspects of nationalism and the Indonesian Revolution, the politics of culture in post-Revolution Indonesia, particularly the role of Communism, and finally the way history and culture are viewed in New Order Indonesia.

Textbook:

Pramoedya, A T, *Awakenings*, Penguin, 1991.

Co-ordinator: Dr A Vickers.

* Not on offer in 1996.

HISTORY

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Arts by Research
3. Master of Arts
4. Graduate Certificate in History Education

POSTGRADUATE PROGRAMS

History
History and Education

CURRENT RESEARCH AREAS

Areas of research available to candidates undertaking the Honours Master of Arts degree by research and the Doctor of Philosophy degree include the following:

Australian history, with emphasis on labour, feminist, regional, military, social and political themes
Modern South East Asian history
19th and 20th century British social and political history, and relations with the USA
French history from 1650
Historiography, including labour, Marxist and communist
20th Century Russian History

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN HISTORY

leading to the Master of Arts.

Number	Subject	Credit Points
HIST904	Reading Course on Themes in Australian History	12
HIST912	Australian Labour Historiography	12
HIST913	The Making of the Modern Australian Woman	12
HIST914	Regional History	12
HIST915	Comparative Settler Capitalism	12
HIST932	The Vietnam Wars	12
HIST933	Culture & Politics in Indonesia, 1865-1988	12
HIST934	The Re-making of Australian History	12
HIST936	Australians and War	12
HIST951	Philosophy of History	12

For further details, see *Course Requirements* below.

POSTGRADUATE PROGRAM IN HISTORY AND EDUCATION

leading to the Graduate Certificate in History Education.

Number	Subject	Credit Points
EDGA822	New Technologies and Approaches to Learning	12
HIST934	The Re-making of Australian History	12

For further details, see *Course Requirements* below.

OTHER POSTGRADUATE SUBJECT

Number	Subject	Credit Points
HIST973	Major Thesis	48

COURSE REQUIREMENTS

1. DOCTOR OF PHILOSOPHY

The Doctoral Dissertation shall be not less than 80,000 words and not more than 100,000 words in length. For this degree, candidates enrol in the subject HIST973.

2. MASTER OF ARTS

Pass degree entry

Pass graduates or equivalent with a major in History may undertake a 48 credit point

Master of Arts course, choosing subjects from the Schedule (excluding the minor and major thesis).

Honours degree entry

The Honours Master of Arts degree is offered either as a research degree, consisting of a major thesis, or as a research and coursework degree consisting of a minor thesis and coursework.

The maximum length of a major thesis shall be 40,000 words and the minimum length of a minor thesis shall be 20,000 words.

Students enrolling in the Honours Master of Arts by research will be BA Honours graduates with a grade of at least Class II, Division 2 or its equivalent in History, or those who have completed the MA coursework requirements at credit level or better. For this degree, candidates enrol in the subject HIST973. Those who enter the Honours Master with a BA (Hons) enter with a notional accreditation of 48 credit points.

Those who have completed 48 credit points of a Pass Masters degree at credit level or

better may proceed to an Honours Masters by coursework and minor thesis only. Their subsequent 48 credit points shall include 24 credit points of course work from the schedule above (one of which shall be HIST951, Philosophy of History unless they have already undertaken HIST325, Theory and Method, at the undergraduate level) and the minor thesis.

In special cases the Department Head may vary the entry requirements, if satisfied that an applicant's qualifications have prepared him or her for advanced historical study.

4. GRADUATE CERTIFICATE IN HISTORY EDUCATION

Candidates should have completed at least a minor sequence in History, or its equivalent, and be practising teachers. The course consists of two subjects as set out in the relevant schedule shown above. Successful students will receive a Graduate Certificate of History Education. This will stand as half credit towards either a Master of Arts or a Master of Education Degree—the former for students who wish to pursue studies in content further, the latter for those who wish to extend their studies in method.

Contact hours for the first subject are 3 hours per week, timetabled in the late afternoon. At some stage in the course it will be necessary for the students to attend for six hours per week.

The Department of School Education has recognised the course for official inservice training purposes.

SUBJECT DESCRIPTIONS

EDGA822 New Technologies and Approaches to Learning

Refer to entry under Faculty of Education.

HIST904 Reading Course on Themes in Australian History

Autumn or Spring session; 12 credit points (one hr supervision per wk).

Assessment: 2 x 4,000 word essays each 40%, 1 x 1,000 word paper 20%.

This subject is designed to enable students to undertake a sustained reading program in selected themes in Australian History under close supervision. Enrolment, selection of appropriate themes and readings are subject to the approval of the Head of the Department.

Textbooks: to be advised.

Co-ordinator: Professor J Hagan.

HIST912 Australian Labour History

Spring session; 12 credit points (3 hrs of lectures/tutorials).

Assessment: 9,000 words in essays/tutorial papers.

This subject is an advanced appreciation of the contemporary debates in Australian Labour Historiography. An understanding of these debates requires an analysis of trade unions and political parties representing the labour movement, the labour process, the industrial relations and arbitration system and the industrial and political environment faced by the labour movement. The subject also considers domestic labour, and the tactics and

dominant ideologies of the labour movement. The intellectual sources of Australian labour historiography are also critically evaluated. A comparison of Australian with British and American labour historiography is also undertaken. *Textbooks:* Irving, T (ed), *Challenges to Labour History*, University of NSW Press, 1994.

Co-ordinator: Dr A Wells.

HIST913 The Making of the Modern Australian Woman

Autumn session; 12 credit points (2 hr seminar per wk).

Assessment: 9,000 words in essays/tutorial papers.

This subject looks at those elements in Australian social history from the 1890s to the present that had particular significance in forming the experiences of present day Australian women. It covers the demographic transition and migration patterns, economic changes, political changes, ideologies of population and consumerism and the rise of professionals as social managers.

On successfully completing this subject students will be able to evaluate the main forces which have altered the lives of Australian women in the twentieth century. They will be able to describe the economic and demographic factors which have interacted to produce these changes. They will be able to distinguish between first and second wave feminism and to trace the intellectual underpinnings of each. They will be familiar with the historiographical debate on women's history and the way in which this subject has achieved a place in the University curriculum. Finally they will have acquired more sophisticated skills in historical analysis and essay writing.

Preliminary Reading:

Game, A and Pringle, R, *Gender at Work*, Allen and Unwin, Sydney, 1983.

Matthews, J, *Good and Mad Women*, Allen and Unwin, 1983.

Sinclair, W A, *The Process of Economic Development in Australia*, Cheshire, 1976.

Textbook:

Saunders, K and Evans, R, *Gender Relations in Australia*, Harcourt, Brace and Jovanovich, 1992.

Co-ordinator: Ms J Castle.

HIST914 Regional History*

Autumn session; 12 credit points (2 hrs seminar per wk).

Assessment: 1 x 3,500 word essay 40%, 1 x 3,500 word research exercise 40%, 1 x 2,000 literature review 20%.

Using methods developed by regional specialists, this subject examines the impact of national political and social forces in history at the local and regional level. Extensive use is made of case studies and students are expected to apply regional methodology in a research project of their own. Australia and North America form the focus of this subject

Textbooks: to be advised.

Co-ordinator: Dr J McQuilton.

HIST915 Comparative Settler Capitalism

Autumn session; 12 credit points (3 hrs lecture/seminar per wk).

* Not on offer in 1996.

Assessment: 1 x 1,500 word tutorial paper 15%, 1 x 2,000 word tutorial paper 20%, 1 x 6,000 word research essay 60%, tutorial participation 5%.

This subject examines the formation and evolution of white settler societies between 1750-1945. It involves an advanced appreciation of the use of comparative historical method and the employment of primary source material to undertake sustained research. Considerable attention will be placed on the impact of European imperialism, its effects on indigenous people and the class dynamics of settler capitalist societies. While the central example will be Australia, considerable attention will be directed towards comparisons with South Africa, New Zealand and Argentina.

Textbook:

Denoon, D, *Settler Capitalism: The Dynamics of Dependent Development in the Southern Hemisphere*, OUP, 1985.

Co-ordinator: Dr A Wells.

HIST932 The Vietnam Wars

Spring session; 12 credit points (3 hrs of lectures/seminars).

Assessment: 9,000 words in essays/tutorial papers.

The French conquest of Indochina in the late nineteenth century, the economic changes wrought by colonialism up to 1940 and the accompanying cultural reappraisals in Vietnamese intellectual circles, establish the background to the First, Second and Third Indochina Wars, 1945-89. The Japanese occupation, the 1945 August Revolution in Vietnam, the French attempt to recolonise and the similarly-fated US intervention of 1955-1975 are studied closely along with Vietnamese and Cambodian society and politics since 1945 and foreign relations with the USA, China, ASEAN and the USSR.

Textbooks:

Beresford, M, *Vietnam: Politics, Economics and Society*, London, Pinter, 1988.

Marr, D G, *Vietnamese Tradition on Trial, 1920-1945*, Berkeley, California University Press, 1981.

Porter, D G, (ed), *Vietnam: A History in Documents*, NAL, 1981.

Woodside, A B, *Community and Revolution in Modern Vietnam*, Boston, 1976.

Co-ordinator: Dr T Li.

HIST933 Culture, History and Politics in Southeast Asia:

Indonesia and Other Case Studies

Autumn session; 12 credit points (3 hrs per wk).

Assessment: 9,000 words in essays/tutorial papers.

The subject examines the politics of identity in Southeast Asia using a number of case studies, particularly from Indonesia. Issues explored include the relationship between nationalism, modernity and politics, the ways history and culture are viewed by present governments, the role of minority groups, the importance of Islam, and relationships between military rule and democracy.

Textbooks: to be advised.

Co-ordinator: Dr A Vickers.

HIST934 The Re-making of Australian History

Autumn session; 12 credit points (3 hrs lecture/seminar per wk).

Assessment: essay 60% tutorial papers 30%,

tutorial participation 10%.

This subject will examine the re-writing of the following themes in Australian history: nationalism and racism; Aboriginal pre-history and white relations; the role of women in society; the influence of literature, art and mass communications; and local and family history. It will also discuss the social and technical sources of these changes.

Textbooks:

Osborne, G and Mandle, W F, (eds), *New History: studying Australia today*, Sydney, George Allen & Unwin, 1982.

Reynolds, H, (ed), *With the White People*, Ringwood, Victoria, Penguin, 1990.

Saunders, K and Evans R, (eds), *Gender Relations in Australia: domination and negotiation*, Sydney, Harcourt Brace Joanovich, 1992.

Co-ordinator: Professor J Hagan.

HIST936: Australians and War

Spring session; 12 credit points (2 hrs seminar per wk).

Assessment: 1 x 3,500 word essay 40%, 1 x 3,500 word research exercise 40%, 1 x 2,000 literature review 20%.

This subject examines the impact of war on Australian society. The Home Front is the major area of study although some reference is made to more traditional areas of military history. Four conflicts form the focus of the subject, the European occupation of Australia, the two world wars and the Vietnam conflict. Themes examined include enlistment, conscription, the place of women in war time Australia and the digger myth.

Preliminary Readings:

Gammage, W, *The Broken Years: Australian Soldiers in the Great War*, ANU Press, Canberra, 1974 (reissued as a Penguin paperback).

McKernan, M, *The Australian People and the Great War*, Nelson, West Melbourne, 1980.

McKernan, M, *All In! Australia During the Second World War*, Nelson, West Melbourne, 1983.

Scott, E, *Australia During the War, Vol 11, Official History of Australia During the War of 1914-1918*.

Textbooks:

McKernan, M and Browne, M, *Australia, Two Centuries of War and Peace*, Australian War Memorial, Canberra, 1988.

Co-ordinator: Dr J McQuilton.

HIST951 Philosophy of History

Spring session; 12 credit points (2 hr seminar per wk).

Assessment: 9,000 words in essays/tutorials.

This subject examines certain fundamental problems associated with historical enquiry, the core of which is the question, "How do we come to know the past?" Some related questions explored are: Is the historical discipline a science? Are there historical laws? What role is played by chance in determining the outcome of events? What is meant by explanation? Is it possible for historians to be objective? Can a knowledge of the past provide the historian with the ability to predict? Although participation in HIST927 does not require prior training in philosophy, it is expected that students will possess an interest in the grounds on which historians claim to know the causes of past

events and developments.

Preliminary Reading:

Atkinson, R F, *Knowledge and Explanation in History*, London, 1978.

Carr, E H, *What is History?* London, 1967.

Collingwood, R G, *The Idea of History*, Oxford, 1961.

Marwick, A, *The Nature of History*, London, 1970.

Co-ordinator: Dr I McLaine.

HIST973 Major Thesis

48 credit points.

In addition to completing a major thesis, postgraduate students in the Department of History and Politics are required to attend a postgraduate seminar series to which visitors, postgraduates, and staff members contribute. Until further notice, the seminars will be of about two hrs, beginning at five o'clock on Wednesdays. During the period of their enrolment, full-time postgraduate students should attend not less than 70 percent of the seminars offered, and part-time postgraduate students about 35 percent. A committee consisting of two elected representatives of the students, the Head of the Department, and another staff member will advise on the program for each series. All candidates for Master of Arts Honours shall give at least two, and candidates for doctoral degrees shall give three, work-in-progress seminars over the course of their candidature.

Co-ordinator: refer to Head of Department.

INTERNATIONAL RELATIONS

COURSE OFFERED

The following postgraduate course is available:

1. Master of Arts

POSTGRADUATE PROGRAM

International Relations

CURRENT RESEARCH AREAS

Research can be supervised in 1996 in diverse aspects of International Relations, focussing primarily (but not exclusively) on the Aisa-Pacific region.

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN INTERNATIONAL RELATIONS

leading to the Master of Arts.

Number	Subject	Credit Points
<i>Core Subjects:</i>		
INTR900	International Law and Diplomacy	8
INTR910	Politics of International Relations	8
INTR920	Advanced International Economic Relations	8
INTR930	Organisational Behaviour	8
<i>Elective Subjects:¹</i>		
INTR901	Practical Diplomacy	8
INTR911	Politics in the South Pacific	8
INTR912	Pacific Rim and Pacific Basin	8
INTR921	Advanced International Economics	8
INTR922	Advanced Topics in Economics	8
INTR931	Strategic Planning and Policy	8
INTR932	Selected Topics in Management	8
INTR940	Case Study in International Politics A	8
INTR941	Case Study in International Politics B	8
INTR950	Australia: Making of a Nation	8
INTR957	Post-war Economic and Social Development of Southeast Asia	8
INTR958	Selected Topics on Post-war Developments in Southeast Asia	8

¹ Not all of these subjects are available each year – refer to Department of History and Politics before enrolment.

For further details, see *Course Requirements* below.

COURSE REQUIREMENTS

1. MASTER OF ARTS

The degree is intended to provide opportunities for graduates of diverse disciplinary backgrounds to develop their academic understanding and professional skills in the field of international relations, broadly defined. The program is expected to be especially useful to students with relevant, professional experience or ambitions, including diplomats, other government officials, business persons, journalists, etc.

The program is multi-disciplinary in nature, focussing on international politics, economics, management, and law and diplomatic practice, in particular, but allowing both for specialisation within the program as well as for the inclusion of area studies, and other relevant subjects, in accordance with students' needs.

Students take part in regular simulations and professional seminars, workshops, exchanges with other institutions, including the Australian Department of Foreign

Affairs and Trade, and where possible, professional placements. Special classes are provided in relevant computing and (where appropriate) English language, study, analytical, public speaking and other skills. A special centre (with computing, video and short-wave radio facilities, plus a range of pertinent periodicals) has been set aside for use by students in the program.

Course Requirements

48 credit points gained from subjects in the INTR schedule of postgraduate subjects (or such greater number as may be required in individual cases). Except with the permission of the Head of Department, students are required to complete the following four subjects in order to graduate in the program:

INTR900	International Law and Diplomacy
INTR910	Politics of International Relations
INTR920	Advanced International Economic Relations
INTR930	Organisational Behaviour

Other subjects available:

INTR901	Practical Diplomacy
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INTR911	Politics in the South Pacific
INTR912	Pacific Rim and Pacific Basin
INTR921	Advanced International Economics
INTR922	Advanced Topics in Economics
INTR931	Strategic Planning and Policy
INTR932	Selected Topics in Management
INTR940	Case Study in International Politics A
INTR941	Case Study in International Politics B
INTR950	Australia: Making of a Nation
INTR957	Post-War Economic and Social Development of Southeast Asia
INTR958	Selected Topics on Post-war Developments in Southeast Asia

Students may, with the permission of the Course Co-ordinator, apply to enrol in other subjects contained in the *Postgraduate Calendar*.

SUBJECT DESCRIPTIONS

INTR900 International Law and Diplomacy
Autumn session; 8 credit points (3 hrs per wk of lectures, seminars and tutorials).

Assessment: 7,500 words of essays and tutorial papers.

The history, theory and practice of diplomatic and consular representation in both bilateral and multilateral contexts. Detailed analyses are made of the theoretical underpinnings, legal character and practical uses of international law; the law of treaties; various forms of diplomatic exchange and agreement; formal diplomatic (non)-recognition; the opening and breaking of relations; and diplomatic and consular immunity. Close attention is paid to the impact of modern technology and mass communications on international law and diplomacy; public diplomacy; summitry; and developments in bilateral, regional and wider forms of technical, functional, economic and other co-operation, including areas such as the Law of the Sea.

Textbooks: to be advised.

Co-ordinator: refer Department.

INTR901 Practical Diplomacy

Spring session; 8 credit points (3 hrs per wk lectures, seminars and tutorials).

Assessment: 7,500 words in essays and class papers.

Case-studies, simulations, workshops and interactions with practitioners. Study and use of diplomatic instruments. Negotiation and dispute resolution.

Textbooks: to be advised.

Co-ordinator: refer Department.

INTR910 Politics of International Relations

Spring session; 8 credit points (3 hrs per wk of lectures, seminars and tutorials).

Assessment: 7,500 words of essays and tutorial papers.

Approaches to and methods of study, theories and concepts of international relations: idealist, legal, institutional, realist, Marxist, Neo-Marxist, globalist, feminist, systems, regimes, etc. The role of international law and diplomacy. Foreign policy making and implementation. Political order and the balance of power, both international and regional. The United Nations and other international organizations. Issues, blocs, and the politics of international economic, technological and functional co-operation, including foreign aid. Class work and assignments involve extensive and intensive analysis of particular issues, countries, alliances and organisations.

Textbook: to be advised.

Co-ordinator: Professor E P Wolfers.

INTR911 Politics in the South Pacific

Autumn session; 8 credit points (3 hrs per wk of lectures, seminars and tutorials).

Assessment: 7,500 words of essays and tutorial papers.

Politics in and among South Pacific island countries. Regional and sub-regional co-operation. Relations with external actors, including governments, international organisations and multi-national corporations. Class work and assignments provide occasions for detailed examination of particular case studies.

Textbooks: to be advised.

Co-ordinator: Professor E P Wolfers.

INTR912 Pacific Rim and Pacific Basin

Spring session; 8 credit points (3 hrs per wk of lectures, seminars and tutorials).

Assessment: 7,500 words of essays and tutorial papers.

The subject analyses aspects of relations between advanced, industrialising and less developed countries on the Pacific Rim and in the Pacific Basin. Particular attention is paid to the foreign relations, including relations with advanced industrial and industrialising countries, and regional as well as inter-regional co-operation, of countries in Southeast Asia and the South Pacific. The subject addresses significant issues in defence, aid, trade, investment and other kinds of international flows and co-operation (including communications, fisheries, and the law of the sea). Particular attention is paid to nuclear and environmental issues; the security and vulnerability of small-island states; colonialism and self-determination; proposals for a New International Economic Order; Asia-Pacific co-operation; and other questions of particular concern to countries on the Pacific Rim and in the Pacific Basin.

Textbooks: to be advised.

Co-ordinator: Professor E P Wolfers.

INTR920 Advanced International Economic Relations

Spring session; 8 credit points (3 hrs per wk lectures and tutorials).

Assessment: essays, seminars and assignments.

The subject examines policy issues in the international economy especially as they affect the Asian-Pacific region. The role of international economic organizations such as the IMF, World Bank and GATT is emphasised as well as issues such as free trade, protectionism exchange rate determination and international capital flows. Options available to individual countries for international economic policy are explored.

Textbooks: to be advised.

Co-ordinator: Associate Professor R Castle.

INTR921 Advanced International Economics

Spring session; 8 credit points (3 hrs per wk lectures and tutorials).

Assessment: essay, seminar and examination.

Aspects of some of the following topics are studied in depth: 1. Growth and Trade; 2. Factor Transfers (Foreign Investment); 3. Tariffs; 4. Import-Substituting Industrialisation; 5. Foreign Exchange Market; 6. Internal and External Balance (the two-gap model).

Textbooks: to be advised.

Co-ordinator: refer Department.

INTR922 Advanced Topics in Economics

Autumn or Spring session, depending on the topics covered; 8 credit points (3 hrs per wk lectures and tutorials).

Assessment: essay, seminar and examination.

Topics for this subject may be drawn from any area of Economics which the Heads of the Departments concerned consider to be suitable preparation for a higher degree and appropriate to the student's special interests.

Textbooks: to be advised.

Co-ordinator: refer Department.

INTR930 Organisational Behaviour

Autumn session; 8 credit points (2 hrs lectures per wk).

Assessment: seminars, case studies, essay(s) and examination(s).

A study of the behaviour of individuals in organisations, groups and group processes, leadership and communication, organisation design and job design, appraisal of performance, processes of organisational change and development. Application to public administration in developing countries.

Textbooks: to be advised.

Co-ordinator: refer Department.

INTR931 Strategic Planning and Policy

Spring session; 8 credit points (2 hrs lectures per wk).

Assessment: examination and essays.

The subject will use case studies as a key teaching vehicle and will examine strategy in the context of organisations. Key topic areas may include: strategy formulation, choice and implementation; strategy and structure and the organisational context; strategy and competitive advantage; interrelationships, diversification, integration, acquisition and internal development; global strategies.

Textbooks: to be advised.

Co-ordinator: refer Department.

INTR932 Selected Topics in Management A

Autumn or Spring session; 8 credit points (2 hrs lectures per wk).

Assessment: assignments, seminars, examinations.

A special topic selected from any area of management. The selection is made by the Heads of Department concerned, taking into account the expertise of academic staff, including visiting staff, and the interests of students.

Textbooks: to be advised.

Co-ordinator: refer Department.

INTR940 Case Study in International Politics A

Autumn session; 8 credit points (minimum one hr/wk by personal arrangement with member(s) of staff).

Assessment: 7,500 words of research papers.

This subject is intended to provide students with an opportunity to engage in detailed research on a particular aspect of international relations approved by the Co-ordinator of the Postgraduate Program in International Relations. The project may focus on an issue, an actor (or actors), or a theoretical or methodological question which the student has previously encountered through reading or practical experience. Enrolment requires the approval of the Co-ordinator of the Postgraduate Program in International Relations, and may be determined by the availability of suitably qualified staff.

Textbooks: to be advised.

Co-ordinator: Professor E P Wolfers.

INTR941 Case Study in International Politics B

Spring session; 8 credit points (minimum one hr/wk by personal arrangement with member(s) of staff).

Assessment: 7,500 words of research papers.

This subject is intended to provide students with an opportunity to engage in detailed research on a particular aspect of international relations approved by the Co-ordinator of the Postgraduate Program in International Relations. The project may focus on an issue, an actor (or actors), or a theoretical or methodological question which the student has previously encountered through reading or practical experience. Enrolment requires the approval of the Co-ordinator of the Postgraduate Program in International Relations, and may be determined by the availability of suitably qualified staff.

Textbooks: to be advised.

Co-ordinator: Professor E P Wolfers.

Assessment: 7,500 words in essays/seminar papers.

The subject examines the politics of identity in Southeast Asia using a number of case studies, particularly from Indonesia. Issues explored include the relationship between nationalism, modernity and politics, the ways history and culture are viewed by present governments, the role of minority groups, the importance of Islam, and relationships between military rule and democracy.

Textbooks: to be advised.

Co-ordinator: Dr A Vickers.

INTR950 Australia: Making of a Nation

Spring session; 8 credit points (3 hrs of lectures/seminars).

Assessment: 7,500 words in essays/seminar papers.

This subject is intended to provide a detailed examination of twentieth century Australia, in the light of notions of dependency and autonomy, in order to assess the extent to which nationhood has been achieved. The subject begins with an analysis of concepts of the nation, nationalism, the state and cultural identity. Economic processes, key industries and relations with the international economy are analysed. The distinctive features of modern Australian political institutions, as well as internal and external policies are identified, and changes examined. The nature of Australian cultural traditions, including social, racial and class differences, are discussed. The subject concludes by returning to the question of national identity and the real and imagined quality of Australian independence.

Textbooks: to be advised.

Co-ordinator: refer Department.

INTR957 Post-War Economic and Social Development of Southeast Asia

Spring session; 8 credit points (3 hrs of lectures/seminars).

Assessment: 7,500 words in essays/seminar papers.

This subject traces economic and social development in Southeast Asia since the Second World War. It covers some major issues of economic development faced by countries of the region from the end of the colonial period to the present day and includes discussion of the colonial economic legacy, the formation of new social classes and their role in independence struggles, indicators of modernisation such as industrialisation, education, urbanisation, women and work, etc. Environmental issues and the economic reforms in Indochina are also discussed.

Higgott, R and Robison, R, (eds), *South-East Asia: Essays in the Political Economy of Structural Change*, Routledge and Kegan Paul, London, 1985.

Co-ordinator: refer Department.

INTR958 Selected Topics on Post-War Developments in Southeast Asia

Spring session; 8 credit points (3hrs of lectures/seminars).

MARITIME POLICY

COURSE OFFERED

The following postgraduate course is available:

1. Master of Arts

POSTGRADUATE PROGRAM

Maritime Policy

CURRENT RESEARCH AREAS

Research covers diverse aspects of maritime policy, focusing primarily, but not exclusively, on the Asia Pacific Region, and including national oceans policy, naval history, maritime regimes and regional maritime co-operation.

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN MARITIME POLICY

leading to the Master of Arts.

Number	Subject	Credit Points
<i>Compulsory Core Subjects:</i>		
MPOL901	National Dimensions of Maritime Policy	8
MPOL902	International Issues in Maritime Policy	8
<i>Elective Subjects:¹</i>		
MPOL911	Maritime Transport I: International Shipping	8
MPOL912	Maritime Transport II: Port Development	8
MPOL920	Marine Environmental Management	8
MPOL921	Marine Environmental Planning	8
MPOL931	International Maritime Environmental Law	8
MPOL932	The Law of the Sea	8
MPOL941	History and Politics of Sea Power	8
MPOL951	Selected Topics in Maritime Policy (1)	8
MPOL952	Selected Topics in Maritime Policy (2)	8

Students may, with the permission of the Course Co-ordinator, apply to enrol in other subjects in the *Postgraduate Calendar* relevant to maritime policy.

¹ Not all of these subjects may be available each year – refer to Department of History and Politics before enrolment. For further details, see *Course Requirements* below.

COURSE REQUIREMENTS

The postgraduate program in Maritime Policy is offered by the Department of History and Politics. This program, the first of its kind in the Asia Pacific region, is intended to provide professionally relevant academic training for a variety of different policy analysts, including advisers in government, the private sector, and non-governmental organisations, in relation to a wide range of maritime issues.

Conducted in close co-operation with the Maritime Policy Centre, the course is intended to provide opportunities for students of diverse professional and academic backgrounds to mix and exchange ideas relevant to policy making, analysis and implementation.

Depending on each student's educational qualifications and work experience, students are required to complete at least 48 credit points in subjects, including the two core subjects, in the Maritime Policy schedule and other approved postgraduate subjects (or such greater number as may be required in individual cases)

Master of Arts

The degree is intended to enable groups of varying academic and professional

backgrounds to develop their knowledge and analytical skills in relation to a wide range of maritime policy issues, broadly defined. The program is expected to be especially useful to prospective government officials, analysts and other practitioners engaged in maritime and related activities, including the Navy, commercial shipping, port management, fisheries and marine environmental protection.

The program consists of an interdisciplinary core of two compulsory subjects, plus a range of options which allow students to specialise in particular disciplines, and to acquire a broader acquaintance with the field as a whole.

In addition to formal course requirements, students take part in a variety of other professional activities, including specialist seminars.

SUBJECT DESCRIPTIONS

MPOL901 National Dimensions of Maritime Policy

Autumn session; 8 credit points (3 hrs per wk of lecture/seminar).

Assessment: 7,500 words in essays and seminar papers.

The subject introduces students to the field

of maritime policy. It provides an overview of conceptual approaches and analytical tools used in public policy analysis as well as an introduction to major substantive areas of national maritime policy. It is interdisciplinary in nature, and participants are encouraged to bring a broad perspective to policy analysis through the use of concepts used in economics, science, management, law and politics. Particular policy areas to be considered include defence, marine industry, marine science and technology, offshore resource development, integrated coastal management, coastal surveillance, shipping and port development and oceans policy. The subject compares and contrasts Australia's experience with maritime policy with that of other countries, particularly the United States of America and Canada. Particular attention is paid to regional maritime policy concerns in the South Pacific and Southeast Asia.

Pre-reading:

Hoole, FW, Friedheim, RL and Hennessey, TM (eds), *Making Ocean Policy - The Politics of Government Organisation and Management*, Boulder, Colorado, Westview, 1981.

Co-ordinator: Professor EP Wolfers.

MPOL902 International Issues in Maritime Policy

Spring session; 8 credit points (3 hrs per wk of lecture/seminar).

Assessment: 7,500 words in essays and tutorial papers.

The subject examines maritime policy issues in an international context. In doing so, it deals with humanity's usage of the sea in a historical context and the foreign policy implications of maritime policy. It addresses international factors including the legal framework and theories of maritime power and strategy, before examining the emergence of international regimes in the maritime environment. Particular regimes considered include the legal regime, environment regime, resources regime, the trade, shipping, and ports regimes, and finally the illegal activities regimes.

Textbooks: to be advised.

Co-ordinator: Professor EP Wolfers.

MPOL911 Maritime Transport I: International Shipping

Autumn session; 8 credit points (3 hrs per wk of lecture/seminar).

Assessment: 7,500 words in essays and tutorial papers.

This subject focuses on the way in which the international shipping market is structured and operates. It examines the determinants of supply and demand for shipping and the factors which have been, and are, responsible for changes in the market. It looks at individual submarkets — dry bulk, tankers and liner shipping, for example; and at freight rates and the pricing of shipping services. It pays special attention to recent developments in shipping including developments in containerisation, hub and feeder operations and intermodalism. It also looks at shipping developments in Southeast Asia and Pacific region countries; and at Australian flag shipping and changes in Australian shipping policy.

Textbooks: to be advised.

Co-ordinator: Associate Professor R Robinson.

MPOL912 Maritime Transport II: Port Development

Spring session; 8 credit points (3 hrs per wk of lecture/seminar).

Assessment: 7,500 words in essays and tutorial papers.

This subject deals with the strategic development of ports. It assesses a number of approaches to the way in which ports are planned; and pays particular attention to the concepts of competitive efficiency and competitive advantage. It examines issues of port performance, port pricing and port investment policies. The subject reviews recent developments in Australian port development policy and in the development policies of ports in New Zealand, Southeast Asia and the Pacific Region.

Textbooks: to be advised.

Co-ordinator: Associate Professor R Robinson.

MPOL920 Marine Environmental Management

Spring session; 8 credit points (56 hrs lecture/seminar per session).

Pre-requisite: Students would normally be expected to have completed an undergraduate degree with a significant science component.

Assessment: 2 essays (10% each), 1 research

report (40%) and final examination (40%).

This subject covers topics designed to give students a comprehensive overview of the scientific basis of maritime environmental management. The subject adopts a multi-disciplinary approach to the scientific understanding of how major marine ecosystems work and shows how an appreciation of such knowledge leads to the development of appropriate management strategies for these systems. While there is some emphasis on the Australian situation, much of the material is applicable in any country. The systems covered include estuaries, reefs, coastal wetlands and lagoons. In addition, the science of the management of hazardous wastes (including radioactive materials) is discussed. Case studies from Australia, South-East Asia and the Pacific Islands are included. As part of the subject, students complete a team project to facilitate the development of interdisciplinary skills and an appreciation of the benefits of teamwork in addressing environmental management issues.

Textbooks:

Libes, S, *Introduction to Marine Biogeochemistry.*

Co-ordinator: Professor J Morrison.

MPOL921 Marine Environmental Planning

Autumn session; 8 credit points (56 hrs lecture/seminar per session).

Assessment: 2 essays (10% each), 1 research report (40%) and final examination (40%).

This subject presents material necessary for a comprehensive overview of the status and development of maritime environmental planning in government and industry. Students are introduced to the principles of environmental planning. This is followed by presentations from staff from a wide range of organisations involved in environmental planning in order to highlight and explain the mechanisms, difficulties and benefits of current planning activities in Australia. While the emphasis is on the Australian situation, reference to activities in other countries are included, in addition to aspects of the global situation regarding environmental planning. As part of the subject, students complete a team project to facilitate the development of interdisciplinary skills and an appreciation of the benefits of teamwork in addressing environmental management issues.

Textbooks: to be advised.

Co-ordinator: Professor J Morrison.

MPOL931 International Maritime Environmental Law

Autumn session; 8 credit points (3 hrs per wk of lecture/seminar).

Assessment: 7,500 words in essays and seminar papers.

This subject uses as its conceptual framework sovereignty and sovereign rights. Students will be introduced to the concept of Port State and Flag State responsibilities and powers; pollution controls in zones of jurisdiction, marine resource conservation, pollution control on the high seas; pollution control in the Area; the role of international and regional institutions within the subject's conceptual framework and the effectiveness of current marine environmental protection rules.

Textbooks: to be advised.

Co-ordinator: Professor M Tsamenyi.

MPOL932 The Law of the Sea

Spring session; 8 credit points (3 hrs per wk of lecture/seminar).

Assessment: 7,500 words in essays and seminar papers.

This subject examines the evolving law of the sea from an historical perspective; examines maritime zones of jurisdiction (internal waters; territorial sea; contiguous zone; the exclusive economic zone; the high seas; the continental shelf and the Area); navigational regimes (transit passage, innocent passage, archipelagic sea lanes passage); maritime boundary delimitation and marine resources law (fisheries and oil/natural gas).

Textbooks: to be advised.

Co-ordinator: Professor M Tsamenyi.

MPOL941 History and Politics of Sea Power

Autumn session; 8 credit points (3 hrs per wk of lecture/seminar).

Assessment: 7,500 words in essays and seminar papers.

This subject reviews the evolution of theories of sea power and maritime strategy from the early theorists of the nineteenth century to the post-Cold War tacticians of today. It addresses the relationship between ideas about the use of naval force and the actual history and politics of maritime power. In this respect, it evaluates the ideas of geopoliticians from Admiral Alfred Thayer Mahan and Sir Halford Mackinder through Nicholas Spykman and the planners of Total War to post-Cold War experts like Colin S Gray and his ilk. It relates the work of these theorists to the emergence of naval force and counterforce in the modern world. It also examines the development of seapower in peacetime as an instrument of state policy from the days of Gunboat Diplomacy to the age of United Nations peacekeeping at sea.

Textbooks:

Gray, CS, *The Geopolitics of Super Power*, Lexington, Ky, University Press of Kentucky, 1988.

Kemp, P, *The Oxford Companion to Ships and the Sea*, Oxford, Oxford University Press, 1993.

Paret, P, (ed), *Makers of Modern Strategy: From Machiavelli to the Nuclear Age* Princeton, University Press, 1986.

Co-ordinator: Dr P Sales/Professor EP Wolfers.

MPOL951 Selected Topics in Maritime Policy (1)

Autumn session; 8 credit points (3 hrs per wk of lecture/seminar).

Assessment: 7,500 words in essays and seminar papers.

This subject provides students with the opportunity to undertake a closely supervised programme of study, including reading and other appropriate forms of research, in an approved, specialist area of Maritime Policy.

Textbooks: to be advised.

Co-ordinator: Professor EP Wolfers.

MPOL952 Selected Topics in Maritime Policy (2)

Spring session; 8 credit points (3 hrs per wk of lecture/seminar).

Assessment: 7,500 words in essays and seminar papers.

This subject provides students with the opportunity to undertake a closely supervised programme of study, including reading and other appropriate forms of research, in an approved, specialist area of Maritime Policy. (This subject covers a different range of topics from those covered in MPOL 951 Selected Topics in Maritime Policy (1).)

Textbooks : to be advised.

Co-ordinator: Professor EP Wolfers.

MODERN LANGUAGES

The Department of Modern Languages offers a range of undergraduate programs in French, Italian, Spanish and Japanese. The Department has a strong commitment to research and accepts postgraduate students in French, Italian, Spanish and Japanese. In recent years, computer-aided language learning has been one of the focal points of departmental research.

FACILITIES

The Department has a fully equipped language laboratory and private study laboratory. There is also a computer laboratory for language learners. The Department has extensive collections of recorded audio and video materials in French, Italian, Spanish and Japanese.

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Arts by Research
3. Graduate Diploma in Arts (European Studies)

Doctor of Philosophy

Refer to *Course Offerings* for details regarding the Doctor of Philosophy.

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master of Arts degree by research and the Doctor of Philosophy degree:

19th Century French novel
 Society and medicine in the novels of Balzac
 French and European minorities
 Computer-aided language learning (French, Italian, Spanish, Japanese)
 Linguistics applied to the teaching of French and Japanese as a second language
 Intonation analysis
 Language teaching methodology and materials development at the secondary and tertiary levels
 War, armies and society of early modern Iberia
 The Habsburg government of Portugal and War of Portuguese Independence, 1580-1668
 Local government in early modern Spain
 20th Century Italian novel and society
 Federico De Roberto and The 'Secondo Ottocento'
 The Italian 'Melodramma'
 Private life in 13th and 14th century Italian novellistica
 Italo-Australian studies
 Multilingual broadcasting in Australia
 Italian lexicography
 Translation (English-Italian, Italian-English)
 Contrastive linguistics: English-Italian, English-Japanese
 Systemic functional linguistics: Japanese
 Japanese language education
 Japanese theatre and literature
 Japanese economic and social issues

Honours Master of Arts

Students entering the program with an Honours degree at a standard of at least Class II, Division 2 will be required to complete a major thesis.

Number	Subject	Credit Points
MLCF975		
or		
MLCI975	Major Thesis	48

Graduate Diploma in Arts (European Studies)

The purpose of the Graduate Diploma in Arts is to provide in a recognised university course a means for graduates with limited acquaintance with European languages, thought and culture to acquire competence in these areas at a reasonably advanced level.

Students are required to complete 28 credit points from the Arts schedule under Languages, with the remaining 20 credit points to be chosen from subjects listed by other departments in the Arts schedule. These will be approved by the Head of Department of Modern Languages.

PHILOSOPHY

COURSES OFFERED

The following postgraduate courses are available:

1. Graduate Diploma in Arts
2. Master of Arts (Applied Ethics)
3. Honours Master of Arts by Research or Coursework
4. Doctor of Philosophy

POSTGRADUATE PROGRAMS

Philosophy

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master of Arts degree by research and the Doctor of Philosophy degree:

Aesthetics

The definition of art
Make-believe
Truth in fiction
New Guinea tribal art

Epistemology and Metaphysics

Coherence theories of knowledge and truth
Perception
Realism and irrealism
Identity
Essentialism

History of Philosophy

Kant
The Empiricists

Logic

Modal logic
Deviant logics

Ethics (Theoretical and Applied)

Responsibility: action, motive, intention, justification and excuse
The doctrine of double effect
Freedom and the will
Issues in moral psychology, eg weakness and strength of will
Moral reasoning
Moral realism
Autonomy and paternalism
Consequentialism
Rights theory
Virtues and vices
Bioethics
Criminal justice ethics
Environmental ethics

Philosophy of Language

Theories of communication and interpretation
Truth and reference
Propositional attitude ascriptions

Philosophy of Mind and Action

Cognitive Science
Theories of the mind
The causal theory of action
Act individuation
Issues in philosophical psychology, eg self-deception, belief and the will, reason and desire, etc

Philosophy of Religion

The existence of God
God's nature and attributes

Philosophy of Law and Jurisprudence

Legal and political obligation
Legal reasoning
Interpretation in the law
Natural law theory
Criminal responsibility

CURRENT RESEARCH AREAS (cont'd)

The following areas of research are available to candidates undertaking the Honours Master of Arts degree by research and the Doctor of Philosophy degree:

Philosophy of Feminism
Philosophy of the Emotions
Philosophy of Literature

Political Philosophy

Liberalism
 Socialism
 Consent theory
 Authority
 Social contract theory of the state
 Self-determination and secession
 Privacy
 Property
 Just war theory
 Theories of justice

SCHEDULE OF PROGRAMS**POSTGRADUATE PROGRAM IN PHILOSOPHY**

leading to the Honours Master of Arts or Master of Arts (Applied Ethics).

Number	Subject	Credit Points
(i) Master of Arts		
<i>Core</i>		
PHIL923	Minor Thesis	24
<i>Electives</i>		
PHIL933	Advanced Logic	6
PHIL943	Advanced Political Philosophy	6
PHIL953	Advanced Philosophy of Value	6
PHIL963	Advanced Epistemology and Metaphysics	6
PHIL973	Advanced Philosophy of Mind and Action	6
PHIL983	Advanced Philosophical Problems	6
(ii) Master of Arts (Applied Ethics)		
<i>Core</i>		
PHIL935	Applied Ethics	8
PHIL955	Theoretical Ethics	8
PHIL923	Minor Thesis	24
<i>Electives</i>		
PHIL965	Bioethics	8
PHIL975	Professional Ethics and Responsibility in Health Care	8
PHIL985	The Ethics of Institutional Dispute Resolution	8
PHIL995	Environmental Ethics	8

For further details, see *Course Requirements* below.

OTHER POSTGRADUATE SUBJECTS

Number	Subject	Credit Points
PHIL913	Advanced Philosophical Topics	48
PHIL990	Feminist Political Philosophy	8
PHIL999	Major Thesis	48

COURSE REQUIREMENTS**1. GRADUATE DIPLOMA IN ARTS**

The purpose of the Graduate Diploma in Arts is to provide, in a recognised University course, a means for graduates with limited acquaintance with logic and philosophy to acquire competence in these subjects at a reasonably advanced level. The Graduate Diploma shall be subject to the University Course Rules for the award of Graduate Diplomas together with the following conditions.

- (1) Candidates are required to complete subjects totalling 48 credit points from those listed in the General or the Arts Schedules under 'Philosophy'. Of these at least 24 must be from 300-level subjects and the remainder from 200-level subjects.
- (2) A candidate may not include in his or her graduate diploma program any course component which substantially duplicates a subject or part of a subject previously passed by the candidate as part of any degree or diploma already held or previously attempted.
- (3) The selection of courses and the program of study shall be approved by the Head of the Department.
- (4) A full-time candidate shall normally complete the diploma in one academic year, a part-time candidate in no less than two and no more than three academic years.
- (5) Admission to candidature for the Graduate Diploma is on the recommendation of the Head of the Philosophy Department who shall assess the applicant's aptitude for sustained philosophical study at a reasonably advanced level.

2. MASTER OF ARTS (APPLIED ETHICS)

The Master of Arts (Applied Ethics) aims to provide professionals and others who have a general interest in applied ethics with a philosophical education in one or more areas of applied ethics. Applied areas on offer in 1994 (subject to enrolments) are: Bioethics, Professional Ethics and Responsibility in Health Care, The Ethics of Institutional Dispute Resolution and Environmental Ethics.

It has become increasingly obvious with the proliferation of ethics committees and the demand for public accountability that health care professionals, public policy makers, lawyers, public servants, business people, scientists, researchers, and so on, are required to make well-reasoned, informed judgements about issues that are essentially ethical. Such judgements require philosophical expertise - one needs to be able to recognize the factual and evaluative complexity of the issues, to recognize evaluative issues as evaluative, critically to evaluate competing ethical claims, and to reason to a conclusion soundly. Yet the development of such expertise is typically not included in the professional training of people who are called to act as ethical decision-makers. The Master of Arts (Applied Ethics) helps make good this lack.

It would be expected that students undertaking the course would benefit at least in the following ways. First, they would sharpen their critical reasoning skills. Second, they would gain a good grounding in ethical theory and a comprehensive understanding of the specific issues in their chosen applied area. Third, they would enhance their ability to make difficult, ethically sensitive decisions.

The Master of Arts (Applied Ethics) is a course in applied philosophy, in which ethical theory, as studied in a core subject (PHIL955 - Theoretical Ethics) is applied to various areas of practical concern. The course is co-taught by members of the Philosophy Department and lecturers from the Faculties of Law and Health and Behavioural Sciences.

Candidature is open to holders of a Bachelor's degree (pass or honours) in any field or others who satisfy the Board of Research and Postgraduate Studies of comparable professional standing or attainments. The Degree is available by Coursework and Minor Thesis.

Candidates shall successfully complete a program of 48 credit points, normally comprising a minor thesis (24 credit points) in applied ethics, together with the two core subjects (8 credit points each) PHIL935 and PHIL955 and one elective (8 credit points) from PHIL965, PHIL975, PHIL985 and PHIL995. Candidates who have done PHIL206, or equivalent, are required to take one core subject PHIL955 and two electives. Candidates who have done PHIL251/301, or equivalent, are required to take one core subject PHIL935 and two electives.

3. HONOURS MASTER OF ARTS

(a) Honours Master of Arts by Research
The purpose of the Honours Master of Arts by research is to enable suitably qualified graduates to make a significant independent contribution to Philosophy. Graduates who hold an Honours Bachelor degree (with a minimum of Honours Class II, Division 2) or equivalent may, if recommended for candidature, undertake PHIL999 Major Thesis (48 credit points). All other candidates must if recommended for admission, normally complete PHIL913 Advanced Philosophical Topics (48 credit points) with an average grade of distinction or better prior to enrolling in PHIL999.

(b) Honours Master of Arts by Coursework

The purpose of the Honours Master of Arts by Coursework in Philosophy is to enable suitably qualified graduates (ie graduates with Honours Class II or its equivalent or who have completed PHIL913 with an average grade of distinction or better) to undertake at advanced level coursework in areas which were not included at the appropriate level, in their undergraduate program, while pursuing a minor research project. Candidates must take subjects to the total value of 24 credit points from the schedule of graduate subjects in Philosophy, together with PHIL923 Minor Thesis.

4. DOCTOR OF PHILOSOPHY

For this degree, candidates enrol in the subject PHIL999 Thesis.

SUBJECT DESCRIPTIONS

PHIL913 Advanced Philosophical Topics

Double session (A); 48 credit points (variable combination of seminars, lectures and lecture/discussions).

Pre-requisites: entry is restricted to students seeking admission to the Honours Masters degree who do not have at least an Honours Class II, Division 2 degree in Philosophy but have attained an average of credit or better in their post-100 level undergraduate philosophy subjects.

Assessment: essays and written examinations as laid down in the requirements for such components as are approved or prescribed.

An approved or prescribed selection of courses provided by the Department under other designations deemed by the Head of the Department to be appropriate as a foundation for postgraduate studies, given the background and intended pursuits of the individual student.

Textbooks

As laid down in the requirements for the component courses.

Co-ordinator: Associate Professor R Dunn.

PHIL923 Minor Thesis

Double session (A); 24 credit points.

PHIL933 Advanced Logic

Double session (A); 6 credit points (variable combination of seminars, lectures and lecture-discussions).

Assessment: examination, assignments and/or essays as determined by the subject co-ordinator. An advanced study of issues in philosophical logic.

Co-ordinator: Dr J Burgess.

PHIL935 Applied Ethics

Autumn session; 8 credit points (3 hrs per wk). Pre-requisite: Bachelor's degree (pass or honours) in any field, or equivalent. Not to count with PHIL206.

Assessment: 60% major research assignment, 40% seminar participation and papers.

A systematic study of a range of problems of applied ethics. Among the topics for discussion will be a selection of the following: Discrimination and Affirmative Action; Animal Rights and the Environment; Sexual Issues; Civil Disobedience; Punishment; Censorship; Warfare; Nuclear Deterrence; Hunger and Welfare; Suicide and Death.

Textbooks:

No set text. Selected reading material will be prescribed by the lecturers.

Co-ordinator: Dr J Burgess.

PHIL943 Advanced Political Philosophy

Double session (A); 6 credit points (variable combination of seminars, lectures and lecture/discussions).

Assessment: examination, assignments and/or essays as determined by the subject co-ordinator. An advanced study of issues in political philosophy.

Co-ordinator: Dr H Beran.

PHIL953 Advanced Philosophy of Value

Double session (A); 6 credit points (variable combination of seminars, lectures and lecture-discussions).

Assessment: examination, assignments and/or essays as determined by the subject co-ordinator. An advanced study of issues in the philosophy of value - eg ethics or aesthetics.

Co-ordinator: Dr S Uniacke.

PHIL955 Theoretical Ethics

Spring session; 8 credit points (3 hrs per wk). Pre-requisite: Bachelor degree (pass or honours) in any field, or equivalent. Not to count with PHIL251 or PHIL301.

Assessment: 60% major research assignment, 40% minor participation and papers.

A systematic study of some central issues in moral philosophy and moral psychology. Among the topics for discussion will be a selection of the following: subjectivist and objectivist theories of morality; facts and values; moral realism; consequentialism; virtues and vices; evaluative thinking and motivation; morality and self-interest.

Textbooks:

No set text. Selected reading material will be prescribed by the lecturers.

Co-ordinator: Associate Professor R Dunn.

PHIL963 Advanced Epistemology and Metaphysics

Double session (A); 6 credit points (variable combination of seminars, lectures and lecture-discussions).

Assessment: examination, assignments and/or essays as determined by the subject co-ordinator. An advanced study of issues in epistemology and metaphysics.

Co-ordinator: Dr D Simpson.

PHIL965 Bioethics

Spring session; 8 credit points (3 hrs per wk).

Pre-requisite: Bachelor degree (pass or honours) in any field, or equivalent.

Assessment: 60% major research assignment, 40% seminar participation and papers.

A systematic study of a range of problems in bio-medical ethics. Among the topics for discussion will be a selection of the following: euthanasia; abortion; *in vitro* fertilization and anonymous donor programs; human embryo and foetal research; genetic engineering; surrogacy; moral problems of decision-making in health care and the allocation of health resources; organ transplantation; experimentation involving human subjects.

Textbooks:

No set text. Selected reading material will be prescribed by the lecturers.

Co-ordinator: Dr S Uniacke.

PHIL973 Advanced Philosophy of Mind and Action

Double session (A); 6 credit points (variable combination of seminars, lectures and lecture-discussions).

Assessment: examination, assignments and/or essays as determined by the subject co-ordinator.

An advanced study of issues in the philosophy of mind and/or action.

Co-ordinator: Associate Professor R Dunn.

PHIL975 Professional Ethics and Responsibility in Health Care

Spring session; 8 credit points (3 hrs per wk).

Pre-requisite: Bachelor degree (pass or honours) in any field, or equivalent.

Assessment: 60% major research assignment, 40% seminar participation and papers.

A systematic study of a range of problems within the health care system. Among the topics for discussion will be a selection of the following: responsibility and autonomous professional practice - agent responsibility and negligence; informed consent and problems surrounding confidentiality; the health-care practitioner and the role of patient advocacy; the relationship between personal and professional ethics - role conflict and role ambiguity.

Textbooks:

No set text. Selected reading material will be prescribed by the lecturers.

Co-ordinator: Dr S Dodds.

PHIL983 Advanced Philosophical Problems

Double session (A); 6 credit points (variable combination of seminars, lectures and lecture-discussions).

Assessment: examination, assignments and/or essays as determined by the subject co-ordinator.

An investigation at an advanced level of one or more philosophical problems.

Co-ordinator: Associate Professor R Dunn.

PHIL985 The Ethics of Institutional Dispute Resolution

Spring session; 8 credit points (3 hrs per wk).

Pre-requisite: Bachelor degree (pass or honours) in any field, or equivalent.

Assessment: 60% major research assignment, 40% seminar participation and papers.

A systematic study of the ethical problems faced by participants in adversarial systems, mediation, arbitration, conciliation and related processes. The subject will critically examine conventional justifications for the

conduct of lawyers in the adversary system. These will be contrasted with the ethical obligations of decision makers in emerging alternative systems of dispute resolution.

Textbooks:

No set text. Selected reading material will be prescribed by the lecturers.

Co-ordinator: Dr J Burgess.

PHIL990 Feminist Political Philosophy

Autumn session; 8 credit points (3 hrs per wk).

Pre-requisite: Bachelor degree (pass or honours) in any field, or equivalent.

Assessment: two 3,000 word essays (40% each) and seminar participation including a seminar presentation (20%).

This subject critically examines some themes in contemporary feminist political philosophy. Topics include the roles envisaged for women, children and families in traditional liberal, conservative and socialist political theory and the responses of feminist political theorists to these accounts. Communitarian political theories will also be examined from a feminist perspective. Particular emphasis will be placed on the tensions between ideals of citizenship and women's reproductive capacities; tensions among ideals of justice and equality and the cultural subordination of woman's role and the theoretical problems which arise in attempts to distinguish the 'political life' of a state from the 'private lives' of the citizenry.

Textbooks:

Shanley, ML and Pateman, C (eds), *Feminist Interpretations and Political Theory*, Polity, 1991.

Co-ordinator: Dr S Dodds.

PHIL995 Environmental Ethics

Spring session; 8 credit points (3 hrs per wk).

Pre-requisite: Bachelor degree (pass or honours) in any field, or equivalent. Not to count with PHIL256.

Assessment: 60% major research assignment, 40% seminar participation and papers.

A systematic study of problems of environmental ethics. Among the topics for critical discussion will be a selection of the following: the place of humankind in nature and the ethical principles that ought govern our treatment of the environment; the ethics of research using non-human animals, and the use and production of non-human animals for food, clothing, etc; the nature and extent of our moral obligations to the third world and to future generations; 'deep' versus 'shallow' theories of environmental ethics; whether a new, environmental ethic is necessary.

Textbooks:

No set text. Selected reading material will be prescribed by the lecturers.

Co-ordinator: Dr J Burgess.

PHIL999 Major Thesis

Double session (A); 48 credit points.

POLITICS

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Arts by Research
3. Master of Arts

POSTGRADUATE PROGRAM

Politics

CURRENT RESEARCH AREAS

Areas in which research can be supervised in 1996 include aspects of the following:

Australian politics, including public policy and foreign relations
 Comparative politics
 International relations
 Politics of development/underdevelopment
 Politics in state socialist societies
 South Pacific politics
 United States politics
 Political theory
 Mass media
 Urban politics
 Australian Political Thought

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN POLITICS

leading to the Master of Arts.

Number	Subject	Credit Points
POL902	Advanced Topics in Australian Politics	12
POL903	Issues in Australian Public Policy	12
POL914	Power and the Modern State	12
POL922	Advanced International Relations	12
POL931	From Revolution to Reform in CIS, Eastern and Central Europe	12
POL932	Contemporary Chinese Politics	12
POL941	Government and Politics in the South Pacific Islands Region	12
POL984	Power and the Modern State: Advanced Topics	8

For further details, see *Course Requirements* below.

OTHER POSTGRADUATE SUBJECT

Number	Subject	Credit Points
POL951	Major Thesis	48

COURSE REQUIREMENTS

1. DOCTOR OF PHILOSOPHY

Candidates for this degree enrol in POL951.

2. HONOURS MASTER OF ARTS

Candidates for this degree enrol in POL951.

3. MASTER OF ARTS

The Master of Arts program is intended to enable graduates with suitable grounding in Politics and/or related disciplines (such as History, Philosophy, Sociology, Law, Economics) to undertake advanced studies in Politics, either for its own sake or as a relevant background to careers in social science teaching, public administration, journalism, and public affairs in government and the private sector.

Intending applicants should consult the Professor of Politics before enrolling in order

to ascertain their eligibility as well as the subjects on offer each year.

Course requirements are a minimum of 48 credit points chosen from the Politics schedule. Teaching will emphasise small-group discussions, flexibility and independence.

SUBJECT DESCRIPTIONS

POL902 Advanced Topics in Australian Politics

Autumn session; 12 credit points (3 hrs per wk lectures and tutorials).

Assessment: 9,000 words of essays and tutorial papers.

The subject provides opportunities for detailed study at an advanced level of significant issues, institutions and processes affecting politics in Australia. The focus is on public policy and on the exploration and application of significant theoretical

questions. Systematic comparisons are made with other advanced industrial countries. Students are helped and encouraged to undertake small-scale research projects of their own.

Textbook: to be advised.

Co-ordinator: refer to Department.

POL903 Issues in Australian Public Policy

Spring session; 12 credit points (4 hrs per wk lectures and tutorials).

Assessment: review of 1,000 words 10%, essay of 2,500 words 25%, critique of 2,500 words 25% and research paper of 3,000 words 40%.

This subject examines, at an advanced level, the policy options for Australian Governments in the 1990s in the light of contemporary policy debates: the Accord, equal opportunities, tariff policy, privatisation, reducing the size of the government sector, deregulation and environmentally sustainable growth. It focuses on Government - industry relations

and the options for politically achievable macro and micro reform. Consideration will be given to the limitations created by the structure of the international political system.

Textbook: to be advised.

Co-ordinator: Dr S Reglar.

POL914 Power and the Modern State

Spring session; 12 credit points (3 hrs per wk lectures and tutorials).

Assessment: 9,000 words in essays and tutorial papers.

The subject examines a variety of perspectives on the nature and exercise of power in the modern state. It includes an advanced study of contemporary liberal, socialist and conservative writings on power and the state in modern advanced industrial countries, including Australia and countries in Europe, East Asia and North America. Concepts such as authority, processes such as legitimisation, and relationships between classes, interest groups, social movements and the state are analysed in detail. Students are encouraged to pay close attention to issues in which they have particular interest, experience and/or expertise.

Textbook:

Held, D, et al (eds), *States and Societies*, Milton-Keynes: Open University, Texts, 1983.

Co-ordinator: Dr G Melleuish.

POL922 Advanced International Relations

Spring session; 12 credit points (3 hrs per wk lectures, seminars and tutorials).

Assessment: 9,000 words in essays, seminar and tutorial papers.

This subject analyses theories, concepts and approaches to the advanced study of international relations, including feminist perspectives. Competing conceptions of and change in, the international order are examined. Alliances, blocs and other forms of international co-operation (including regional and functional) co-operation are discussed. Issues studied include: security, diplomacy, foreign policy, and the role of government in international economic relations. The roles of non-government influence and relations, including the development and impact of foreign and international opinion on issues such as human rights; the role of the press and mass communications; and the growth and consequences of other trans-national links are analysed in the light of the theories outlined above. Students are encouraged and helped to undertake small-scale research projects of their own, focussing on Australia and the Asia-Pacific region(s).

Textbook: to be advised.

Co-ordinator: Professor E P Wolfers.

POL931 From Revolution to Reform in CIS, Eastern and Central Europe

Autumn session; 12 credit points (3 hrs per wk lectures and tutorials).

Assessment: 9,000 words in essays and tutorial papers.

This subject examines the collapse of the reforms in state socialist countries in the CIS, Eastern and Central Europe. It analyses the reasons for the loss of legitimacy of Leninist political systems and the role of

social movements in the crisis of state socialism. The implications of changes in the domestic and foreign policies of the former nations of the USSR and Eastern and Central Europe for the "Balance of Power" in international relations are examined through consideration of special case studies. Competing explanations of the power structure of state socialism and post soviet-type societies and international political economy are examined to determine what such approaches offer as explanations of current inter-state tensions and the crises facing the respective governments.

Textbooks: to be advised.

Co-ordinator: Dr S Reglar.

POL932 Contemporary Chinese Politics

Spring session; 12 credit points (4 hrs per wk lectures and tutorials).

Assessment: 2 x 3,000 word essays each 25%, 1 x 2,000 word essay 20%, 1 x 1,000 word tutorial paper 10%, Journal 20%.

This subject examines the reasons for reform in the government and administration of the Peoples' Republic of China. Issues studied include foreign policy, the role of ideology, the legacy of Mao Zedong, the Communist Party, law and policing, the role of intellectuals, theoretical debates in political economic policy, approaches to technological modernisation, industrial organisation, gender and family policy and problems of rural and urban life.

Textbooks:

Brugger, B, and Reglar, S, *Politics, Economy and Society in Contemporary China*, London, Macmillan, 1994.

Mackerras, C, Taneja, P, and Young, G, *China Since 1978: Reform, Modernisation and 'Socialism with Chinese Characteristics'*, Melbourne, Longman Cheshire, 1994.

White, G, *Riding the Tiger*, Macmillan, London, 1993.

Co-ordinator: Dr S Reglar.

POL941 Government and Politics in the South Pacific Islands

Autumn session; 12 credit points (3 hrs per wk lectures, seminars and tutorials).

Assessment: 9,000 words in essays, seminar and tutorial papers.

The subject analyses pre-colonial and colonial politics and government in the South Pacific islands. Particular attention is paid to nationalism, political parties and other forms of popular mobilisation, and decolonisation. Issues studied include constitution making, independence, and post-independence political arrangements, including challenges to the authority of successor states. The role of politics, government, policy-making and implementation, including the impact of external forces (aid donors, lenders, investors, etc) is discussed. Students are encouraged to undertake detailed case-studies of particular issues, institutions, countries or regions; to draw on, apply and test relevant bodies of theory; and to make systematic comparisons (which need not be confined to the region).

Textbook: to be advised.

Co-ordinator: Professor E P Wolfers.

POL984 Power and the Modern State: Advanced Topics

Spring session; 8 credit points (3 hrs of lectures/tutorials).

Assessment: 7,500 words in essays/tutorial papers.

This subject examines a variety of perspectives on the nature and exercise of power in the modern state. It includes an advanced study of contemporary liberal, socialist and conservative writings on power and the state in modern advanced industrial countries, including Australia and countries in Europe, East Asia and North America. Concepts such as authority, processes such as legitimisation, and relationships between classes, interest groups, social movements and the state are analysed in detail. The implications of the preceding analyses for human rights, equal opportunities, freedom and justice are explained. Students are encouraged to pay close attention to issues in which they have particular interest, experience and/or expertise.

Textbook: to be advised.

Co-ordinator: Dr G Melleuish.

POL951 Major Thesis

Double session (A); 48 credit points.

Assessment: Thesis.

In addition to completing a major thesis, in close consultation with their appointed supervisor(s), postgraduate students are required to attend postgraduate seminars and to give work-in-progress seminars at least once a year. Students may also be required to complete such coursework as the Professor of Politics, acting in consultation with the supervisor(s), shall determine.

SCIENCE AND TECHNOLOGY STUDIES

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Arts by coursework and/or research
3. Master of Arts (Science and Technology Studies)
4. Graduate Diploma in Arts

POSTGRADUATE PROGRAMS

Science and Technology Studies

CURRENT RESEARCH AREAS

The following areas of research available to candidates undertaking the Honours Master of Arts degree by research and the Doctor of Philosophy degree include:

Environment and socio-technical change
 Science, technology and public policy
 Political sociology of scientific knowledge
 The social and economic context of technological change
 Technology policy and industrial performance
 The politics of medicine and health
 Women and science
 Evolutionary theory in the nineteenth century
 Scientific controversy and the sociology of knowledge
 Darwinism, social Darwinism and neo-Darwinism
 The impact of genetics in agriculture and medicine
 The social impact and politics of information and communications technology
 Politics of atmospheric crisis
 Philosophy and sociology of scientific change
 Technical, ideological and institutional origins of Mechanism and Cartesianism 1600-1660
 Structure of scientific discourses - 'systems of nature', and doctrines of 'method'
 History and Sociology of technology
 Work, automation and employment
 Artificial intelligence and social control
 Technical controversies and political intervention
 Risk assessment and the politics of hazard
 Energy strategies and organisation for sustainable development
 Peace and war

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN SCIENCE AND TECHNOLOGY STUDIES

leading to the Honours Master of Arts (Program 1).

Number	Subject	Credit Points
Core:		
STS901	Theories and Methods of Science and Technology Studies	12
STS921	Dynamics of Science and Technology	12
STS902	Advanced Topics in Science & Technology Studies	12
STS909	Topics in History of Western Science and Technology	12
<i>plus either</i>		
STS903	Minor Thesis	24
<i>and</i>		
Electives		24
<i>or</i>		
STS924	Major Thesis	48
Electives:		
STS910	Gender and Body Politics	8
STS914	Master Narratives, Myth and Symbolic Politics in Science	12
STS929	Studies in Resource and Environmental Policy	8
STS931	Risk Assessment, Health & Safety	12
STS933	Energy and Technological Development	12
STS934	Genetics and Technological Innovation	12
STS935	The Impact of Computers and Communication Technology	12
STS936	Critical Studies in Medicine and Health	12

For further details, see *Course Requirements* below.

POSTGRADUATE PROGRAM IN SCIENCE AND TECHNOLOGY STUDIES

leading to the Master of Arts (Program 2).

Number	Subject	Credit Points
STS921	The Dynamics of Science and Technology	12
STS901	Theory and Methods of Science and Technology Studies	12
STS902	Advanced Topics in Science and Technology Studies	12
STS951	Research Report	12

For further details, see *Course Requirements* below.**COURSE REQUIREMENTS****1. DOCTOR OF PHILOSOPHY**

Candidates for this degree enrol in STS999.

2. HONOURS MASTER OF ARTS

The Department of Science and Technology Studies offers Honours Masters programs to students with a background in Science and Technology Studies who wish to pursue their studies at a higher level.

PROGRAM 1 - Honours Master of Arts (Science and Technology Studies)

This program is open to students with a substantial background in Science and Technology Studies who wish to pursue their studies at a higher level. Students entering the program with a degree in Science and Technology Studies, or its equivalent (as determined by the Head of Department), at a standard below Honours Class II, Division 2 will be required to complete subjects with a value of at least 96 credit points. Those with an Honours degree in Science and Technology Studies, or its equivalent, at a standard of Class II, Division 2 or higher will be required to complete subjects with a value of at least 48 credit points.

Students required to complete 96 credit points must complete 48 credit points before they enrol in either STS903 Minor Thesis, or STS924 Major Thesis, one of which must be completed by all students enrolled in Program 1.

3. MASTER OF ARTS

Science and technology play central and crucial roles in our society. Their social and economic implications are becoming increasingly important and contentious issues. This postgraduate course is offered by the Department of Science and Technology Studies to science, applied science, humanities and social science graduates who wish to further their understanding of the forces shaping science and technology and their social, economic and political dimensions in modern industrial society.

PROGRAM 2 - Master of Arts (Science and Technology Studies)

This program offers a coherent set of courses in the area of science and technology in their socio-economic and political contexts, together with a research component.

The degree of Master of Arts in Science and Technology Studies has been designed for

graduates without an extensive STS background and is of particular relevance to those employed in government, administration and management, teaching and educational planning; and relevant to those more generally concerned with the social relations of science, medicine and technology.

Students entering the Masters program in Science and Technology Studies will be required to complete subjects with a value of 48 credit points as set out in the Schedule for this Program.

Interdisciplinary Seminar

Students enrolled in either Program 1 or Program 2 are required to attend and contribute to a series of regular informal seminars and discussion meetings held within the Department of Science and Technology Studies during Autumn and Spring Sessions.

Assessment

Continuous assessment by written assignments and seminar presentations, together with a research report (Program 2), minor or major thesis (Program 1).

Entry to Course

Will be dependent upon approval by the Head of Department.

Program Determination

Students wishing to enrol for the Honours Master of Arts, Program 1 or Master of Arts, Program 2, must have their proposed course of study approved by the Head of the Department.

4. GRADUATE DIPLOMA IN ARTS

The aim of this course is to enable graduates with a limited acquaintance with the history and philosophy of science and technology or the role of science and technology in contemporary society, to acquire an understanding of these subjects to a reasonably advanced level. The Graduate Diploma shall be subject to the Course Rules for the Award of Graduate Diplomas together with the following conditions:

1. candidates are required to complete subjects totalling 48 credit points from those listed in the Arts Schedule under 'Science and Technology Studies'. Of these at least 24 must be from 300-level subjects and the remainder from 200-level subjects. Subject to the joint approval of the Head of the Department of Science and Technology Studies and the Head of the other department concerned, 12 credit points may be taken from suitable subjects

listed in the Arts Schedule under other Departments;

2. a candidate may not include in his or her graduate diploma program any course component which substantially duplicates a subject or part of a subject previously passed by the candidate as part of any degree or diploma already held or previously attempted;
3. the selection of courses and the program of study shall be approved by the Head of Department;
4. a full-time candidate shall normally complete the graduate diploma in one academic year, a part-time candidate in no less than two and no more than three academic years;
5. admission to candidature for the Graduate Diploma is on the recommendation of the Head of the Department of Science and Technology Studies.

SUBJECT DESCRIPTIONS**STS901 Theories and Methods of Science and Technology Studies**

Autumn session; 12 credit points (3 hrs seminars per wk).

Assessment: essays and seminar papers.

Students will study topics appropriate to their field of special interest subject to the approval of the Head of Department.

Co-ordinator: to be advised.

STS902 Advanced Topics in Science and Technology Studies

Autumn or Spring session; 12 credit points (3 hrs seminars per wk).

Assessment: essays and seminar papers.

Students will study topics appropriate to their field of special interest, subject to the approval of the Head of the Department.

Co-ordinator: to be advised.

STS903 Minor Thesis

Autumn or Spring session; 24 credit points (3 hrs per wk).

Assessment: thesis.

A thesis embodying the result of an original investigation of a problem approved by the Head of the Department under the supervision of a staff member.

Co-ordinator: to be advised.

STS909 Topics in History of Western Science and Technology

Autumn or Spring session; 12 credit points (3 hrs per wk lecture/seminars).

Assessment: essay 50%, seminar paper 30%; and two oral seminar criticisms 10% each.

An introduction to the methods and

interpretative tools of the history of Western science and technology, including perspectives on contemporary history of science and technology. Topics will be selected to explore key periods and central theoretical debates and may include: science, technology and society in Medieval, Renaissance and Early Modern Europe; technology dynamics, innovation and social change since the Industrial Revolution; new perspectives in the social history of technology and contextual history of science in the 19th and 20th centuries; the dynamics of contemporary science and technology; and the relations between the history of science and the history of technology.

Textbook:

No single suitable textbook; current research embodied in the main journals and significant recent books will be the focus of concern.

Co-ordinator: Associate Professor J A Schuster.

STS910 Gender and Body Politics

Autumn session; 8 credit points (3 hrs lecture/seminar per wk).

Assessment: major essay, seminar paper, presentation and participation.

Increasingly in the modern world, scientific and medical discourse have come to articulate the authoritative social theories of the feminine and masculine body and mind. Historically, science and medicine have included woman within their gaze, but excluded her from their practice. Critical awareness of contemporary scientific and medical issues concerning women requires an understanding of the social and historical shaping of scientific and medical knowledge claims. This subject focuses on the intersection of social, scientific and medical discourses and practices concerning the representation of women's bodies, minds and health. It draws upon feminist critiques of science and medicine and recent theoretical developments in the history and sociology of the body in examining medical and scientific constructions of women's bodies, health and nature, in their institutional and wider social contexts.

Textbook: no set text.

Co-ordinator: to be advised.

STS914 Master Narratives, Myth and Symbolic Politics in Science

Spring session; 12 credit points (3 hrs per wk).

Assessment: essay 50%; seminar 30%, two oral seminar commentaries 20%.

The past generation has witnessed the demise, in some quarters, of virtually the entire corpus of traditional frameworks of cultural meaning about the history and nature of science, elaborated over the past 350 years. What previously counted as master narratives of, and signposts to, the essence of scientific progress and rationality have come to be seen as problematic, historically contingent discursive weapons and strategies for the defense (or sectional co-optation) of the institution of science, by practitioners and their cultural allies. Accordingly, the previously received cultural meanings of science have become objects of study in the newer critical history and sociology of science. This subject surveys the previously received wisdom – including some of its internal conflicts – and

examines the grounds of its deconstruction and collapse, as seen from within recent critical theoretical developments in the history, philosophy and sociology of science. Topics will include: (1) Traditional master narratives of the history of science – idealist/Marxist/ functionalist – and their deconstruction from Bachelard, through Kuhn to post-Kuhnian history and sociology of science; the common 'whiggish' discursive 'deep structure' of formally opposed 'internalist' and 'externalist' narratives of science. (2) The lingering cult and symbolism of method: the discursive dynamics and rhetorical functions of method discourse (Feyerabend/Schuster); the abortive careers of 'born-again' methods narratives from Popper to Lakatos and Laudan. (3) Science as inscription: scientific discoveries, facts and tests as textual and rhetorical accomplishments; and textuality and historicity of scientific hardware. (4) The possibility and desirability of new master narratives for old in the 17th century rise of modern science and the 18th century emergence of experimental fields. (5) Myth, symbol and master narrative in current science policy discourse and the wider public politics of science.

Textbook:

No single suitable textbook; various books and articles will be used.

Co-ordinator: Associate Professor J A Schuster.

STS915 Master Narratives, Myth and Symbolic Politics in Science

Spring session; 8 credit points (3 hrs per wk lecture/seminars).

Pre-requisite: available only to students enrolled in *Master of Cultural Studies*.

Assessment: essay 50%; seminar paper 30% and two oral seminar commentaries 20%.

For subject description see STS914 Master Narratives, Myth and Symbolic Politics in Science.

Textbook:

No single suitable textbook; various books and articles will be used.

Co-ordinator: Associate Professor J A Schuster.

STS921 The Dynamics of Science and Technology

Autumn session; 12 credit points (3 hrs per wk).

Assessment: essay 35%, essay 45%, seminar paper 20%.

The aim of this subject is to introduce students to contemporary research on the dynamics of science and technology (S & T) in their social context. This general aim is addressed through an assessment of the alternative explanations of scientific and technological change and how they inform the promotion and regulation of S & T for economic and political purposes. Against the background of a critical evaluation of traditional linear approaches to science, technology and development, the subject introduces the student to (i) contemporary approaches to scientific and technological change and their implications for the promotion of science and technology; (ii) alternative perspectives on scientific and technological control and their implications for the regulation of science and technology; and (iii) the realities of bureaucratic politics and socio-technical engineering in combining 'internal' and 'external' influences on S & T and

'promotion' and 'regulation' mechanisms in shaping sectoral, institutional and national forms of development. The course concludes with a discussion of the implications of contemporary perspectives on the dynamics of S & T for the role of the policy analyst.

Textbook:

Jasonoff, S et al. (eds), *Handbook of Science and Technology Studies*, Sage, Thousand Oaks CA, 1995.

Co-ordinator: to be advised.

STS924 Major Thesis

Double session (A); 48 credit points (2 hrs per wk).

A thesis embodying the results of a significant and original investigation of a problem approved by the Head of the Department under the supervision of a staff member.

STS929 Studies in Resource and Environmental Policy

Autumn session; 8 credit points (3 hr lecture/seminar per wk).

Assessment: major research essay of 4,000 words, minor essay of 1,500 words, seminar performance, plus class exercises.

This subject will provide advanced study of the social, economic and political processes through which environmental policy is negotiated and instituted. The subject will be thematic, choosing one or more particular areas of technological development and its environmental impact as a case study. (The areas will be chosen in any given year on the basis of their contemporary relevance). Theoretical perspectives which will be developed in this context may include the politics and sociology of scientific controversy, global, national and regional developments in environmental regulation, theories of state regulation and intervention, and the choice and negotiation of different environmental strategies. Students will be expected to read extensively and critically, to engage in coherent and documented argument and to approach the problems considered by utilising insights from a number of different theoretical perspectives.

Textbooks:

The study program will rely on extensive library study in journals and books, supplemented by case study material assembled for the subject.

Co-ordinator: Professor J Falk.

STS931 Risk Assessment, Health and Safety

Spring session; 12 credit points (3 hrs per wk).

Assessment: essay 30%, review exercise 15%, seminar presentation 20%, participation 15%, take-home examination 20%.

This subject investigates scientific and political aspects of environmental and occupational hazards, with special reference to contemporary Australia. Themes will include: concept of acceptable risk, public participation in decisions about risks, shaping of attitudes to risks, the social production of scientific knowledge. The course will draw on case studies which are currently being debated in Australia: eg herbicides, asbestos, radiation, fuel additives.

Co-ordinator: Dr S Russell.

STS933 Energy and Technological Development

Autumn session; 12 credit points (3 hrs per wk).

Assessment: participation 15%, review exercise 15%, seminar presentation 20%, essay 30%, take-home examination 20%.

This subject examines the social, economic and political factors influencing patterns of energy provision and choice of energy technologies; the social and environmental implications of different energy options; and the nature of the debates themselves which have developed throughout the world on these issues and choices.

Textbook:

Saddler, H, *Energy in Australia*, Allen & Unwin, 1981.

Co-ordinator: Dr S Russell.

STS934 Genetics and Technological Innovation

Autumn session; 12 credit points (3 hrs per wk).

Assessment: seminar paper 30%, essay 30%, attendance, preparation and participation 20%, oral examination 20%.

This subject examines the emergence, development and impact of molecular biology and genetic engineering on the life sciences in their social context. Issues to be addressed may include: the roles of Avery, Chargaff and Pauling prior to the development by Watson and Crick of their model of DNA; the part played by Wilkins and Franklin in the work leading up to the double helix; the acceptance of the Watson-Crick structure; the function of Crick's 'Central Dogma of Molecular Biology' in guiding subsequent work; the elucidation of the genetic code; the development of recombinant DNA techniques; Asilomar and safety of recombinant DNA; molecular biology versus genetic engineering; controversy over release of recombinant organisms; biotechnology in Australia.

Textbooks:

Watson, J, *The Double Helix*, Penguin.

Judson, H F, *The Eighth Day of Creation*, Simon & Schuster.

Yoxen, E, *The Gene Business*, Pan.

Nossal, G J V, *Reshaping Life*, Melbourne University Press.

Co-ordinator: to be advised.

STS935 The Impact of Computers and Communication Technology

Autumn session; 12 credit points (3 hrs per wk).

Assessment: two essays 60%, seminar paper 20%, seminar presentation 20%.

The course will examine the effects of information technology on work and organisations principally through the work of Zuboff (1988). The author's main conclusion is that the full benefits from information technology can only be achieved when managers can relinquish their old ideas about employees and organisations. The main topics covered by the course are: Theories of organisation and industrial society. How and why organisations change. Early and recent socio-technical theory. The computer and the "textualisation" of work. The limits of hierarchy in an "informed" organisation. Information technology as a window on the organisation - "Panoptic" power. The changing nature of managerial authority. Authority and expert systems. Decision-making in the information age. The

changing nature of Human Resource Management. The scope of information technology in the modern organisation.

Textbooks:

Zuboff, S, *In the Age of the Smart Machine - The Future of Work and Power*, Heinemann Professional Publishing, Oxford, 1988.

Aungles, S (ed) *Information Technology in Australia: transforming the organisational structure and culture?*, New South Wales University Press, Sydney, 1991 (forthcoming).

Co-ordinator: Mr S Aungles.

STS936 Critical Studies in Medicine and Health Care

Spring session; 12 credit points (3 hrs per wk).

Assessment: essay 50%, two seminar papers 50%.

An examination of the increasing technological dependency and automation of diagnosis and treatment in modern medicine and health care; their socio-economic and political implications.

Co-ordinator: to be advised.

STS945 Technology and Economics*

Autumn session; 6 credit points (3 hrs per wk).

Assessment: essay 25%, seminar paper 20%, reviews 20%, research paper 35%.

This subject explores in historical and contemporary terms the relation between technology and economy - in industrialised, newly industrialising and developing countries. It also assesses the past and potential contribution of economists to understanding the origins of, influences on, and impacts of, technological change and R&D activity. It examines among other topics: structural changes in the global economy; technology, development and economic growth; the role of technological change in cyclical patterns in economic activity, economic influences on innovative activity, technological trajectories and diffusion; technology, productivity and employment; firms, markets and technological change; influences of government economic policies on countries' technological capabilities; comparative economics of research and development; economic appraisal of technological projects.

Textbooks:

Clarke, N, *The Political Economy of Science and Technology*, Blackwell, Oxford, 1985.

Coombs, R, Saviotti, P & Walsh, V, *Economics and Technological Change*, Macmillan, London, 1987.

Rothwell, R and Zegveld, W, *Reindustrialisation and Technology*, Longman, Harlow, 1985.

Co-ordinator: to be advised.

STS946 Management of Technological Change

Spring Session; 6 credit points (3 hrs per wk).

Assessment: major case study 50%, six research exercises 50%.

The objectives of this subject are to develop familiarity with the conceptual tools and techniques available to manage technology in private and public sector organisations in the context of the changing role of technology in the national and global economy and the implications of these

changes for national, industry and company strategies. The course will cover issues of technology strategy formulation and management, marketing of technology, models and mechanisms of government intervention, new manufacturing technologies, work organisation and skill formation, and management information systems.

Textbooks:

Rothwell, R and Zegveld, W, *Reindustrialisation and Technology*, Longman, Harlow, 1985.

Link, P, *Marketing Technology*, Nelson Wadsworth, Melbourne, 1987.

Fransman, M and King, K, *Technological Capability in the Third World*, Macmillan, 1984.

Scott-Kemmis, D, Darling, T and Johnston, R, *Innovation for the 1990s: New Challenges for Technology Policy and Strategy*, DITAC, Canberra, 1988.

Co-ordinator: to be advised.

STS947 Case Studies in Science and Technology Policy

Spring session; 6 credit points (3 hrs per wk).

Assessment: tailored to individual student projects and will include a major case study report of at least 5,000 words.

The objectives of this subject are to provide practical insights and experience in the application of methods of analysis, policy formulation, implementation and monitoring of science and technology in their social and political context. Case studies will be chosen on the basis of departmental and student interests and expertise, and may also draw on research themes from the Science and Technology Analysis (STA) Research Program. Students will engage in the analysis of one or more case studies of technological controversy taking into account their political, economic and technical dimensions. Participation will be based on a combination of active research, course work, and policy laboratory studies and exercises. Topic areas may include consideration of issues such as the problems raised in developing and evaluating: a pesticide residue control policy; a national set of research priorities; a set of performance indicators for education funding; and negotiating a major computing system purchase.

Textbooks:

Relevant material will be provided initially by the Department.

Co-ordinator: to be advised.

STS948 Research Project

Spring session; 6 credit points.

Assessment: research reports 80%, proficiency and application 20%.

Students will be provided with an attachment to an organisation which is involved in decision-making about technology appropriate to their interests in which they will design and carry out a closely supervised policy exercise relevant to the organisation and prepare two reports - one on their experience and one for the organisation. Typical organisations will include government departments, research organisations, innovation centres, technology parks, consulting organisations and public and private sector companies.

Co-ordinator: to be advised.

* Not on offer in 1996.

STS951 Research Report

Autumn or Spring session; 12 credit points (3 hrs per wk).

A report providing a survey and analysis of arguments and data on the subject approved by the Head of the Department, under the supervision of a staff member.

Co-ordinator: to be advised.

SOCIOLOGY

COURSES OFFERED

The following postgraduate courses are available.

1. Doctor of Philosophy
2. Honours Master of Arts (Cultural Studies)
3. Honours Master of Arts by Research
4. Master of Arts
5. Master of Policy (Social Policy)
6. Master of Arts (Cultural Studies)
7. Graduate Diploma in Arts
8. Graduate Certificate in Migration and Development

POSTGRADUATE COURSEWORK PROGRAMS

Social Policy
Sociology
Cultural Studies
Migration and Development

CURRENT RESEARCH AREAS

The overall approach of Wollongong Sociology centres on the analysis and understanding of the social, political and cultural consequences of people's changing conditions of life. Concern with issues of critical and theoretical analysis and social and public policy underlie the Department's research and scholarship. These interests are developed through concentration on a few key areas which the Department classifies in two crosscutting ways: by specialisation and by regional foci.

The disciplinary specialisations are Urban and Regional studies, Intercultural studies (encapsulating the areas of multiculturalism, migration, Asian societies and indigenous peoples) and Women's studies. The principal regional research foci of the Department are Australia and the Asia/Pacific region, with the emphasis being on comparative perspectives.

These are the Department's priority areas for postgraduate teaching, research and scholarship.

The Department is closely associated with the Social Change, Social Justice and Citizenship Research Group. This Research Group brings together researchers and post-graduate students concerned with the analysis of fundamental factors of social advantage and disadvantage in social, political and cultural change and integrates research within Sociology in these areas of central concern to the discipline. The University's Centre for Multicultural Studies is a unit within the Department. These two initiatives will enhance the Department's research activities as well as strengthening the development of our teaching in both undergraduate and postgraduate areas.

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN SOCIOLOGY

leading to the Master of Arts.

Number	Subject	Credit Points
<i>Core:</i>		
SOC910	Postgraduate Sociology Seminar	8
SOC933	Advanced Research Techniques	8
<i>Plus at least two of the following:</i>		
SOC940	Advanced Social Policy Studies	8
SOC942	Advanced Race and Ethnic Studies	8
SOC943 *	Advanced Urban Society	8
SOC946	Practical Communication and Communication Theory	8
SOC959	Advanced Studies of Gender in Society	8
<i>Electives:</i>		
SOC906	Sexuality, Health Issues and Social Policy	8
SOC918	Advanced Sociology of Development	8
SOC938*	Advanced Health Sociology	8
SOC949	Advanced Social Regulation: Policies and Issues	8
SOC950	Advanced Studies of the Individual in Society	8
SOC961 ¹	Women, Migration and Development	8
SOC962 ¹	Nationalism and Minorities in the Asia-Pacific Region	8
SOC970	Advanced Social Movements	8
CMS904 ¹	Australian Multiculturalism: Social Policy and Cultural Identity in a Changing Society	8
CMS905 ¹	New Migrations and Global Change	8

(A Special Topic may be substituted for one of the electives with the permission of the Head of the Department).
For further details, see *Course Requirements* below.

* Not on offer in 1996.

¹ Subject currently offered by PAGE. For further details see *Subject Descriptions*.

POSTGRADUATE PROGRAM IN SOCIAL POLICY

leading to the Master of Policy (Social Policy).

Number	Subject	Credit Points
<i>Core:</i>		
SOC904	Case Studies in Social Policy	8
SOC933	Advanced Research Techniques	8
SOC940	Advanced Social Policy Studies	8
<i>Electives: at least two of the following:</i>		
SOC906	Sexuality, Health Issues and Social Policy	8
SOC918	Sociology of Development	8
SOC938*	Advanced Health Sociology	8
SOC942	Advanced Race and Ethnic Studies	8
SOC943*	Advanced Urban Society	8
SOC949	Advanced Social Regulation: Policies and Issues	8
SOC959	Advanced Studies of Gender in Society	8
SOC970	Advanced Social Movements	8
CMS904 ¹	Australian Multiculturalism: Social Policy and Cultural Identity in a Changing Society	8
CMS905 ¹	New Migrations and Global Change	8
POL984	Selected Topics in Australian Politics	8

(A Special Topic may be substituted for one of the electives with the permission of the Head of the Department).

For further details, see *Course Requirements* below.

* Not on offer in 1996.

¹ Subject currently offered by PAGE. For further details see *Subject Description*.**OTHER POSTGRADUATE SUBJECTS**

Number	Subject	Credit Points
SOC921	Special Topic in Sociological Studies	8
SOC990	Minor Thesis	24
SOC999	Major Thesis	48

COURSE REQUIREMENTS**1. DOCTOR OF PHILOSOPHY**

A student may enrol for a PhD in Sociology on successfully completing a BA(Hons) in Sociology at Class II, Division 1 or higher, on successfully completing an MA(Hons) in Sociology, or with approval of the Head of Department, after completing, at a high level, the Master of Arts Degree in Sociology. Normally, a minimum of three years of full-time research is required to complete a PhD in Sociology. Full-time candidates enrol in SOC999. Part-time enrolment is available. Students may enrol in Sociology or Multicultural Studies as appropriate.

2. HONOURS MASTER OF ARTS (CULTURAL STUDIES)

For details of this course, please refer to the "CULTURAL STUDIES" entry in the Faculty of Arts section.

3. HONOURS MASTER OF ARTS BY RESEARCH

This degree is available to graduates with an Honours degree in Sociology. Normally, a minimum of one year full-time research is required to complete a MA(Hons) in Sociology. Full-time candidates enrol in SOC999. Part-time enrolment is available. Students may enrol in Sociology or Multicultural Studies as appropriate.

4. MASTER OF ARTS

The purpose of the Master of Arts is to allow graduates to pursue studies of society, culture and knowledge within frameworks provided by sociological theory. Students

are required to choose subjects worth a total of 48 credit points from the Schedule of Graduate Studies, with the following qualifications:

- (1) persons who have completed a major in Sociology at the undergraduate level shall not include in their program subjects which are substantially similar to those already completed;
- (2) students shall discuss their overall program with the Head of the Department or post-graduate co-ordinator prior to enrolment, at which time the most appropriate program will be decided;
- (3) optional subjects will be offered according to Postgraduate Rules. That is, not all subjects will be offered in any one year or session;
- (4) the Master of Arts shall be available as a part-time and full-time program. Full-time students are expected to complete the degree in two academic sessions, part-time students in not less than three and not more than six academic sessions.

5. MASTER OF POLICY (SOCIAL POLICY)

- (1) The objective of the Master of Policy is to allow pass graduates in arts or with other approved areas of study or experience, to pursue advanced studies in theoretical and practical aspects of contemporary Australian social policy. The tightly structured program will prepare students for work in government or voluntary welfare

organisations, or policy related community groups. Students shall be admitted under the Rules covering the Masters Degree, with the additional qualifications covered below.

- (2) Students are required to complete successfully an approved program of study of 48 credit points drawn from the Schedule of Graduate Studies, as set out in the table above.
- (3) Students shall not include in their program subjects substantially similar to those already completed as part of their previous undergraduate or graduate studies.
- (4) Students shall discuss their proposed program with the Co-ordinator of the Master of Policy (Social Policy) prior to enrolment.
- (5) Students may be required to undertake additional work as a pre-requisite for subjects included in the Schedule of Graduate Subjects.
- (6) The Master of Policy shall be available as a part-time and full-time program. Full-time students are expected to complete the degree in two academic sessions, part-time students in not less than three and not more than six academic sessions.

6. MASTER OF ARTS (CULTURAL STUDIES)

For details of this course, please refer to the "CULTURAL STUDIES" entry in the Faculty of Arts section.

7. GRADUATE DIPLOMA IN ARTS

The purpose of the Graduate Diploma in Arts is to provide graduates who have a limited knowledge of Sociology a means of acquiring a sociological competence at a reasonably advanced level. The Head of the Department will advise intending students on which course structure is most appropriate to their interests. The Graduate Diploma will be subject to the Course Rules for the award of Graduate Diplomas together with the following conditions:

- (1) candidates are required to complete subjects totalling 48 credit points from those listed in the Arts Schedule under 'Sociology'. Of these, at least 24 must be from 300-level subjects and the remainder from 200-level subjects;
- (2) a candidate may not include in his or her Graduate Diploma program any course component which substantially duplicates a subject or part of a subject previously passed by the candidate as part of any degree or diploma already held or previously attempted;
- (3) the selection of subjects and the program of study shall be approved by the Head of the Department;
- (4) a full-time candidate shall normally complete the diploma in one academic year, a part-time candidate in no less than two and no more than three academic years;
- (5) admission to candidature for the Graduate Diploma is on recommendation of the Head of the Sociology Department who shall assess the applicant's aptitude for sustained sociological study at a reasonably advanced level.

8. GRADUATE CERTIFICATE IN MIGRATION AND DEVELOPMENT

This certificate is offered only by distance education via the Profession and Graduate Education (PAGE) consortium and in collaboration with the Special Broadcasting Service (SBS). The course is concerned with aspects of contemporary processes of globalisation, linking issues of social, economic, political and cultural change as they relate to Australia and the Asia-Pacific region. This course is run in conjunction with the Centre for Multicultural Studies. For further details on this course only, contact (042) 214 444.

SUBJECT DESCRIPTIONS

CMS904 Australian Multiculturalism: Social Policy and Cultural Identity in a Changing Society

Autumn/Spring session; 8 credit points (14 TV units).

Assessment; short essay 20%, book review 30%, major essay 50%.

Please note: This subject is currently offered by PAGE. Students wishing to take this subject will need to contact the Head of the Department concerning availability.

This subject will describe and analyse multiculturalism in Australia as a public policy, and relate it to changes in Australia's demographic and social structure. It starts with an examination of the historical emergence of multiculturalism, showing the way in which Australian identity was constituted prior to 1945, and the factors which led to change in the wake of the post-1945 mass immigration program. The policy of assimilation and the reasons for its failure will be examined. The demographic, socio-economic and political dimensions of community formation and the development of cultural pluralism will be analysed. The subject will go on to look at the institutional and policy implications of multiculturalism, as it has developed since 1972. The consequences of multicultural policies for the definition of citizenship and for international relations will also be examined.

Co-ordinator: Professor S Castles.

CMS905 New Migrations and Global Change

Autumn/Spring session; 8 credit points (14 TV units).

Assessment; short essay 20%, book review 30%, major essay 50%.

Please note: This subject is currently offered by PAGE. Students wishing to take this subject will need to contact the Head of the Department concerning availability.

This subject will describe and analyse contemporary mass population movements and their consequences for society. It introduces basic concepts of theoretical approaches to understanding migration, covering a number of disciplines, including sociology, political economy, economics, geography and political science. Theories of migration will be linked to analyses of global change covering economic, political and cultural dimensions. The history of international migration and its links with the emerging world market will be discussed. International migration will be examined both from the perspective of less-developed sending countries and highly-developed receiving countries. The main emphasis will be on the receiving countries. Issues to be examined include effects on labour markets, community formation and effects on cities, racism and resistance, ethnic diversity and the state, and the effects of ethnic diversity on national identity and the character of nation-states.

Co-ordinator: Professor S Castles.

SOC904 Case Studies in Social Policy

Spring session; 8 credit points (2 hrs seminar/workshop).

Pre-requisite: successful completion of SOC940.

Assessment: workshop participation, seminar reports, assignments.

A case-centred approach is used to examine policy issues, concentrating on exploring the methodologies of issue identification, definition, investigation, and policy development, implementation, outcome and review. Students will develop case analyses based on reading and visits to community groups. Topics may include welfare, health, employment and communications policies, programs addressed to the needs of the aged, youth, the disabled and government strategies aimed at overcoming disadvantage experienced by Aborigines, immigrants or

women. Where appropriate, comparative international perspectives will be used to explore the relationships between state forms and social policies.

Co-ordinator: Mr M Morrissey.

SOC905 Social Policy Research Project*

SOC906 Sexuality, Health Issues and Social Policy

Autumn session; 8 credit points (2 hrs seminar). Assessment: participation, 7000 words of written work which will include: a book review, a short essay and a long essay.

The 1980s and 1990s have been a time of a resurgence of politics and policy making about 'private' aspects of human social relations: sexual expression and sexual reproduction. This subject will trace the ways that feminist and sexual liberationist politics have challenged previous social theory and public policy practice by liberal democracies in these areas. Current social theory regarding gender relations and human sexuality will be considered. It will then critically examine the attempts by various Australian governments to make policy about fertility and fertility control including reproductive technology, HIV/AIDS and other aspects of sexual health, and sexual and physical abuse of women and children.

Co-ordinator: Ms R Albury.

SOC910 Postgraduate Sociology Seminar

Autumn/Spring session; 8 credit points (2 hrs seminar).

Assessment: seminar presentations and essay.

The subject matter will explore contemporary theoretical and substantive issues in sociology. The subject will provide a means of exploring particular areas of current debate within the discipline.

Co-ordinator: Professor J Bern or Dr A Aungles.

SOC918 Advanced Sociology of Development

Autumn session; 8 credit points (2 hrs seminar).

Assessment: Two seminar papers, one major essay.

This subject examines the interaction between rich and poor nations, and theoretical explanations for the emergence of international disparities of wealth. In particular it will focus on the Asia-Pacific region, and the role that Australia plays in this part of the world. Development programs conducted by both government and non-government agencies will be studied, with illustrative examples from current development debates.

Co-ordinator: Dr A Cornish.

SOC921 Special Topic in Sociological Studies

Autumn/Spring session; 8 credit points (variable combination of individual supervision and seminars).

Pre-requisite: permission of Head of Department.

Assessment: one essay and tutorial assignments.

Topics for this subject may be chosen from any area of Sociology which the Head of the Department considers to be of suitable

* Not on offer in 1996.

substance and level to be offered as a SOC900 subject. This will be a reading subject offered under the direct supervision of a member of staff. For information of availability of topics offered, students should consult the Head of the Department.

Co-ordinator: Refer to Head of Department.

SOC933 Advanced Research Techniques

Autumn session; 8 credit points (2 hrs seminar). Assessment: research project and continuous assessment of work set in 'practical' seminars.

This subject will explore social science techniques of enquiry with a focus of appropriate methods, both qualitative and quantitative, for different types of enquiry. Students will review some of the traditional social science tools of analysis - questionnaire, semi-structured interviewing and formal observation. Some of the following alternative methods will be considered - film, video, analysis of public documents, participant observation, unobtrusive measures and evaluation research.

Co-ordinator: Mr M Morrissey.

SOC938 Advanced Health Sociology*

SOC940 Advanced Social Policy Studies

Autumn session; 8 credit points (3 hrs lecture/seminar).

Assessment: written exercises and group project. The aim of the subject is to explore the relationship between social policy and sociological theory. The subject will review major debates in contemporary sociology in these areas and move towards developing a paradigm for the evaluation of policy in Australia. The discussion of social policy in Australia will focus on understanding the role of the State, the development and impact of policy and the historical and materialist base in which the State and its policies are located.

Co-ordinator: Head of Department

SOC942 Advanced Race and Ethnic Studies

Spring session; 8 credit points (3 hrs lecture/seminar).

Assessment: essay, seminar paper, presentation and participation.

This subject introduces students to theories of ethnicity, 'race' and racism, in relation to other dimensions of social structure, in particular class and gender relations. Within an analysis of the Australian context, the significance of culture and ideology is explored. This includes an analysis of the subjective and structural dimensions of racial oppression and liberation movements, as well as an analysis of the broader theoretical and substantive relationship between culture, identity and resistance. These theories and issues will relate to the situation of Aboriginal and ethnic minorities in Australia, and international and historical comparisons will be made.

Co-ordinators: Professor S Castles and Dr E Vasta.

SOC943 Advanced Urban Society*

SOC946 Practical Communication and Communications Theory

Autumn session; 8 credit points (2 hrs seminar).

Assessment: major essay, seminar paper and participation.

This subject aims to lift professional communication skills and understanding by relating practical issues to theoretical models, concepts, and ideas. It seeks to undertake this by exploring various debates, and theoretical constructs which help relate individuals to society. Practical work will include: interviewing, participant observation, role-playing, analysing visual and phenomenological material. The theoretical traverse will examine various accounts, models and theories of communication and aims to raise students' ability to encode and decode communication issues.

Co-ordinator: Dr T Jagtenberg.

SOC947 Cultural Theory

Spring session; 8 credit points (2 hrs seminar).

Assessment: major essay, seminar paper, and in-class textual exercise.

This subject aims to introduce students to the work of leading cultural theorists and modes of cultural analysis. A number of perspectives will be covered ranging from structuralism, neo-marxism and phenomenology, through to feminism and post-modernism. Key concepts and issues to be explored will include forms and modes of culture in their social context: for example 'high' culture and 'popular' culture; hegemony; media culture; the relationship between 'race'/ethnicity and culture; gendered cultures; the relationship between feminism and culture; the technological mediation of culture; cultural production as social/political intervention; visual culture; culture and the environment; post-modernism. Students will explore the implications, value and impact of particular cultural theories and will be encouraged to construct their own interventions.

Co-ordinators: Dr T Jagtenberg and Dr E Vasta.

SOC949 Advanced Social Regulation: Policies and Issues

Autumn session; 8 credit points (3 hrs lecture/seminar).

Assessment: major essay/research paper, and continuous assessment of seminar work.

In this subject we analyse social regulation as a complex social process with the penal, welfare and medical spheres comprising three major systems of social control in modern industrial/post industrial societies. The first section of the course covers a detailed examination of the competing theories in the field and an investigation of the changes in modes of social control since the sixteenth century. This provides the basis for the second part of the course in which we investigate current issues and policies of social control with an emphasis on the specific populations regulated and controlled within the three spheres.

Co-ordinator: Dr A Augles.

SOC950 Advanced Studies of the Individual in Society

Spring session; 8 credit points.

(3 hrs lecture/seminar/workshop).

Assessment: major essay, seminar project, and participation.

This subject examines fundamental aspects of human identity and explores the extent to which an individual is 'socially constructed'. The individual is located in the historical, cultural, and institutional context of 'modern'/'post-modern' times through a consideration of contemporary myths, ideologies and practices which provide structure and meaning to daily life (eg. love, gender, truth). The course broadly addresses the question of how personal identity is achieved in the context of change and uncertainty. These issues involve cross-cultural exploration of different models of self, identity and relationship. Students have the opportunity to explore a range of perspectives including interactionist, structuralist, post-structuralist and post-modern approaches to questions of identity. This also involves some consideration of 'non-western' traditions and questions about the ecological status of human identity.

Co-ordinator: Dr T Jagtenberg.

SOC959 Advanced Studies of Gender in Society

Autumn session; 8 credit points (3 hrs lecture/seminar).

Assessment: participation, seminar papers and long essay: maximum of 7000 words.

This subject takes as its focus current debates about the constitution of humans as gendered subjects. Through the reading of key texts students will explore the debates within contemporary sociological thought on the complex inter-relation of social structures, social institutions and social practices in the constitution of femininity and masculinity. The debates to be addressed include those about the sexual division of labour, the contradictory position of women in relation to the family and the state, and the nature and role of sexuality in the constitution of femininity and masculinity. Each year the subject concentrates on a particular aspect of gender relations in Australia. The focus will be on the inter-action of the state and other social institutions of gender division. Examples will be drawn from current literature.

Please Note: Students with little or no background in the study of gender relations must consult the lecturer for preliminary reading.

Co-ordinator: Ms R Albury.

SOC961 Women, Migration and Development

Autumn or Spring Session; 8 credit points.

Assessment: to be advised.

Pre-requisite: none.

The central theme of this subject is the increasingly important role of women in processes of development, urbanisation and migration. For many women, rural urban movement is merely the first link in a migratory chain. The subject will examine this feminisation of migration as a global tendency. The theoretical framework will include feminist theory, political economy, demography, sociological theories of migration and ethnic relations.

Co-ordinator: Dr E Vasta.

* Not on offer in 1996.

**SOC962 Nationalism and Minorities
in the Asia-Pacific Region**

Autumn or Spring session; 8 credit points.

Assessment: to be advised.

Pre-requisite: none.

This subject will focus on the emergence of modern nation states in Southeast Asia, and the links between ethnicity and concepts of nationalism in this process. Through a series of case studies it will develop an analysis of the relationship between the state and minority groups, raising both theoretical and practical concerns.

Co-ordinators: Dr A Cornish and Dr A Vickers.

**SOC970 Advanced Social
Movements**

Spring session; 8 credit points (3 hrs lecture/seminar).

Assessment: major essay, seminar paper and presentation, participation.

This subject will examine, historically and sociologically, local and global power relations with particular reference to traditional channels of resistance and change. Firstly some of the traditional channels, such as trade unions, will be analysed as agents of change. Secondly new social movements including the women's movement, urban movements, environmental and minority liberation movements will be examined.

Co-ordinator: Dr E Vasta.

SOC990 Minor Thesis

24 credit points.

SOC999 Major Thesis

48 credit points.

WOMEN'S STUDIES

COURSES OFFERED

The following postgraduate course is available:

1. Master of Arts

The Master of Arts in Women's Studies is both interdisciplinary and multidisciplinary. The structure of the degree is built on the disciplinary base of the students' undergraduate degrees. All students are expected to complete work for this award in more than one discipline. The common core provides an introduction to the concepts and debates that constitute Women's Studies as an academic field. The listed specialisations allow students to focus their study in a particular area at a greater depth. In 1996 this degree will be administered by the Department of Sociology.

POSTGRADUATE PROGRAM

Women's Studies

CURRENT RESEARCH AREAS

Following a successful completion of the MA (Women's Studies), students with appropriate academic backgrounds may be accepted as candidates for research degrees in one of departments of the Faculty of Arts which offers subjects in this degree.

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN WOMEN'S STUDIES

leading to the Master of Arts.

Number	Subject	Credit Points
Core:		
WMST901	Feminist Issues and Debates	8
WMST902	Feminist Theory	8
Specialisations		
Students choose 2 subjects (at least 16 credit points) from one of the three specialisations listed below and a further 2 subjects (at least 16 credit points) as electives. It is strongly recommended that students choose one elective from another specialisation. The second may be chosen from their specialisation or from any of the subjects listed as electives below.		
Textual and Visual Representation		
<i>Core</i>		
ENGL925	Writing the Gendered Body	8
<i>Options</i>		
EDGA973	Language, Ideology and Culture	8
ENGL910	20th Century Women Writers	8
ENGL933	Early Women Writers	8
ENGL936	Sexuality and Representation	8
VIS910	Visual Arts Theory	12
Gender, Politics and Society		
<i>Core</i>		
SOC959	Advanced Studies in Gender in Society	8
<i>Options</i>		
EDGA923	Sport, Culture and Education	8
PHIL990	Feminist Political Philosophy	8
SOC949	Social Regulation: Policies and Issues	8
HIST913	The Making of the Modern Australian Woman	12
Science, Medicine and Gender		
<i>Core</i>		
STS910	Gender and Body Politics	8
<i>Options</i>		
PHIL965	Bioethics	8
SOC938	Advanced Health Sociology	8
SOC906	Sexuality, Health Issues and Social Policy	8
STS934	Genetics and Technological Innovation	12
STS936	Critical Studies in Medicine and Health Care	12
Electives		
GHMB922	Psychosocial Development of the Family	8
GBHD981	Maternal and Child Health in Developing Countries	6
ENGL909	Deconstructing Australia: Cultural Dissidence and the Ethics of Difference	8
SOC942	Advanced Race and Ethnic Studies	8
MGMT916	Management and Employment Relations	6
MGMT906	Managing People at Work	6
WMST903	Advanced Topics in Women's Studies	8

Please note: Not all subjects will be available each year, refer to the relevant department and the Co-ordinator of Women's Studies before enrolling.

For further details, see *Course Requirements* below.

COURSE REQUIREMENTS

1. MASTER OF ARTS

(Administered in 1996 by the Department of Sociology.)

The Masters program is an interdisciplinary and multidisciplinary course – based in the Faculty of Arts.

Pass degree entry

Pass graduates or equivalent may undertake a 48 credit point Master of Arts course, choosing 6 subjects (which in normal circumstances will include the two prescribed subjects) from the Schedule. The degree will run over one year full-time or two years for part-time students.

- (i) Students are required to successfully complete an approved program of study of 48 credit points drawn from the Schedule of Graduate Subjects, as set out in the table 'Postgraduate Program in Women's Studies'.
- (ii) Students shall undertake any additional work required by Departments or Faculties as a prerequisite for subjects included in the Schedule of Graduate Subjects.
- (iii) Students shall not include in their program subjects substantially similar to those already completed as part of their previous undergraduate or graduate studies.
- (iv) Students shall discuss their proposed program with the Co-ordinator of the Master of Arts (Women's Studies) prior to enrolment.
- (v) The Master of Arts (Women's Studies) shall be available as a part-time and a full-time program. Full-time students are expected to complete the degree in two academic sessions, part-time students in not less than three and not more than six academic sessions.

SUBJECT DESCRIPTIONS

WMST901 Feminist Issues and Debates

Autumn session; 8 credit points (3 hrs lecture/seminar).

Pre-requisite: entry into MA (Women's Studies)
Assessment: seminar presentation and participation plus a minimum of 7000 words as a seminar paper, a short essay and a long essay.

This subject will be taught as an interdisciplinary seminar series which will examine the challenges of feminist knowledges to established modes of thought and social organisation. Through a study of some key issues in women's lives the subject will examine the interactions between feminist theory and activism in both historical and contemporary debates. These studies will be drawn from the following areas: suffrage and citizenship; work; family; health; sexuality; cultural production and representation; war and peace; and ecology.

The areas of focus will be determined according to staff availability.

Co-ordinator: Dr K Newey.

WMST902 Feminist Theory

Spring session; 8 credit points (3 hrs lecture/seminar).

Pre-requisite: WMST901.

Assessment: seminar presentation and participation plus a minimum of 7000 words comprising a seminar paper, a short essay and a long essay.

Through an examination of historical and contemporary literature this subject will provide the basis for an exploration of the concepts, theories and discourses used to investigate the meanings of gender in contemporary Western culture. The subject will be divided into three parts: the social and intellectual foundations of theories of sexuality and gender; the contribution of feminist scholarship to the theoretical developments in the humanities and social sciences during the past two decades, and recent developments within feminist theory. According to staff availability the subject will focus on at least two areas: social and political thought, literary theory, cultural studies, feminist epistemology and feminist critiques of established epistemologies.

Co-ordinator: Dr S Dodds.

WMST903 Advanced Topics in Women's Studies

Autumn/Spring session; 8 credit points (contact hrs by arrangement).

Pre-requisite: WMST901, WMST902 and specialisation (part-time students), WMST901 (full-time students).

Co-requisite: WMST 902 (full-time students)

Assessment: written work equivalent to 7000 words.

This subject offers students an opportunity for in-depth study of a particular aspect of Women's Studies. The topics will be determined annually according to the availability of staff for supervision. Normally this will be a reading program determined by the supervisor and student in consultation with the Co-ordinator of Women's Studies. Students will be expected to demonstrate some background in the topic they undertake; work experience may be substituted for academic study in some cases.

Co-ordinator: Ms R Albury.

Interdisciplinary Subjects

For the following subject descriptions, please refer to individual Department listing.

Faculty of Arts

Dept of English

ENGL909	Deconstructing Australia: Cultural Dissidence and the Ethics of Difference
ENGL910	20th Century Women Writers
ENGL925	Writing the Gendered Body
ENGL933	Early Women Writers
ENGL936	Sexuality and Representation

Dept of History & Politics

HIST913	The Making of the Modern Australian Woman
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Dept of Philosophy

PHIL965	Bioethics
PHIL990	Feminist Political Philosophy

Dept of Science & Technology Studies

STS910	Gender and Body Politics
STS934	Genetics and Technological Innovation

STS936	Critical Studies in Medicine and Health Care
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Dept of Sociology

SOC906	Sexuality, Health Issues and Social Policy
SOC938	Advanced Health Sociology
SOC942	Advanced Race and Ethnic Studies
SOC949	Social Regulations: Policies and Issues
SOC959	Advanced Studies in Gender in Society

Faculty of Commerce

Dept of Management

MGMT906	Managing People at Work
MGMT916	Management and Employment Relations

Faculty of Creative Arts

VIS910	Visual Arts Theory
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Faculty of Education

EDGA923	Sport, Culture and Education
EDGA973	Language, Ideology and Culture

Faculty of Health & Behavioural Sciences

Dept of Public Health & Nutrition

GHMD981	Maternal and Child Health in Developing Countries
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Dept of Nursing

GHMB922	Psychosocial Development of the Family
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FACULTY OF
COMMERCE

FACULTY OF COMMERCE

FACULTY OFFICE

Dean: Professor Gill Palmer
Sub Dean: Ms Diana Kelly
Executive Officer: Ms Miranda Baker (042) 21 3380
Professional Officer: Ms Rosemary Cooper (042) 21 4031
Administrative Assistant: Ms Carol Wett (042) 21 3665
External Relations Officer: Ms Belinda Schuster

MEMBER UNITS

The Faculty of Commerce is made up of the following Units:

Accounting and Finance
Business Systems
Economics
Management

RESEARCH COURSES AVAILABLE

The Faculty offers Honours Master of Commerce and Doctor of Philosophy degrees by research and some offer the Honours Master of Arts by research.

POSTGRADUATE PROGRAMS

Postgraduate programs are available in the Faculty in the following areas:

	Page
Auditing	49
Business Administration	57
Business Information Systems	57
Commerce (Management)	80
Controllership	49
Development Economics	62
Economics	62
Environmental and Resource Economics	62
External Reporting	49
Finance	49
Global Economics	62
Human Resource Economics	62
Human Resource Management	79
Industrial Relations	77
Information Systems in Accounting	49
International Accounting and Finance	49
Management	79
Management Accounting	49
Managerial Economics	62
Marketing	79
Money, Banking and Finance	62
Operations Management	79
Organisational Behaviour	79
Public Policy	62
Public Sector Management	79
Quantitative Economics	62

For Total Quality Management, refer to the "Cross Faculty Programs" Section.

FULL TIME STAFF**Dean**

Gill Palmer, BSocSc(Hons) *Birm*, MSc LSE,
PhD City UK, FAIM, FAHRI

Sub-Dean

Diana Kelly, BA *Macq*, MCom (Hons)

Executive Officer

Miranda Baker, BA(Hons)UNSW, MBA

Administrative Assistant

Carol Wett

Professional Officer

Rosemary Cooper, BCom

External Relations Officer

Belinda Schuster, BSc, MEd, GDip(Mgmt)

**DEPARTMENT OF
ACCOUNTING AND FINANCE****Departmental Head and Professor of
Accountancy**

Michael J R Gaffikin, BCom *Well*, MBA
(Hons) *Massey*, PhD *Syd*, FCPA

Professor

David J Johnstone, BA BCom (Hons) PhD
Syd

Associate Professors

Gary Linnegar, DBA *Mississippi State*, MBA
AGSM, FCPA, FCIS FCIM

Michael McCrae, BCom DipEd *Melb*,
MEcon WA, PhD ANU

Senior Lecturers

Henry W Collier, MA MBA *Mich State*, BBA,
CPA, CMA

Mary M Day, BBus *DDIAE*, MCom (Hons),
PhD, AAIM, FCPA

Gerhard Griewosz, BA GradDipBusAdmin
SAIT, MCom DipCom *Otago*, CPA

Warwick N Funnell, BA DipEd *UNSW*,
BCom MCom (Hons), PhD, CPA

Hema G M Wijewardena, BA *Vidyod*, MBA
New Hampshire, PhD *Sri L*

Lecturers

Anne Abraham, BSc *Syd*, DipEd *STC*, MAcc
C Sturt, MCom *ASA*

Ari W Ariyadasa, BA *Vidyod*, DipAccy *Ceyl*,
MEc *Syd*, *ACA*

Larry A Blackett, BCom (Hons) MCom
(Hons)UNSW, MAS *Illinois*

Anwar I Chowdhury, BCom MCom *Dhaka*,
ACA (Aust), *ACA (Eng & Wales)*
ACMA (Bangl)

Kathie Cooper, BCom (Hons), PhD

Barbara Cornelius, MEc(Finance)
DipFinMan PhD *UNE*, BA *Georgia State*

Adrian Gardiner, BBus(Accy) *QUT*, MFM
Qld

Mary A Kaidonis, BSc *Adel*, MCom(Hons)
DipA *Flin*, GDipA GDipEdCoun (Hons)
SAIT, CPA

Gregory K Laing, BBus(Acc) *MIHE*, MCom
(Hons), GradCertEd*QUT*

Sudhir Lodh, BCom (Hons), MCom, PhD
Raj, MBA, KUL *Belgium*

George E Mickhail, BCom GradDip(Mgmt
Sc) *Cairo*, MSc Ec (Info Sys) *LSE*, MBCS

Ceng UK, LIDPM MORS UK, AIEE USA

Ron Perrin, BBA *WSyd*, MCom

Robert B Williams, BCom *UNSW*, MCom
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Janet Moore, BCom MCom (Hons)

Associate Lecturers

Helen Irvine, BCom *Qld*, MCom

Clive Salzer, BSc *Syd*, GradDipMangt *N'cle*,
MBA

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CPA

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ACIB UK

Professional Officer

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Computer Systems Officer

Mak Kwai Lan (Tina), BMath BE PEng
MAustIE

Administrative Assistants

Cynthia Frew

Maureen Todd, BA *UNE*

**DEPARTMENT OF BUSINESS
SYSTEMS****Departmental Head and Professor**

Graham K Winley, BA *Macq*, MSc(OR)
UNSW, PhD

Associate Professor

Joseph G Davis, BSc *Calicut*, Grad Dip Mgmt
IIM, PhD *Pittsburgh*

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RCA

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GDipCom MCom(Hons)

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BD *Melb*, CDi DipA *Moore TC*, BA

Sim Kim Lau, BSc *Malaysia*, MB *RMIT*

Jeanne Wong, BCom, MCom

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Philip Waugh, BCom

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Debbie Critcher

Operations Supervisor

Cathy Nicastri, AssDipCompAppl

Computer Systems Officers

Louis Athanasiadis, BMet BMath

Diniz Da Rocha, BMath

DEPARTMENT OF ECONOMICS**Departmental Head and Associate
Professor**

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Acting Departmental Head and Professor

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St

Professor

Dudley A S Jackson, BA BPhil *Oxf*

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Tran Van Hoa, BEc *WA*, MEc PhD
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(*Berkeley*)

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MCom

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MCom *Canl*, MA *Sussex* PhD *Minn*

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MA *Sussex* PhD *Minn*

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UNSW,

Hugh Shorten, BA *UNSW*

Lilliana Vlachos, BCom

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Macq

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Professors
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Professorial Fellow

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PhD
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Graham Sewell, BSc PhD Wales
Michael Zanko, BA Leeds, MBA Brad, PhD

Lecturers

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PhD Mass
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Stanford
Kenneth G Robinson, BBA, MBA, PhD
Georgia
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Lesley White, BPharm Syd, MCom UNSW

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Teresa Brugnera
Kim McCall
Tom Findlay

Mr Warren Greentree, General Manager,
Ilawarra Electricity
Mr Paul Greenwood, President, NSW Small
Business Combined Association
Mr Les Gregory, Manager, BHP Pty Ltd,
Training & Development, Sheet & Coil
Products Division
Mr Greg Klamus, Manager, Major Business
Reform, The Water Board, Potts Hill
Reservoir
Mr Kevin Locke, Training Manager, BHP
Steel, Slab & Plate Products Division
Mr Paul Matters, Secretary, South Coast
Labour Council
Mr John McKenna, General Manager,
Marksman Homes
Mr Malcolm Moss, Administrations
Manager, Kembla Grange Plant,
Tubemakers of Australia, Water, Oil &
Gas Industries Division
Mr Phil O'Sullivan, Director, Capital
Markets, Barclays de Zoete Wedd,
Australia
Ms Kathy Rozmeta, Training &
Development Manager, CocaCola -
Amatil
Mr Tom SAAR, Partner, McKinsey & Co
Ms Vivien Twyford, Director, Vivien
Twyford Communications
Mr Mike Withford, National Marketing
Partner, Price-Waterhouse Urwick

**FACULTY VISITING
COMMITTEE**

Mr Ian Angus
Dr Steven Andersen, Managing Director,
Southern Pathology
Mr Richard Dowse, Quality Manager,
Wollongong City Council
Mr Michael Duffy, Senior Manager,
Management Development,
Commonwealth Bank
Ms Mary Foley, General Manager, Policy
Development, Health Care of Australia,
Mayne Nickless Ltd
Prof Graeme Galt, Chairman, Korn-Ferry
International

ACCOUNTING AND FINANCE

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Arts by Coursework or Research
3. Honours Master of Commerce by Coursework or Research
4. Master of Commerce
5. Graduate Diploma in Commerce

POSTGRADUATE PROGRAMS

Auditing
 Controllership
 External Reporting
 Information Systems in Accounting
 International Accounting & Finance
 Management Accounting
 Finance

Note: All programs leading to the Master of Commerce degree have three components from which subjects are to be selected - an inner core, an outer core and approved electives.

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master degrees and the Doctor of Philosophy degree:

Accounting and information systems
 Accounting and EDI
 Auditing
 Controllership
 Critical accounting theory
 External financial reporting
 Finance
 Government and not-for-profit accounting
 History of accounting thought
 Management accounting
 Small business management

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN EXTERNAL REPORTING

leading to the Master of Commerce or the Honours Master of Arts or Commerce.

Number	Subject	Credit Points
(i) Master of Commerce		
<i>Inner Core, at least 3 from</i>		
ACCY904	Financial Accounting	6
ACCY906	Issues in Financial Accounting	6
ACCY924	Corporate Financial Information Analysis	6
ACCY974	Accounting Regulation	6
<i>Outer Core, at least 3 from</i>		
ACCY903	Accounting Theory	6
ACCY905	International Accounting	6
ACCY907	Empirical Research Methods in Accounting	6
ACCY908	Applied Financial Accounting	6
ACCY933	Studies in Information Systems in Accounting	6
ACCY944	Issues in Auditing	6
ACCY968	Insolvencies	6
ACCY973	History of Accounting Thought	6
<i>plus approved electives</i>		
(ii) Honours Master of Arts or Commerce		
<i>Compulsory</i>		
ACCY903	Accounting Theory	6
ACCY904	Financial Accounting	6
ACCY913	Management Accounting	6
ACCY993	Research Essay	12
<i>Electives, at least 12 credit points from</i>		
ACCY906	Issues in Financial Accounting	6
ACCY907	Empirical Research Methods in Accounting	6

POSTGRADUATE PROGRAM IN EXTERNAL REPORTING (cont'd).

leading to the Master of Commerce or the Honours Master of Arts or Commerce.

Number	Subject	Credit Points
ACCY924	Corporate Financial Information Analysis	6
ACCY944	Issues in Auditing	6
ACCY974	Accounting Regulation	6
ACCY995	Research Project	24

For further details, see *Course Requirements* below.**POSTGRADUATE PROGRAM IN INTERNATIONAL ACCOUNTING & FINANCE**

leading to the Master of Commerce or the Honours Master of Arts or Commerce.

Number	Subject	Credit Points
(i) Master of Commerce		
<i>Inner Core, at least 4 from</i>		
ACCY904	Financial Accounting	6
ACCY905	International Accounting	6
ACCY909	Comparative Accounting Systems	6
ACCY910	Issues in International Accounting	6
ACCY974	Accounting Regulation	6
ACCY928	Multinational Financial Management	6
<i>Outer Core, at least 4 from</i>		
ACCY903	Accounting Theory	6
ACCY907	Empirical Research Methods in Accounting	6
ACCY913	Management Accounting	6
ACCY924	Corporate Financial Information Analysis	6
ACCY944	Issues in Auditing	6
ACCY983	Studies in Government Accounting	6
<i>plus approved electives</i>		

(ii) Honours Master of Arts or Commerce*Compulsory*

ACCY903	Accounting Theory	6
ACCY904	Financial Accounting	6
ACCY913	Management Accounting	6
ACCY993	Research Essay	12

Electives, at least 12 credit points from

ACCY905	International Accounting	6
ACCY907	Empirical Research Methods in Accounting	6
ACCY909	Comparative Accounting Systems	6
ACCY910	Issues in International Accounting	6
ACCY928	Multinational Financial Management	6
ACCY995	Research Project	24

For further details, see *Course Requirements* below.**POSTGRADUATE PROGRAM IN MANAGEMENT ACCOUNTING**

leading to the Master of Commerce or the Honours Master of Arts or Commerce.

Number	Subject	Credit Points
(i) Master of Commerce		
<i>Inner Core, at least 3 from</i>		
ACCY913	Management Accounting	6
ACCY914	Management Planning and Control Systems	6
ACCY916	Studies in Controllership	6
ACCY918	Applied Management Accounting	6
<i>Outer Core, at least 3 from</i>		
ACCY903	Accounting Theory	6
ACCY905	International Accounting	6
ACCY907	Empirical Research Methods in Accounting	6
ACCY933	Studies in Information Systems in Accounting	6
ACCY936	Management and Information Systems	6
ACCY973	History of Accounting Thought	6
ACCY983	Studies in Government Accounting	6
MGMT967	Quantitative Methods	6
<i>plus approved electives</i>		
(ii) Honours Master of Arts or Commerce		
<i>Compulsory</i>		
ACCY903	Accounting Theory	6
ACCY904	Financial Accounting	6
ACCY913	Management Accounting	6
ACCY993	Research Essay	12

POSTGRADUATE PROGRAM IN MANAGEMENT ACCOUNTING (cont'd).

leading to the Master of Commerce or the Honours Master of Arts or Commerce.

Number	Subject	Credit Points
<i>Electives, at least 12 credit points from</i>		
ACCY907	Empirical Research Methods in Accounting	6
ACCY914	Management Planning and Control Systems	6
ACCY916	Studies in Controllership	6
ACCY918	Applied Management Accounting	6
ACCY933	Studies in Information Systems in Accounting	6
ACCY995	Research Project	24

For further details, see *Course Requirements* below.**POSTGRADUATE PROGRAM IN FINANCE**

leading to the Master of Commerce or the Honours Master of Arts or Commerce.

Number	Subject	Credit Points
(i) Master of Commerce		
<i>Inner Core</i>		
ACCY921	Managerial Finance	6
ACCY922	Capital Investment	6
ACCY924	Corporate Financial Information Analysis	6
<i>Outer Core, at least 4 from</i>		
ACCY903	Accounting Theory	6
ACCY907	Empirical Research Methods in Accounting	6
ACCY923	Investment Management	6
ACCY925	Australian Banking Practice	6
ACCY926	Studies in Business Finance	6
ACCY927	Small Business Finance	6
ACCY928	Multinational Financial Management	6
ACCY968	Insolvencies	6
ECON934	Advanced Financial Economics	8

*plus approved electives**Note: With the Approval of the Head of Department students may substitute other relevant subjects for ACCY921 and ACCY922.***(ii) Honours Master of Arts or Commerce***Compulsory*

ACCY921	Managerial Finance	9
ACCY922	Capital Investment	6
ACCY924	Corporate Financial Information Analysis	6
ACCY993	Research Essay	12
<i>Electives, at least 18 credit points from</i>		
ACCY903	Accounting Theory	6
ACCY907	Empirical Research Methods in Accounting	6
ACCY923	Investment Management	6
ACCY927	Small Business Finance	6
ACCY928	Multinational Financial Management	6
ACCY968	Insolvencies	6
ECON934	Advanced Financial Economics	8
ACCY995	Research Project	24

For further details, see *Course Requirements* below.**POSTGRADUATE PROGRAM IN INFORMATION SYSTEMS IN ACCOUNTING**

leading to the Master of Commerce or the Honours Master of Arts or Commerce.

Number	Subject	Credit Points
(i) Master of Commerce		
<i>Inner Core, at least 3 from</i>		
ACCY914	Management Planning And Control Systems	6
ACCY931	Advanced Decision Support Systems	6
ACCY933	Studies in Information Systems in Accounting	6
ACCY936	Management and Information Systems	6
<i>Outer Core, at least 3 from</i>		
ACCY903	Accounting Theory	6
ACCY908	Applied Financial Accounting	6
ACCY943	Auditing and Accounting Information Systems	6
ACCY968	Insolvencies	6
ACCY973	History of Accounting Thought	6
ACCY974	Accounting Regulation	6
ACCY983	Studies in Government Accounting	6

plus approved electives

POSTGRADUATE PROGRAM IN INFORMATION SYSTEMS IN ACCOUNTING (cont'd).

leading to the Master of Commerce or the Honours Master of Arts or Commerce.

Number	Subject	Credit Points
(ii) Honours Master of Arts or Commerce		
<i>Compulsory</i>		
ACCY903	Accounting Theory	6
ACCY904	Financial Accounting	6
ACCY913	Management Accounting	6
ACCY993	Research Essay	12
<i>Electives, at least 12 credit points from</i>		
ACCY914	Management Planning And Control Systems	6
ACCY931	Advanced Decision Support Systems	6
ACCY933	Studies in Information Systems in Accounting	6
ACCY936	Management and Information Systems	6
ACCY995	Research Project	24

For further details, see *Course Requirements* below.

POSTGRADUATE PROGRAM IN CONTROLLERSHIP

leading to the Master of Commerce or the Honours Master of Arts or Commerce.

Number	Subject	Credit Points
(i) Master of Commerce		
<i>Inner Core</i>		
ACCY904	Financial Accounting	6
ACCY913	Management Accounting	6
<i>Outer Core, at least 4 from</i>		
ACCY903	Accounting Theory	6
ACCY905	International Accounting	6
ACCY906	Issues in Financial Accounting	6
ACCY924	Corporate Financial Information Analysis	6
ACCY933	Studies in Information Systems in Accounting	6
ACCY944	Issues in Auditing	6
ACCY973	History of Accounting Thought	6
ACCY974	Accounting Regulation	6
ACCY983	Studies in Government Accounting	6
<i>plus approved electives</i>		
(ii) Honours Master of Arts or Commerce		
<i>Compulsory</i>		
ACCY903	Accounting Theory	6
ACCY904	Financial Accounting	6
ACCY913	Management Accounting	6
ACCY993	Research Essay	12
<i>Electives, at least 12 credit points from</i>		
ACCY907	Empirical Research Methods in Accounting	6
ACCY914	Management Planning and Control Systems	6
ACCY924	Corporate Financial Information Analysis	6
ACCY933	Studies in Information Systems in Accounting	6
ACCY973	History of Accounting Thought	6
ACCY995	Research Project	24

For further details, see *Course Requirements* below.

POSTGRADUATE PROGRAM IN AUDITING

leading to the Master of Commerce or the Honours Master of Arts or Commerce.

Number	Subject	Credit Points
(i) Master of Commerce		
<i>Inner Core, at least 4 from</i>		
ACCY904	Financial Accounting	6
ACCY924	Corporate Financial Information Analysis	6
ACCY933	Studies in Information Systems in Accounting	6
ACCY943	Auditing and Accounting Information Systems	6
ACCY944	Issues in Auditing	6
ACCY974	Accounting Regulation	6
<i>Electives, at least 2 from</i>		
ACCY907	Empirical Research Methods in Accounting	6
ACCY914	Management Planning and Control Systems	6
ACCY968	Insolvencies	6
ACCY983	Studies in Government Accounting	6

plus approved electives

POSTGRADUATE PROGRAM IN AUDITING (cont'd).

leading to the Master of Commerce or the Honours Master of Arts or Commerce.

Number	Subject	Credit Points
(ii) Honours Master of Arts or Commerce		
<i>Compulsory</i>		
ACCY903	Accounting Theory	6
ACCY904	Financial Accounting	6
ACCY913	Management Accounting	6
ACCY993	Research Essay	12
<i>Electives, at least 12 credit points from</i>		
ACCY924	Corporate Financial Information Analysis	6
ACCY933	Studies in Information Systems in Accounting	6
ACCY943	Auditing and Accounting Information Systems	6
ACCY944	Issues in Auditing	6
ACCY974	Accounting Regulation	6
ACCY995	Research Project	24

For further details, see *Course Requirements* below.**OTHER POSTGRADUATE SUBJECTS**

Number	Subject	Credit Points
ACCY961	Professional Practice - Accounting	6
ACCY962	Professional Practice - Auditing & EDP	6
ACCY963	Professional Practice - Taxation	6
ACCY985	Special Topic in Accounting - A	6
ACCY986	Special Topic in Accounting - B	6
ACCY994	Project	12
ACCY996	Thesis	48

COURSE REQUIREMENTS**1. DOCTOR OF PHILOSOPHY**

Candidates for this degree enrol in ACCY996.

2. HONOURS MASTER OF ARTS

(a) Candidates who have completed at an acceptable standard the requirements for the award of the BA(Hons) in Accounting and Finance, Economics or Management at a standard of Class II, Division 2 or higher, or an equivalent degree, may qualify for the award of the MA(Hons) degree by completing at honours standard any one of the courses of study listed below under the Honours Master of Commerce degree.

(b) Candidates who have completed the requirements for the BA degree at a standard less than Class II, Division 2, or equivalent degree, may, subject to the attainment of a satisfactory standard in that degree, be permitted to register as candidates for the MA(Hons) degree. Such candidates may qualify for the award of the degree by completing at honours standard subjects aggregating not less than 96 credit points of which subjects aggregating not less than 48 credit points shall be selected from the specialisation Schedule.

3. HONOURS MASTER OF COMMERCE

(a)1 Candidates who have completed the requirements for the award of the BCom(Hons) in Accounting and Finance, Economics or Management at a standard of Class II, Division 2 or

higher, or an equivalent degree, may qualify for the award of the MCom(Hons) degree by completing at honours standard any one of the following courses of study:

- (i) Thesis (48 credit points);
- or
- (ii) Project (12 credit points, Accounting and Finance; 16 credit points, Economics) plus course work to aggregate not less than 48 credit points;
- or
- (iii) Research report (24 credit points) and course work aggregating not less than 24 credit points;
- or
- (iv) Course work aggregating not less than 48 credit points.

(a)2 Subjects are to be selected from 900-level subjects offered by the Department of Accounting and Finance as set out in the Schedule of Graduate Programs.

Subjects aggregating not more than 12 credit points may be selected from those offered by other Departments, where approval is given by the Department offering the subject and the Head of the Department of Accounting and Finance.

(a)3 A candidate may not include for this degree subjects similar in content to subjects included in the honours part of the undergraduate course.

(b) Candidates who have completed the requirements for the BCom degree at a standard less than Honours Class II, Division 2, or equivalent degree, may, subject to the attainment of a satisfactory standard in that degree, be

permitted to register as candidates for the MCom(Hons) degree. Such candidates may qualify for the award of the degree by completing at honours standard subjects aggregating not less than 96 credit points of which subjects aggregating not less than 48 credit points shall be selected from the specialisation Schedule.

(c) Candidates holding the combined BCom(Hons) degree including the compulsory 400-level subjects aggregating 30 credit points may proceed to the 48 credit point MCom(Hons) degree; other candidates (with the combined Honours degree who have not completed all the compulsory subjects) will be required to complete any of the compulsory subjects plus subjects aggregating 48 credit points.

(d) Candidates required to undertake a preliminary program or required to complete designated subjects at an appropriate standard in accordance with Clause 501(3) of the Honours Masters Degree Rules may have their enrolment cancelled in the event that the preliminary program or designated subjects is not completed at the appropriate standard.

4. MASTER OF COMMERCE

The purpose of this pass degree is to provide graduate students, who have completed the Accountancy or Finance specialisation for the BCom degree, with the opportunity of further in-depth study of advanced topics in accounting or finance. This degree should be particularly suitable for students wishing to specialise in professional areas, or wishing to complete graduate specialisations approved by the

Australian Society of CPA's.

The degree of 48 credit points may be studied full-time over one year, or may be studied part-time. Subjects are to be selected from the Schedule of Graduate Subjects in accordance with one of the postgraduate programs. Entry requires a BCom degree with a specialisation in Accountancy or Finance, or equivalent degree.

Candidates who do not have a specialisation in Accountancy and wish to complete an accounting program in their degree may be permitted to study for the degree provided that they include Financial Accounting III and Management Accounting III (or, in special situations, other undergraduate accountancy subjects); thus the total credit points required for these candidates is 72.

Members of not less than five years standing of the Australian Society of Accountants or the Institute of Chartered Accountants in Australia with appropriate experience are permitted to enrol for the degree even though they do not hold an undergraduate degree; such candidates will be required to pass subjects aggregating 72 credit points.

5. GRADUATE DIPLOMA IN COMMERCE

In accordance with the general regulations governing graduate diplomas, candidates for the Graduate Diploma in Commerce must have been admitted to the degree of Bachelor in the University or other approved institution. In special circumstances a professional person holding a tertiary qualification (for example, an experienced accountant with the Commerce (Accounting Procedures) Certificate) may be permitted to enrol. The main requirement is that subjects aggregating not less than 30 credit points of the 48 necessary for the Graduate Diploma are to be obtained from 200- and/or 300-level subjects offered by the Accounting and Finance Department. The Graduate Diploma requires one year full-time study or part-time equivalent.

The Graduate Diploma serves a wide variety of interests. On the one hand Science or Engineering graduates may study first the second year accounting or take, say, Management Accounting to third year, and on the other hand, Accountancy students may specialise further for professional purposes.

Specific requirements for the Graduate Diploma are:

- not less than 30 credit points (of the minimum required of 48) are to be obtained from 200- and/or 300-level subjects offered by the Department of Accounting and Finance;
- with the approval of the Head of the Department of Accounting and Finance subjects may be selected from 900 level subjects offered by the Department of Accounting and Finance. (Any subjects selected under this clause may be included in the 30 credit points required under 1.); and

- the whole course for the diploma is to be approved by the Head of the Department of Accounting and Finance as providing a coherent course of study.

SUBJECT DESCRIPTIONS

Seminars

Generally a two hour weekly seminar or lecture is held for each 900 level subject.

Assessment

The assessment for 900 level subjects will specify the seminar contribution, essays and examination.

Textbooks

There are no prescribed textbooks. Reading is required from a wide variety of references, including books and journal articles. Specific recommendations may be obtained from the Department of Accounting and Finance.

ACCY901 Accounting for Managers

Autumn session: 6 credit points.

The interpretation and utilisation of the major types of reports and analyses prepared by accountants for management decision making.

Co-ordinator: Ms J F Moore.

ACCY903 Accounting Theory

6 credit points.

The nature of research, theory formation and validation. The nature of accounting. A study of the methods used in accounting theory formation, and of attempts to formulate theories of accounting.

Co-ordinator: Professor MJR Gaffikin.

ACCY904 Financial Accounting

6 credit points.

The objectives and functions of external financial reporting, including periodic profit measurement. Evaluation of accounting measurement methods including historical cost, general price level, current value and relative price change models. Communication in accounting reports.

Co-ordinator: Mr R Perrin.

ACCY905 International Accounting

6 credit points.

Differences in accounting thought and standards between countries. Influence of national outlook and policies and of economic infra-structure on accounting practice. Accounting development in State controlled economies and in developing countries. Comparative study of accounting in developed nations. Uniform systems of accounting. Corporate growth and its impact on accounting and auditing. Comparative study of auditing and reporting standards, and international aspects of public accounting practice. The multi-national corporation. The effect of changing price levels on accounting for international operations.

Co-ordinator: Mr G Gniewosz.

ACCY906 Issues in Financial Accounting

6 credit points.

Contemporary issues in financial reporting to external parties, including accounting for

different classes of assets, liabilities and equities. Legal, institutional and professional reporting requirements including proposals for improvement in accounting principles applied in practice.

Co-ordinator: Mr A W Ariyadasa.

ACCY907 Empirical Research Methods in Accounting

6 credit points.

The subject provides an overview of the ways accounting researchers identify, formulate and investigate accounting and information systems issues. This includes a study of the criteria adopted to select research projects and of the relationship between research and accounting and information systems issues such as experimental design, validity threats, measurement problems, and statistical analysis will also be considered. Selected published accounting research will be used to illustrate the method of empirical research in accountancy and information systems.

Co-ordinator: Associate Professor M McCrae.

ACCY908 Applied Financial Accounting

6 credit points.

An in-depth examination of external financial reporting addressing both practice reporting issues and resultant economic implications. Specific applications will be presented in relevant case studies based on realistic business situations drawn from published financial statements and press reports.

Co-ordinator: Mrs A Abraham.

ACCY909 Comparative Accounting Systems

6 credit points.

An in-depth examination of the patterns of accounting development in different national political environments. Key variables determining the differential accounting development patterns and their implications, in particular, for multinational reporting, will be critically evaluated. Approaches for resolving the problems posed by the diversity of accounting systems will also be considered.

Co-ordinator: Mr G Gniewosz.

ACCY910 Issues in International Accounting

Spring session; 6 credit points (2 hrs per wk)

Pre-requisite: ACCY905.

Assessment: by seminar.

Specific current issues that may be examined in-depth include harmonisation of accounting standards and practices, foreign currency accounting, internal control and performance evaluation problems in foreign subsidiaries, and international transfer pricing problems. Content may be revised subject to the currency of specific issues and in light of student interests.

Co-ordinator: Mr G Gniewosz.

ACCY913 Management Accounting

6 credit points.

The conceptual basis of management accounting and information systems. An examination of the organisational content

of management accounting, including the contingency approach to management accounting, the interrelationships between individual and group behaviour and management accounting systems.

Co-ordinators: Dr S C Lodh and Dr W Funnell.

ACCY914 Management Planning and Control Systems

6 credit points.

An in-depth analysis of selected aspects of the design and evaluation of management accounting, planning and control systems.

Co-ordinator: Associate Professor G Linnegar.

ACCY916 Studies in Controllorship

6 credit points.

The role and functions of the Chief Accounting Officer. Designing, installing and managing accounting systems - both financial and managerial. Specific problem areas in controllorship, as depicted in selected case studies.

Co-ordinator: Mr L Blackett.

ACCY918 Applied Management Accounting

6 credit points.

An in-depth applied analysis of selected topics in management accounting. Topics chosen could include decision theory and analysis, financial model building, cost prediction and control techniques, pricing, management accounting systems design, and the interrelationships between management and the management accounting system. Theoretical concepts developed in other management accounting subjects will be expanded as needed to support the complex applications being studied.

Co-ordinator: Dr RB Williams.

ACCY921 Managerial Finance

6 credit points.

Pre-requisite: ACCY901 or ACCY983.

An examination of the sources and uses of corporate finance, and the identification of relevant costs for decision making. Specific topics may include financial decision and corporate strategy, valuation, receivables, capital investment, risk and uncertainty, required rates of return, dividend policy, leasing, mergers and acquisitions.

Not to count with MGMT921 Managerial Finance

Co-ordinator: Professor D Johnstone.

ACCY922 Capital Investment

6 credit points.

An in-depth study of investments and investment decision analysis. The theoretical bases of asset pricing and net present value. The application of investment selection criteria under diverse conditions and in different market settings. The incorporation of risk into investment decision analysis and a study of the application of capital asset pricing models in investment evaluation.

Not to count with ACCY915

Co-ordinator: Associate Professor M McCrae.

ACCY923 Investment Management

6 credit points.

The theory of optimal investment decisions. Cost of capital. Introduction to portfolio theory and capital markets. Portfolio analysis. Sources of investment information. Investment media and strategies. Analysis of corporate performance and securities.

Co-ordinator: Dr SC Lodh.

ACCY924 Corporate Financial Information Analysis

6 credit points.

A survey of methods for the appraisal and prediction of corporate financial performance from such publicly available information as accounting numbers, industry and economic statistics, and stock market data. Equal emphasis is placed upon the development of theoretical constructs, and appraisal of the results of empirical research, especially Australian studies.

Co-ordinator: Professor D Johnstone.

ACCY925 Australian Banking Practices

6 credit points.

This subject focuses on accounting aspects of the practices and operations of banks and other financial institutions in Australia. Topics include the regulatory structure of financial institutions; the cheque clearing system; float management; and electronic banking. Additionally, the subject should enable the student to understand balance sheet planning and capital adequacy analysis as used in financial institutions.

Co-ordinator: to be advised.

ACCY926 Studies in Business Finance

6 credit points.

Contemporary business finance theory, including option pricing theory, arbitrage pricing model, bond swapping and bond immunisation.

Co-ordinator: Dr B Cornelius.

ACCY927 Small Business Finance

6 credit points.

Planning the structure and finances of a small business from establishment of the small business through to floatation. The choice of the structure of business and an examination of alternative sources of finance, requirements of financiers, improved utilisation of existing resources, and relevant costs in financing.

Not to count with ACCY942.

Co-ordinator: Dr B Cornelius.

ACCY928 Multinational Financial Management

6 credit points.

Pre-requisite: MGMT921 or ACCY921

The role of multinationals in international investment; aspects of the international monetary system; Euromarkets; foreign exchange markets; internal and external exposure management techniques; currency futures and options; swaps; financing MNC investment; MNC investment decision making; political risk analysis; international taxation.

Not to count with MGMT998.

Co-ordinator: Mr G Gniewosz.

ACCY931 Advanced Decision Support Systems

6 credit points.

This subject will examine the theoretical foundations for Decision Support Systems. Consideration will be given to architectural and environmental factors in designing Decision Support Systems. Practical accounting applications will be provided. Empirical studies and recent developments in business will be selected for in-depth review.

Co-ordinator: to be advised.

ACCY933 Studies in Information Systems in Accounting

6 credit points.

Studies of particular computer applications in accounting. Specific problem areas as depicted in selected case studies.

Co-ordinator: Ms MA Kaidonis.

ACCY936 Management and Information Systems

6 credit points.

The effective use and control of information systems, particularly computer-based information systems, and the likely impact of developments in this area on management functions and how managers carry out those functions.

Co-ordinator: Associate Professor G Linnegar.

ACCY943 Auditing and Accounting Information Systems

6 credit points.

The general principles of auditing applied to the audit of computer-based accounting systems and the use of computers as an auditing tool. Particular emphasis on the positive aspects of auditing and internal control, including their contribution towards improvements in: (a) management functions such as planning; and (b) the quality (both real and perceived) of information flows within an entity and between it and external parties.

Co-ordinator: Mr GME Mickhail.

ACCY944 Issues in Auditing

6 credit points.

An in-depth examination of contemporary topics in auditing with emphasis on controversial and theoretical issues, including social and ethical issues, role of quantitative techniques in the audit function, continuous auditing concept, uncertainty reporting, audit performance evaluation, extension of attest function and public sector auditing.

Co-ordinator: Mr AI Chowdhury.

ACCY961 Professional Practice - Accounting

6 credit points.

Statements of Accounting Standards and Statements of Accounting Practice. Accounting Provisions of the Companies Act.

Co-ordinator: to be advised.

ACCY962 Professional Practice - Auditing and EDP

6 credit points.

Statements of Auditing Standards and Statements of Auditing Practice. EDP Systems and Controls.

Co-ordinator: to be advised.

ACCY963 Professional Practice - Taxation

6 credit points.

Australian Income Tax Assessment Act 1936 as amended with Regulations. Rating Acts and International Agreements.

Co-ordinator: to be advised.

ACCY968 Insolvencies

6 credit points.

Note: A student who has passed ACCY368 Insolvencies may not enrol in this subject.

Accounting and legal aspects of corporate and non-corporate insolvencies including bankruptcies, liquidations, receivership; alteration of capital, reconstruction, amalgamation and takeovers.

Co-ordinator: Ms C Spasich.

ACCY973 History of Accounting Thought

6 credit points.

An examination of the environmental factors and processes by which accounting thought, practices and institutions originated and developed in the ancient, medieval and modern eras. Ancient accounts. Special-purpose account-keeping in the Middle Ages. Philosophy, influence and constraints of the double-entry system. Development of basic concepts of continuity, accrual accounting and limited liability. Impact of the Industrial Revolution and changing corporate environment on accounting development. Legislation and institutional influences on accounting.

Co-ordinator: Dr KA Cooper.

ACCY974 Accounting Regulation

6 credit points.

An in-depth study of the regulation of accounting practice and procedures, the accounting profession and of measurement and disclosure in external financial reporting. This could include an examination of the consequences of regulation, alternative institutional arrangement for setting standards, the impact of accounting theory on standard setting, and a historical review of accounting regulation.

Co-ordinator: Ms JF Moore.

ACCY983 Studies in Government Accounting

6 credit points.

A detailed examination of selected areas in federal, state, regional or local government accounting.

Co-ordinator: Dr WN Funnell.

ACCY985 Special Topic in Accounting - A

6 credit points.

ACCY986 Special Topic in Accounting - B

6 credit points..

A special topic to be selected from any area of financial accounting, management accounting, business finance, information systems or government accounting. The selection would be made by the Head of the Department, taking into account the expertise of academic staff, including visiting staff, and the interest of students.

Co-ordinator: Professor MJR Gaffikin.

ACCY993 Research Essay

12 credit points.

ACCY994 Project

12 credit points.

ACCY995 Research Project

24 credit points.

ACCY996 Thesis

48 credit points per year.

Information may be obtained from the Head of Department regarding ACCY985, ACCY986, ACCY993, ACCY994, ACCY995 and ACCY996.

BUSINESS SYSTEMS

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Commerce by Coursework and/or Research
3. Master of Business Administration (specialisations in Systems Management and Systems Development)
4. Master of Commerce
5. Graduate Diploma in Commerce (Business Information Systems)
6. Graduate Certificate in Business Information Systems

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master of Commerce degree by research and the Doctor of Philosophy degree:

Project 1: The Application of Knowledge-Based Information Systems in Organisations

This project is concerned with the investigation, development and implementation of knowledge-based information systems and associated development methodologies for the purpose of managerial decision support.

Specific areas of investigation include:

- (a) the application of knowledge-based systems in commercial environments;
- (b) methodologies for the development of knowledge-based systems;
- (c) the refinement of knowledge for incomplete domain theories;
- (d) the development of second generation expert systems;
- (e) intelligent search methods for project management.

Project 2: The Support of Information Systems in Organisations

This project addresses aspects of support important to the efficient and effective operation of information systems in organisations including: the education and training needs of information systems professionals and users, the interface and interaction between personnel and computer-based systems, the management of information systems resources.

Specific areas of investigation include:

- (a) information systems curriculum research supporting the education and training needs of users and professionals with a national and international focus;
- (b) the human computer interface with a focus on educational applications;
- (c) the management of information systems resources with a focus on issues related to open systems;
- (d) tools, techniques and methodologies for the design and implementation of intelligent tutoring systems and databases.

Project 3: Information Systems Development in the Organisational Context

This project addresses the evaluation and development of information systems in organisations with focuses on managerial decision making and the use of qualitative analysis.

Specific areas of investigation include:

- (a) qualitative analysis of the organisational context of information systems development;
- (b) the evaluation and development of information systems for managerial decision making.

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN BUSINESS INFORMATION SYSTEMS

leading to the Master of Commerce or the Honours Master of Commerce.

Number	Subject	Credit Points
(i) Master of Commerce		
Schedule 1		
<i>Compulsory subjects</i>		
BUSS945	Information Systems Project	12
BUSS950	Systems Development Methodologies	6
BUSS951	Critical Issues in Systems Development	6
BUSS952	Information Systems Management	6
BUSS953	Management of Systems Development	6
12 credit points of 900 level BUSS subjects selected from Schedule 4.		
(ii) Honours Master of Commerce		
Schedule 2		
BUSS981	Advanced Information Systems Topic A	6
BUSS982	Advanced Information Systems Topic B	6
BUSS983	Advanced Information Systems Topic C	12
BUSS984	Advanced Information Systems Topic D	12
BUSS986	Research Report	24
BUSS987	Thesis	48
For further details, see <i>Course Requirements</i> below.		

MASTER OF BUSINESS ADMINISTRATION

leading to the Master of Business Administration specialisations in Systems Management or Systems Development.

Refer *Graduate Business and Professional Education Unit*.

OTHER POSTGRADUATE SUBJECTS

Number	Subject	Credit Points
Schedule 4		
BUSS906	Information in Organisations	6
BUSS908	Intelligent Tutoring Systems	6
BUSS909	Office Automation	6
BUSS924	Systems Modelling and Simulation	6
BUSS925	Techniques for Knowledge-Based Systems Development	6
BUSS926	Decision Support Systems	6
BUSS927	Human Computer Interaction	6
BUSS928	Current Issues in Knowledge-Based Systems Development	6

Students enrolled in the Master of Commerce or the Master of Business Administration specialising in Systems Development must select two 6 credit point subjects from only one of the groupings: BUSS906, BUSS927 or BUSS925, BUSS928 or BUSS908, BUSS909, BUSS926. Not all subjects in Schedule 4 are on offer in any year.

Graduate Diploma in Commerce

Schedule 5

BUSS211	Business Systems Development A	6
BUSS212	Business Systems Development B	6
BUSS214	Commercial Programming I	6
BUSS215	Commercial Programming II	6
BUSS311	Database Management Systems	6
BUSS312	Distributed Information Systems	6
BUSS316	Information Systems Prototyping	6
BUSS317	Advanced Business Programming	6

Descriptions for the subjects in this schedule are provided in the University Undergraduate Calendar. Pre-requisites will not apply to Graduate Diploma and Graduate Certificate students. Students may substitute other 200 or 300 level BUSS subjects in Schedule 5 or 6 with approval from the Head of Department.

Graduate Certificate in Business Information Systems

Schedule 6

BUSS211	Business Systems Development A	6
BUSS212	Business Systems Development B	6
BUSS311	Database Management Systems	6
BUSS312	Distributed Information Systems	6

For further details, see *Course Requirements* below.

COURSE REQUIREMENTS**1. DOCTOR OF PHILOSOPHY**

Candidates for this degree enrol in BUSS999.

2. HONOURS MASTER OF COMMERCE (BUSINESS INFORMATION SYSTEMS)

1.(a) Candidates who have completed the requirements for the award of the BCom(Hons) in Accountancy, Business Systems Analysis, Economics or Management at a standard of Class II, Division 2 or higher, or an equivalent degree, may qualify for the award of the MCom(Hons) degree by completing at honours standard any one of the following courses of study:

- (i) Thesis (48 credit points); or
- (ii) Research report (24 credit points) and course work aggregating not less than 24 credit points.

(b) Subjects are to be selected from 900-level subjects offered by either the Department of Accountancy, the Department of Economics, the Department of Business Systems, or the Department of Management, and included in the Schedule of Graduate Subjects; provided that:

- (i) A combination of subjects from two departments must be approved by the Heads of the two Departments

- (ii) Subjects aggregating not more than 12 credit points may be selected from those offered by other Departments, where approval is given by the Heads of the respective Departments (i.e. the Department offering the subject on one hand, and on the other, either Accountancy, Economics, Business Systems, or Management as appropriate in each case. The appropriate Department would be the Department in which the student had taken or planned to take more than 48 credit points in Honours subjects for the undergraduate degree and graduate subjects for this degree).
- (iii) A candidate may not include for this degree subjects similar in content to subjects included in the honours part of the undergraduate course.

- 2. Candidates who have completed the requirements for the BCom degree at a standard less than Honours Class II, Division 2, or equivalent degree, may, subject to the attainment of a satisfactory standard in that degree, be permitted to register as candidates for the MCom(Hons) degree. Such candidates may qualify for the award of the degree by completing at honours standard subjects aggregating not less than 96 credit points of which subjects aggregating not less than 48 credit points shall be selected in accordance with the requirements of (1) above.
- 3. Candidates holding the combined BCom(Hons) degree including the

compulsory 400-level subjects aggregating 30 credit points may proceed to the 48 credit point MCom(Hons) degree; other candidates (with the combined Honours degree who have not completed all the compulsory subjects) will be required to complete any of the compulsory subjects plus subjects aggregating 48 credit points.

- 4. Candidates required to undertake a preliminary program or required to complete designated subjects at an appropriate standard in accordance with the Honours Masters Rules may have their enrolment cancelled in the event that the preliminary program or designated subjects is not completed at the appropriate standard.

3. MASTER OF BUSINESS ADMINISTRATION (IN SYSTEMS MANAGEMENT AND SYSTEMS DEVELOPMENT)

Refer Graduate Business and Professional Education Unit.

4. MASTER OF COMMERCE

The MCom(Pass) degree specialising in Business Information Systems provides graduates with the opportunity to study some advanced topics in information systems and to undertake a research project in one of the areas of research interest in the department. The program aims to both

deepen and broaden the knowledge and skills of students in systems development methodology, systems management and a selected area of IS research. Graduates from the program would be qualified to take on a senior analyst or project management role in the IS Department, to plan and initiate innovative use of IT/IS within their organisations, or to pursue further research via doctoral studies. The one year full-time course may also be studied part time. Applicants must have:

- (i) a degree in computing and/or IS; or
- (ii) a degree with a major study in computing and/or IS; or
- (iii) a graduate diploma in computing and/or IS.

5. GRADUATE DIPLOMA IN COMMERCE (BUSINESS INFORMATION SYSTEMS)

This course aims to provide graduates from a recognised tertiary course, a program of studies which will enable them to function as an information systems professional within an organisation or business concern. The course curriculum provides a balanced approach to the technical knowledge and skills as well as the human emphases of the information systems field.

The course is specifically designed for those who hold tertiary qualifications in areas not related to the discipline of information systems and who wish to gain essential initial education in information systems.

Specific admission requirements for the Diploma:

1. a university degree or equivalent;
2. completion of at least the equivalent of one introductory computing subject at tertiary level. Applicants not meeting this requirement may do a Summer Session course at this University prior to commencement.

In appropriate circumstances a person may be admitted if he/she submits evidence of such academic and professional attainments deemed to be equivalent to the requirements above.

Course Duration

The course is available by part-time study over four sessions (two years), in which case each student takes two subjects in any session, or by full-time study over two sessions.

Course Structure

The course is a coherent program of study which involves the successful completion of eight subjects (48 credit points) as listed above in Schedule 4.

6. GRADUATE CERTIFICATE IN BUSINESS INFORMATION SYSTEMS

This one year part-time course is designed for graduates from a recognised tertiary institution seeking an introductory course in the field of information systems.

Specific entry requirements for the Certificate are:

- (i) a University degree or equivalent;
- (ii) completion of at least the equivalent of

one introductory computer programming subject at tertiary level. Applicants not meeting this requirement may do the Summer Session subject BUSS 111 at this University prior to commencement.

The course is specifically designed for and restricted to those who hold qualifications in areas not related to the discipline of information systems. Students performing at a satisfactory level in the Graduate Certificate may be permitted to continue with the Graduate Diploma in Commerce (Business Information Systems) with up to 24 credit points of specified credit. These students will not be entitled to receive the Graduate Certificate in Business Information Systems.

SUBJECT DESCRIPTIONS

Information on textbooks used in subjects is provided in subject outlines and is available on request prior to the start of teaching.

BUSS903 Information Systems for Managers

Spring session; 6 credit points (3 hrs per wk).

Assessment: assignments, and examination.

This subject provides an analysis of the structures and functions of the range of typical computer-based business information systems. Other issues considered are the integration of discrete applications into the total information system and organisational implications of such integration and automation. As a core MBA subject, there is an emphasis on the international nature of business and wherever possible and appropriate, case study examples and problems which illustrate the increasing globalisation of the business and management environment.

Textbook: to be advised.

Co-ordinator: Dr L Schafe.

BUSS906 Information in Organisations

Autumn session; 6 credit points (3 hrs per wk).

Assessment: examination, assignments and case studies.

This subject establishes a foundation for understanding the role of information systems in organisations and how such systems relate to organisational objectives and structures. Topics covered include: the systems concepts in an organisation; information theory; information flows and decision processes; nature of information systems in organisations; techniques and skills in representing system structures; and integration of information systems into the organisational structure. Examples will be drawn from business organisational settings wherever possible.

Textbook: to be advised.

Co-ordinator: Dr L Schafe.

BUSS908 Intelligent Tutoring Systems

Spring session; 6 credit points (3 hrs per wk).

Assessment: examination, assignments and case studies.

This subject examines the design, construction, and implementation of intelligent tutoring systems and adaptive instructional programs. It draws upon recent advances in artificial intelligence, software engineering, and the psychology of learning, and applies these developments to

the design of computer software for training and instruction. Examples and applications will be drawn from the business environment.

Textbook: to be advised.

Co-ordinator: Dr L Schafe.

BUSS909 Office Automation

Spring session; 6 credit points (3 hrs per wk).

Assessment: examination and assignments.

This subject considers the integration of key elements in office automation - namely: people; computers, and communication - with the ultimate aim of improving the productivity of office staff. It examines such issues as: the technology of text; hypertext data; image; and audio-processing; decision support systems; human and ergonomic factors; office systems analysis; personnel and professional management aids; and computer-based information services.

Textbook: to be advised.

Co-ordinator: Dr L Schafe.

BUSS924 Systems Modelling and Simulation

Spring session; 6 credit points (3 hrs per wk).

Assessment: assignments, examination.

This subject aims to develop the concepts of modelling and simulation as applied to information systems. A variety of models, both deterministic and stochastic and the associated methodologies will be presented. The students will be expected to actually construct a model(s) and to evaluate the performance of the model by analysis or simulation with the view to optimise the performance of the real system. Simulation languages GPSS and SLAM II will be introduced.

Textbook: to be advised.

Co-ordinator: Dr L Schafe.

BUSS925 Techniques for Knowledge-Based Systems Development

Autumn session; 6 credit points (3 hrs per wk).

Assessment: assignments and examination.

This subject provides a comprehensive understanding of the techniques and tools used in knowledge-based systems development with particular emphasis on the role of knowledge-based systems in business applications. Topics covered include components of a knowledge-based system, rule-based and frame-based methodologies, knowledge acquisition, knowledge representation, knowledge formulation, inference mechanisms and techniques used in implementing a knowledge-based system. The subject also considers the evaluation and selection of knowledge-based systems development tools and techniques.

Textbook: to be advised.

Co-ordinator: Dr L Schafe.

BUSS926 Decision Support Systems

Autumn session; 6 credit points (3 hrs per wk).

Assessment: assignments and examination.

This subject examines the following issues in decision support systems: objective and subjective rationality in decision making; decision making process in individuals and in organisations; uncertainty and risks; Delphi and group techniques; the role of

decision support systems in MIS; design and evolution of decision support systems; cognitive styles, man-machine interfaces, tools and techniques in support of decision making.

Textbook: to be advised.
Co-ordinator: Dr L Schafe.

BUSS927 Human Computer Interaction

Spring session; 6 credit points (3 hrs per wk).

Assessment: assignments and examination.

The aim of this subject is to make students aware of the multidisciplinary nature of the domain of Human Computer Interaction. It aims to provide students with the knowledge and skills required to make sound judgements about the design of a business computer system in terms of its suitability for achieving the particular goals required by its users, to evaluate how well software systems fulfil the needs of their users and to contribute to the design of user-centred systems in which users and task needs are given major consideration.

Textbook: to be advised.
Co-ordinator: Dr L Schafe.

BUSS928 Current Issues in Knowledge-Based Systems Development

Spring session; 6 credit points (3 hrs per wk).

Assessment: assignments and examination.

Content: This subject provides a broader perspective to knowledge-based systems technology by investigating some of the current issues and trends in knowledge-based systems development with particular emphasis on the strategies for successful knowledge-based systems applications in the business environment. Topics covered include existing types of knowledge-based systems in business applications, problems in knowledge-based systems development, existing development methodologies, strategies for successful knowledge-based system inception, management and institutionalisation, current issues in knowledge acquisition, knowledge representation, search techniques, reasoning and uncertainty. Other issues considered are the alternative technologies to complement knowledge-based systems: object oriented programming, fuzzy systems, neural networks, machine learning and natural language processing.

Objectives: On successfully completing this subject students will have an understanding of: the architectural structure, the development cycle, rule and frame based methodologies, techniques used in selecting an expert system shell or programming language and an appreciation of the need for knowledge-based systems in the business environment.

Textbook: to be advised.
Co-ordinator: Dr L Schafe.

BUSS930 Programming for Managers

Autumn session; 6 credit points (3 hrs per wk).

Assessment: tutorials, assignments and examination.

Content: This subject provides an appreciation of the program development tasks of the information systems professional. Topics include: the historical development of programming and computer languages; the fundamentals of computer use, the operating system and appropriate software

packages; the program development process including basic programming concepts; programming as part of the systems development cycle; software development approaches in modern organisations and current and future trends in computer programming.

Objectives: On successfully completing this subject students will have an understanding of computer programming as a problem solving process, have acquired basic skills in structured program design and implementation and have an appreciation of the programming environment in a modern organisation.

Textbook: to be advised.
Co-ordinator: Dr L Schafe.

BUSS931 Database for Managers

Spring session; 6 credit points (3 hrs per wk).

Assessment: assignments and examination.

Content: This subject provides an appreciation of the concepts, management and development of database systems in business organisations. Topics covered include: the history of database, the structure of data, database design, issues of database administration, database control issues and practical experience with the use of database packages.

Objectives: On successful completion of this subject students will have an appreciation of the skills required to develop database systems and the functions of database packages. They will understand the principles of database administration and control.

Textbook: to be advised.
Co-ordinator: Dr L Schafe.

BUSS940 Management Information Systems Project

Double (A) or Autumn or Spring session; 18 credit points.

Assessment: written report.

Students will be expected to carry out a substantive project in management information systems, under the supervision of a member of staff, culminating in a substantial written report.

Co-ordinator: Dr L Schafe.

BUSS945 Information Systems Project

Double (A) or Autumn or Spring session; 12 credit points.

Assessment: written report.

Content: The aim of this subject is to provide students with the opportunity to study a topic of research interest either within an external organisational setting (MBA students), or within a staff research group in the department (MCom or MBA students). The project will be completed under staff supervision and culminates in the production of a substantial written report plus other products such as software, manuals as appropriate to the project.

Objectives: On successfully completing this subject students will have developed demonstrated skills in the analysis, synthesis and evaluation of information related to a specific topic. They will have experienced the tasks associated with conducting an individual piece of research under supervision.

Textbook: as relevant to the individual student project.
Co-ordinator: Dr L Schafe.

BUSS950 Systems Development Methodologies

Autumn session; 6 credit points (3 hrs per wk).

Assessment: essays, presentation and examination.

Content: This subject aims to overview and compare a range of systems development methodologies through the study of the underlying philosophical basis and methods, tools and techniques used in these methodologies.

Objectives: On successfully completing this subject students will have an appreciation of: the origins and philosophical bases underpinning a range of different methodologies, the frameworks and issues which may be used to assess and compare methodologies. They will have an understanding of the basic tools and techniques used across a range of methodologies and the major phases and stages used in a selection of methodologies.

Textbook: to be advised.
Co-ordinator: Dr L Schafe.

BUSS951 Critical Issues in Systems Development

Spring session; 6 credit points (3 hrs per wk).

Assessment: essay and major reports.

Content: This subject aims to provide a critical examination of the relationships between systems development methodologies and organisational contexts through the study of alternative systems development life cycles and development practices.

Objectives: On successfully completing this subject, students will be able to demonstrate the ability to: analyse and identify the assumptions embedded in specific methodologies; select and apply compatible sets of methods, techniques and tools; complement technical frames of reference in order to incorporate social and organisational issues in systems development and use.

Textbook: to be advised.
Co-ordinator: Dr L Schafe.

BUSS952 Information Systems Management

Autumn session; 6 credit points (3 hrs per wk).

Assessment: assignments, and examination.

This subject examines a number of current management issues pertinent to the effective and efficient use of IS/IT resources throughout an organisation in pursuit of organisational objectives. Issues considered include: strategic planning and the use of IS/IT for gaining competitive advantage; linking business and IS/IT planning, formulating IS/IT architecture, and information management strategies; structure, organisation and placement of the IS/IT Department within the organisation; end-user computing and IS/IT Department support; IS/IT Department functions and operations; organisational change, IS/IT ethics.

Textbook: to be advised.
Co-ordinator: Dr L Schafe.

BUSS953 Management of Systems Development

Spring session; 6 credit points (3 hrs per wk).

Assessment: assignments and examination.

Content: This subject provides an introduction to, and overview of, the knowledge and skills required to successfully

manage computer-based systems development projects within an organisational setting. Topics and issues considered include: IS/IT project management and its organisational context; project management tools and techniques; feasibility study methods; resource estimation techniques; IS/IT project groups behaviour, and management; systems development environments for professionals and end-users; quality assurance; project and system evaluation.

Objectives: On successfully completing this subject students will be able to: identify and describe the knowledge and skills required to successfully manage projects, identify and apply appropriate techniques to feasibility studies, apply project management software to the tasks of systems development, identify appropriate tools and techniques used to support development projects and describe the key concepts and issues involved in group behaviour and the management of development groups.

Textbook: to be advised.

Co-ordinator: Dr L Schafe.

**BUSS981 Advanced Information
Systems Topic A**

6 credit points.

**BUSS982 Advanced Information
Systems Topic B**

6 credit points.

**BUSS983 Advanced Information
Systems Topic C**

12 credit points.

**BUSS984 Advanced Information
Systems Topic D**

12 credit points.

BUSS986 Research Report

24 credit points.

BUSS987 Masters Thesis

48 credit points.

BUSS999 Doctoral Thesis

48 credit points per year.

ECONOMICS

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Commerce by Coursework or Research
Honours Master of Arts by Coursework or Research
3. Master of Commerce by coursework
4. Graduate Diploma in Commerce (Economics)
5. Graduate Certificate in Applied Economics

POSTGRADUATE PROGRAMS

General Economics
 Development Economics
 Global Economics
 Human Resource Economics
 Environmental and Resource Economics
 Managerial Economics
 Money, Banking and Finance
 Public Policy
 Quantitative Economics

There is a Supplementary Schedule 11 for postgraduate subjects offered by the Department of Economics for postgraduate students taking other degrees. The Industrial Relations Schedules 12 and 13 are given in the Industrial Relations section. In special circumstances the Head of the Department may substitute an approved 900-level subject for a subject or subjects in Schedules 2 to 11.

Subject to student demand, staff availability, and resource limitations, some subjects may not be available in a given year. The session in which a subject is to be offered will be determined by the Head of Department. Contact the Department of Economics for details.

CURRENT RESEARCH AREAS

The areas of research in which staff can offer supervision are indicated by the areas by Schedules 1 to 11 and by the specific subjects within those schedules. Other areas may be offered subject to consultation with the Head of Department.

SCHEDULE OF PROGRAMS*

SCHEDULE 1: MASTER OF COMMERCE (HONOURS) ECONOMICS

Number	Subject	Credit Points
<i>Schedule 1</i>		
ECON996	Advanced Macroeconomic Theory	8
ECON997	Advanced Microeconomic Theory	8
ECON998 ¹	Graduate Quantitative Analysis	8
<i>Plus</i>		
ECON992	Research Report	24
<i>or</i>		
ECON993 ²	Thesis	48

SCHEDULE 2: GENERAL ECONOMICS

Number	Subject	Credit Points
(a) Graduate Certificate/Graduate Diploma		
ECON205	Macroeconomic Theory and Policy	8
ECON215	Microeconomic Theory and Policy	8
	Any approved 200 or 300 level Economics subject	8
(b) Master of Commerce		
ECON936	Graduate Macroeconomics	8
ECON937	Graduate Microeconomics	8
<i>and one of</i>		
ECON906	History of Economic Thought	8
<i>or</i>		
ECON942	Advanced Topics B	8
<i>or</i>		
ECON998	Graduate Quantitative Analysis	8

* Variations to the Schedules 1-10 must be approved by the Head of the Department of Economics or the Postgraduate Co-ordinator.

1 Head of the Department of Economics may agree to the substitution of another quantitative subject for ECON998.

2 Only for candidates who have successfully completed ECON996, 997 and 998 or their equivalents.

SCHEDULE 3: DEVELOPMENT ECONOMICS

Number	Subject	Credit Points
(a) Graduate Certificate/Graduate Diploma		
<i>Three from</i>		
ECON251	Industry and Trade in East Asia	8
ECON303	Economic Development Issues	8
ECON305	Economic Development Planning	8
ECON310	Cost-Benefit Analysis	8
(b) Master of Commerce		
ECON907	Cost-Benefit Analysis	8
ECON908	Advanced Topics in the Economics of Development	8
ECON923	Applied Economic Development Planning	8

SCHEDULE 4: GLOBAL ECONOMICS

Number	Subject	Credit Points
(a) Graduate Certificate/Graduate Diploma		
<i>Three (including at least one 300 level subject) from</i>		
ECON216	International Economics A	8
ECON251	Industry and Trade in East Asia	8
ECON252	Global Economics	8
ECON302	Comparative Economic Systems	8
ECON307	International Monetary Economics	8
(b) Master of Commerce		
ECON902	Advanced International Monetary Economics	8
ECON911	Advanced International Economics	8
ECON924	International Economic Relations - B	8

SCHEDULE 5: HUMAN RESOURCE ECONOMICS

Number	Subject	Credit Points
(a) Graduate Certificate/Graduate Diploma		
<i>Three from</i>		
ECON240	Industrial Relation B: Wage Determination in Australia	8
ECON308	Labour Economics	8
ECON315	Applied Microeconomics	8
ECON317	Economics of Health Care	8
(b) Master of Commerce		
<i>Three from</i>		
ECON912	Labour Economics	8
ECON916	Microeconomic Analysis	8
ECON917	Economics of Health Care	8
ECON957	Productivity and Labour	8

SCHEDULE 6: ENVIRONMENTAL AND RESOURCE ECONOMICS

Number	Subject	Credit Points
(a) Graduate Certificate/Graduate Diploma		
<i>Three from</i>		
ECON309	Environmental Economics	8
ECON310	Cost-Benefit Analysis	8
ECON311	Natural Resource Economics	8
ECON313	Economics of Energy Resources	8
(b) Master of Commerce		
<i>Three from</i>		
ECON907	Cost-Benefit Analysis	8
ECON919	Economics of Energy Economics	8
ECON938	Environmental Economics	8
ECON943	Advanced Topics in Economics - C	8

SCHEDULE 7: MANAGERIAL ECONOMICS

Number	Subject	Credit Points
(a) Graduate Certificate/Graduate Diploma		
ECON312	Industrial Economics	8
ECON331	Financial Economics	8
ECON332	Managerial Economics	8

SCHEDULE 7: MANAGERIAL ECONOMICS (cont'd).

Number	Subject	Credit Points
b) Master of Commerce		
ECON913	Industrial Economics	8
ECON934	Advanced Financial Economics	8
ECON935	Advanced Managerial Economics	8

SCHEDULE 8: MONEY, BANKING AND FINANCE

Number	Subject	Credit Points
(a) Graduate Certificate/Graduate Diploma		
ECON301	Monetary Economics	8
ECON307	International Monetary Economics	8
ECON331	Financial Economics	8
(b) Master of Commerce		
ECON901	Monetary Economics	8
ECON902	Advanced International Monetary Economics	8
ECON934	Advanced Financial Economics	8

SCHEDULE 9: PUBLIC POLICY

Number	Subject	Credit Points
(a) Graduate Certificate/Graduate Diploma		
<i>Three from</i>		
ECON304	Economic Policy	8
ECON309	Environmental Economics	8
ECON310	Cost-Benefit Analysis	8
ECON315	Applied Microeconomics	8
(b) Master of Commerce		
ECON903	Public Finance	8
ECON916	Microeconomic Analysis	8
ECON938	Environmental Economics	8

SCHEDULE 10: QUANTITATIVE ECONOMICS

Number	Subject	Credit Points
(a) Graduate Certificate/Graduate Diploma		
<i>Three (including at least one 300 level subject) from</i>		
ECON221	Econometrics	8
ECON222	Mathematical Economics	8
ECON228	Quantitative Analysis for Decision Making - I	8
ECON231	Business Statistics and Forecasting	8
ECON322	Mathematical Economics B	8
ECON327	Advanced Econometrics	8
ECON328	Applied Econometric Modelling	8
ECON332	Managerial Economics	8
(b) Master of Commerce		
<i>Three from</i>		
ECON909	Econometric Theory	8
ECON921	Econometric Models	8
ECON935	Advanced Managerial Economics and Operations Research	8
ECON939	Principles of Econometrics	8
ECON940	Econometric Analysis	8
ECON941	Advanced Topics in Economics - A	8

SCHEDULE 11: SUPPLEMENTARY

Number	Subject	Credit Points
ECON905	Input-Output Analysis	8
ECON918	Economics of Health Care - A (Not to count with ECON 917)	6
ECON925	Advanced Economic Theory	8
ECON929	Macrodynamics	8
ECON932	Economic Analysis of the Business Environment	6
ECON933	Game Theory	8
ECON944	Advanced Topics in Economics - D	8
ECON945	Advanced Topics in Economics - E	8
ECON946	Advanced Topics in Economics - F	8
ECON980	Special Topics in Economics (MBA) A	6
ECON981	Special Topics in Economics (MBA) B	6
ECON991	Project	16

COURSE REQUIREMENTS

1. DOCTOR OF PHILOSOPHY

For the degree of Doctor of Philosophy, candidates enrol in the subject ECON993 Thesis. Additional subjects may be required.

2. HONOURS MASTER OF COMMERCE

HONOURS MASTER OF ARTS

The purpose of the Honours Masters degree is to provide graduate students who have completed the Economics specialisation for the BCom degree (or equivalent) with the opportunity for further in-depth study of advanced topics in Economics as a preparation for a professional career as an economist. Entry requires a BCom degree with a specialisation in Economics or an equivalent degree.

The Course Rules governing the Honours Masters degree will apply. The degree of 96 credit points can be studied full-time over two years, or may be studied part-time.

For the Honours Master degree students must, subject to the subsequent advanced standing or exemption clause:

- (i) complete Schedule 1 (48 credit points) and
- (ii) complete 24 credit points from section (b) of one of the Schedules 3-10, and
- (iii) complete an additional 24 credit points of approved 900-level economic subjects.

Students who have completed the BCom(Hons) in Economics or the BA(Hons) in Economics, or an equivalent degree, and who have graduated in Honours with a standard of Class II, Division 2 or higher may be given advanced standing or exemption up to a maximum of 48 credit points of the required 96 credit points.

3. MASTER OF COMMERCE

The purpose of this pass degree is to provide graduate students who have completed the Economics specialisation for the BCom degree (or equivalent) with the opportunity for further in-depth study of advanced topics in Economics as a preparation for a professional career in economics.

The Course Rules governing the Masters degree will apply. The degree of 48 credit points may be studied full-time over one year, or may be studied part-time.

For the Master of Commerce degree, normally students must complete 48 credit points at the 900 level including:

- (i) 24 credit points from Schedule 1 or section (b) of Schedule 2* and

- (ii) 24 credit points from section (b) of one of the Schedules 3-10.

Entry requires a BCom degree with a specialisation in Economics or an equivalent degree. Candidates who do not have a specialisation in Economics but who have the equivalent of Economics to second-year level in their undergraduate degree may be permitted to study for the degree provided they have first passed a program of 24 credit points of 300-level Economics subjects approved by the Head of Department; thus the total credit points required for these candidates is 72.

4. GRADUATE DIPLOMA IN COMMERCE

The purpose of this diploma is to provide graduate students who have not completed an Economics specialisation in their undergraduate degree with the opportunity for advanced study in Economics.

The Course Rules governing Graduate Diplomas will apply. Accordingly, candidates for the Graduate Diploma in Commerce will normally hold a Bachelor degree from an approved institution. In special circumstances a professional person holding a tertiary qualification other than a Bachelor degree may be permitted to enrol.

The Graduate Diploma in Commerce requires two sessions of full-time study or the part-time equivalent.

For the Graduate Diploma students must complete 48 credit points including:

- (i) 24 credit points from section (a) of Schedule 2 and
- (ii) 24 credit points from section (a) of one of the Schedules 3-10.

5. GRADUATE CERTIFICATE IN APPLIED ECONOMICS

The purpose of this certificate is to provide graduate students an opportunity for advanced study in Applied Economics. The award is suitable for students who have not completed an Economics specialisation in their undergraduate degree. Section (a) of Schedule 2 is usually most appropriate for such students. The award is also designed for those who have completed an undergraduate major in Economics and who would like to pursue a short course with advanced study in a specialist area. Section (a) of Schedules 3-10 is usually most appropriate for such students.

The Graduate Certificate can be completed in one session of full-time study or the part-time equivalent.

For the Graduate Certificate students must complete 24 credit points from section (a) of one of Schedules 2-10. Some of the subjects have prerequisites which must be met unless waived by the Head of the Department.

SUBJECT DESCRIPTIONS

Composition of Subjects

Three hours lectures/seminars per week.

Assessment

Continuous assessment by written assignments, essays and Departmental examinations.

ECON901 Monetary Economics

8 credit points.

The subject is in two sections. The first section compares the monetarist theory of money with the reinterpreted Keynesian theory of money, examining: theories and evidence on the demand for money; the relative stability debate; the transmission mechanism and the policy implications of both theories. The second section examines conflicting theories such as Monetarist and Keynesian Neutral. The topics to be covered are: the theories of the supply of money; the effect of the growth of financial institutions on the efficacy of monetary policy; and the debate on the term structure of interest rates. Much of the subject will be based on journal articles in which most of the debates have been carried.

Co-ordinator: Dr C Harvie.

ECON902 Advanced International Monetary Economics

8 credit points.

Foreign exchange markets; banking and financial institutions; money supply, price level and international adjustment; international monetary system.

Co-ordinator: Dr K Chowdhury.

ECON903 Public Finance

8 credit points.

This subject further develops topics encountered in the undergraduate Public Finance course. Particular emphasis will be placed on issues surrounding inter-governmental fiscal relations in a federal system. Questions of fiscal transfer mechanism, divisions of powers and responsibilities and the equalisation measures which might be used will be considered.

Co-ordinator: Associate Professor R Castle.

ECON905 Input-Output Analysis*

8 credit points.

Design and estimation of input-output matrices. Basic equilibrium, optimising and forecasting techniques. Application to planning and some regional problems.

Co-ordinator: to be advised.

ECON906 History of Economic Thought*

8 credit points.

A study of the history of Economics, mainly concerned with the origins and development of modern Economics.

Co-ordinator: Associate Professor R Castle.

ECON907 Cost-Benefit Analysis

8 credit points.

The main objective of the subject is to develop skills in appraising public sector (and other) investment projects. These skills are sought through a study of the role and theory underlying cost-benefit analysis. The subject contains a practical component involving the appraisal of specific investment projects. Topics covered will include: welfare economics; the derivation

*Where students have exemptions from these subjects, 24 credit points approved by the Head of the Department from Schedules 3-11 may be used to fulfill requirement (i).

* Not on offer in 1996.

of analytical criteria for investment appraisal; the identification and valuation of benefits and costs; shadow prices for imperfect factor and product markets; unpriced goods and services; multiple objective planning; and the incorporation of risk and uncertainty.

Co-ordinator: Associate Professor DP Chaudhri.

ECON908 Advanced Topics in the Economics of Development

8 credit points.

The subject provides an in-depth analysis of formulation of development policies in less developed countries in the light of theory and experience. The formulation of an integrated strategy of development is preceded by problem description and application of relevant economic theory. Possible topics include: economic growth versus economic development; poverty and inequality; population growth; unemployment and rural-urban migration; technological change; peasant agriculture and agricultural productivity; human capital and development; role of capital; credit and institutions; international dimensions of development and development planning.

Co-ordinator: Associate Professor DP Chaudhri.

ECON909 Econometric Theory

8 credit points.

This subject deals with advanced topics in the theory and practice of econometrics and covers contemporary issues of modelling specification, estimation, testing, and forecasting. Much of the course will be based on journal articles in which the current econometric issues have been discussed.

Co-ordinator: Associate Professor Tran Van Hoa.

ECON911 Advanced International Economics

8 credit points.

Aspects of some of the following topics are studied in-depth: growth and trade; factor transfers (foreign investment); tariffs; import-substituting industrialisation; foreign exchange market; internal and external balance (the two-gap model).

Co-ordinator: Dr CS Suh.

ECON912 Labour Economics

8 credit points.

The theory of the labour market and applications to the Australian situation, including labour supply and demand. Special emphasis is placed on analysing the character of the workforce and structural changes in industries and occupations. Wage theory and practice are examined under conditions of collective bargaining and arbitration. The development of the arbitration system in Australia and principles of wage determination followed by the Commission are of particular importance. Wages and income policies, including indexation policies will also be studied, as will wage developments outside the arbitration system.

Co-ordinator: Ms N Verrucci.

ECON913 Industrial Economics

8 credit points.

A study of industrial organisation and performance, decision-making criteria and

constraints affecting output and distribution of revenue, market behaviour, and matters of ownership and control of the unit organisation.

Co-ordinator: Dr CS Suh.

ECON916 Microeconomic Analysis*

8 credit points.

Several areas of microeconomic theory will be selected for advanced treatment. Within each topic contemporary applications will be explored after the development of a theoretical base.

Co-ordinator: Professor D Lewis.

ECON917 Economics of Health Care

8 credit points.

Not to count with ECON918.

A survey of economic aspects of the Australian health care system. Topics covered will include the supply and demand for health services, health care delivery systems, health insurance, social statistics and medical decision making. Government policies influencing all aspects of health care will be analysed and evaluated.

Co-ordinator: Professor D Lewis.

ECON918 Economics of Health Care - A

6 credit points.

Not to count with ECON917.

A survey of economic aspects of the Australian health care system. Topics covered will include the supply and demand for health services, health care delivery systems, health insurance, social statistics and medical decision making. Government policies influencing all aspects of health care will be analysed and evaluated.

Co-ordinator: Professor D Lewis.

ECON919 Economics of Energy Resources*

8 credit points.

The main objects of the subject are to review the applications of economic theory to contemporary energy problems; and to evaluate the available options for energy policies. The course topics include: social objectives with respect to energy; renewable and non-renewable energy resources; optimisation frameworks for the extraction of energy resources; the demand for energy; energy supply and the role of alternative energy technologies including the role of nuclear energy; energy deficits and the role of international trade; and the design and implementation of energy policies.

Co-ordinator: to be advised.

ECON921 Econometric Models*

8 credit points.

This is a subject on the foundations of econometric models. Both single-equation and simultaneous equation models will be studied. Emphasis is on suitable model building with economic content, on obtaining estimates with desirable properties, on testing procedures, on model evaluation and selection, and applications.

* Not on offer in 1996.

Examples from current Australian econometric models will be critically examined.

Co-ordinator: Associate Professor Tran Van Hoa.

ECON923 Applied Economic Development Planning

8 credit points.

This subject will develop the skills needed by those engaged in economic development planning and analysis. Topics covered will include: identification of program objectives, program planning, program evaluation and appraisal, program implementation and management. Several programs in developing nations will be reviewed.

Co-ordinator: Associate Professor A Levy.

ECON924 International Economic Relations - B

8 credit points.

Not to count with INTR920.

The subject will examine policy issues in the international economy, especially as they affect the Asia-Pacific region. The role of international economic organisations such as the IMF, World Bank, and GATT will be emphasised as well as issues such as free trade, protectionism, exchange rate determination and international capital flows. Options available to individual countries for international economic policy will be explored.

Co-ordinator: Associate Professor R Castle.

ECON925 Advanced Economic Theory*

8 credit points.

Advanced topics in economic theory will be studied. Topics in microeconomics will normally include game theory, general equilibrium analysis, welfare economics and economics of regulation. Topics in macroeconomics will normally include growth theory, trade cycle theory, open economy dynamics, rational expectations and post-Keynesian economics.

Co-ordinator: Mr E Wilson.

ECON929 Macrodynamics*

8 credit points.

This subject covers dynamic aspects of macroeconomics, including economic growth theory and business cycle theories. The role of technological change, balanced and unbalanced growth, shock adjustment, and optimal growth will all be studied in a framework of macroeconomic modelling.

Co-ordinator: Associate Professor A Levy.

ECON932 Economic Analysis of the Business Environment

6 credit points.

This subject focuses on the macro and micro environment of business and organisations, and the role of managers in relating their organisational behaviour to the economic environment. Internationalisation of business and the globalisation of economics and markets will be studied as well as macroeconomic and microeconomic policies which affect the business environment.

Co-ordinator: Ms A Hodgkinson.

ECON933 Game Theory**8 credit points.**Pre-requisite: ECON111 and ECON122 or their equivalents.*

A study of advanced topics in game theory. The objective of this subject is to build on traditional analytical techniques in economics based on assumptions of certainty and competitive markets. Using game theory, the analysis is extended to settings that traditional economic analysis is unable to cope with. These typically involve settings incorporating risk and uncertainty, asymmetric and incomplete information and strategic situations where the assumptions of competitive markets do not apply. The emphasis is on theoretical developments and the application of the central tools of game theory to real world problems of business and economics involving strategic interactions between parties.

Textbook:

Rasmussen, E, *Games and Information*, Basil Blackwell, Oxford, 1989.

*Co-ordinator: Dr B Lee.***ECON934 Advanced Financial Economics***8 credit points.**Pre-requisite: ECON121 or equivalent.*

An advanced study of the theory of optimal acquisition, financing and composition of assets and production activities with applications in the fields of economics of the firm, agricultural economics and international economics. The optimal control method and phase-plane diagrams will be applied in the analysis of the optimal trajectories of capital investment, advertising and borrowing. Investors' portfolio choices and producers' activity sets will be analysed within a mean-variance expected utility maximisation framework incorporating the notions of risk aversion, costs of risk bearing and diversification. The determinants and implications of debt accumulation, insolvency, continuation or liquidation will be analysed within the context of international economics.

*Co-ordinator: Associate Professor A Levy.***ECON935 Advanced Managerial Economics and Operations Research***8 credit points.**Pre-requisite: ECON228 or ECON230 or equivalent.*

A study of advanced quantitative techniques applicable to economic and managerial decision-making. This subject covers a wide range of quantitative analyses such as forecasting techniques, Bayesian analysis, Markov process models, PERT, CPM and specialised network algorithms, risk preference analysis, transportation and assignment models and quadratic and nonlinear programming.

Textbook:

Mansfield, E (ed) *Managerial Economics and Operations Research Techniques Applications and Cases*, (5th ed) W W Norton, NY 1987, plus selected journal articles.

*Co-ordinator: Associate Professor M Metwally.***ECON936 Graduate Macroeconomics***8 credit points.*

The aim of the subject is to analyse the major factors which determine economic behaviour in the aggregate and to evaluate how alternative macroeconomic policies may improve some performance. In doing so the course examines the major determinants of aggregate demand equilibrium, namely consumption and investment demands, international factors, money and interest. Monetary and fiscal policies are examined using this analytic structure to determine the effectiveness of these policies. Aggregate supply equilibrium is then analysed in terms of wages, prices and employment. The problems of inflation and unemployment are also considered along with possible wages policies. The subject concludes with a brief review of longer term growth explanations of economic behaviour and associated policy prescriptions.

*Co-ordinator: Mr E Wilson.***ECON937 Graduate Microeconomics***8 credit points.*

The subject provides the theoretical basis for analysis of a wide range of microeconomic issues and policies. Topics include demand and supply theory; consumer preference theory; theory of the firm; cost functions; market behaviour under perfect competition, monopoly, and imperfect competition; factor markets; general equilibrium theory; externalities and intertemporal choice and risk. The emphasis in these topics is on providing a theoretical foundation that is linked to empirical analysis and interpretation of real world problems.

Textbooks:

Varian, H R, *Microeconomic Analysis*, (3rd Edition), Norton, New York, 1992.

Mansfield, E, *Microeconomics*, (7th Edition), Norton, New York, 1992.

*Co-ordinator: Dr CS Suh.***ECON938 Environmental Economics***8 credit points.*

This subject will provide a comprehensive analysis of environmental issues utilising the theory of economic externalities and the theory of ecologically sustainable development. Methods used to convert environmental problems and to measure externalities will be analysed. It will also evaluate environmental policies in Australia, developing countries and in the international economy.

Textbook:

Pearce, D W and Turner, R K, *Economics of Natural Resources and the Environment*, 1990.

*Co-ordinator: Ms A Hodgkinson.***ECON939 Principles of Econometrics***8 credit points.*

This course deals with the fundamental concepts of econometrics used in applied economic work in the academic, business and government sectors. The course covers the standard and non-standard econometric models, based on time series,

cross-section, or qualitative data. Emphasis will be on applications of the econometric methodologies in empirical research.

Textbook:

Griffiths, W E, Carter-Hill, R and Judge, G, *Learning and Practising Econometrics*, New York, Wiley & Sons, 1993.

*Co-ordinator: Associate Professor Tran Van Hoa.***ECON940 Econometric Analysis****8 credit points.*

The subject deals with applications of the econometric theory to microeconomic and macroeconomic analyses. Topics include consumer demand, production function, investment analysis, finance, unemployment, inflation, and international trade. The subject also covers multi-sector economy-wide modelling of the Keynesian and neo-classical classes, and emphasises particularly empirical research on current economic issues.

Textbook:

Green, W H, *Econometric Analysis*, New York, Macmillan, 1993.

*Co-ordinator: Associate Professor Tran Van Hoa.***ECON941 Advanced Topics in Economics - A***8 credit points.***ECON942 Advanced Topics in Economics - B***8 credit points.***ECON943 Advanced Topics in Economics - C***8 credit points.***ECON944 Advanced Topics in Economics - D***8 credit points.***ECON945 Advanced Topics in Economics - E***8 credit points.***ECON946 Advanced Topics in Economics - F***8 credit points.*

Topics for these subjects (A-F) may be drawn from any area of Economics which the Head of the Department considers to be suitable preparation for a higher degree and appropriate to the student's special interests.

*Co-ordinator: Professor D Lewis.***ECON980 Special Topics in Economics - G***6 credit points (3 hrs per wk of lectures, tutorials and seminars)*

Pre-requisites: ECON932 or other ECON as approved by Head, Department of Economics
Note: Enrolment must be specifically approved by the Head, Department of Economics

The purpose of this subject is to make available a 6 credit point form of specialised ECON subjects for MBA students. Special assessment requirements will be provided reflecting the lower work load of a 6 credit point subject. The objectives are those of the substantive subject. This subject can

* Not on offer in 1996.

replace designated ECON MBA subjects in MBA Schedules 5, 6, 10 and 11 and MCom (ACCY) Schedule-Treasury (Finance).
Co-ordinator: Associate Professor R Castle.

ECON981 Special Topics in Economics - H

6 credit points (3 hrs per wk of lectures, tutorials and seminars)

Pre-requisites: ECON932 or other ECON as approved by Head, Department of Economics

Note: Enrolment must be specifically approved by the Head, Department of Economics

The purpose of this subject is to make available a 6 credit point form of specialised ECON subjects for MBA students. Special assessment requirements will be provided reflecting the lower work load of a 6 credit point subject. The objectives are those of the substantive subject. This subject can replace designated ECON MBA subjects in MBA Schedules 5, 6, 10 and 11 and MCom (ACCY) Schedule-Treasury (Finance).

Co-ordinator: Associate Professor R Castle.

ECON991 Project

16 credit points.

ECON992 Research Report

24 credit points.

ECON993 Thesis

48 credit points per year.

ECON996 Advanced Macroeconomic Theory

8 credit points.

This subject critically reviews advanced contemporary macroeconomic theories and their policy prescriptions. It stresses the need to consider four important concepts; namely the international orientation of macroeconomics, the role of expectations and their formation, the importance of macroeconomic adjustment speeds, dynamics and stability properties, and finally, the difficulty of formulating and implementing consistent, optimum macroeconomic policy in a changing world.

Co-ordinator: Mr E Wilson

ECON997 Advanced Microeconomic Theory

8 credit points.

The objective of this subject is to provide a balanced and comprehensive coverage of the core topics in theoretical microeconomics, with particular attention to welfare economics, the economics of production, and contestable markets.

Co-ordinator: Dr T Webber.

ECON998 Graduate Quantitative Analysis

8 credit points.

Advanced mathematical and statistics techniques used in economic research will be studied. The emphasis will be on mathematical techniques which are of use in understanding advanced theoretical subjects in economics as well as statistical techniques needed to conduct empirical research in economics.

Co-ordinator: Professor D Lewis.

For descriptions of subjects not listed here, refer to Industrial Relations section.

GRADUATE BUSINESS AND PROFESSIONAL EDUCATION UNIT

COURSES OFFERED

The following postgraduate courses are available:

1. Graduate Certificate in Management
2. Graduate Diploma in Commerce
3. Master of Business Administration

SCHEDULE OF PROGRAMS

GRADUATE CERTIFICATE IN MANAGEMENT

The objective of the Graduate Certificate is to provide an introductory study of the concepts of management and management practice. The Certificate is deliberately structured to provide different approved programs of study, including off-campus programs for specific employment groups (eg. the NSW Police Service) or specified professional groups (eg. Public Sector Managers).

Admission to this Graduate Certificate requires Bachelor qualifications, though in special circumstances an applicant holding other academic or professional qualifications, and with relevant work experience and/or employer support, may be admitted as a candidate. This award is equivalent to 6 months full-time study. Students complete 24CP of study selected from the Graduate Diploma in Commerce (MGMT) schedule. Students qualifying for the Graduate Certificate in Management who have achieved an average of a credit grade or better over all subjects may be admitted to the Graduate Diploma program. They will receive a credit of up to 24CP depending upon the particular program of study undertaken.

GRADUATE DIPLOMA IN COMMERCE (Management)

Entry to this program is based on graduate qualifications, employment history and managerial experience. Students completing the GradDip with better than credit average results and relevant work experience will be eligible for admission to the MBA program. The Graduate Diploma in Commerce (Management) is a one year full-time or two year part-time course comprising eight compulsory subjects. Subjects focus on the fundamental issues that relate to essential managerial understandings and skills in that area. This is a 48CP course.

Number	Subject	Credit Points
ACCY901	Accounting for Managers	6
ECON932	Economics Analysis of the Business Environment	6
BUS903	Information Systems for Managers	6
MGMT905	Business Ethics and Law	6
MGMT906	Managing People at Work	6
MGMT907	Managerial Skills Workshop	6
MGMT922	Marketing Management	6
MGMT979	Financial Decision Making	6

Co-ordinator: Professor Michael Hough.

MASTER OF BUSINESS ADMINISTRATION

The Master of Business Administration (MBA) is a two year full-time or four year part-time course. Students will be required to complete the core elements of study, as for the Graduate Diploma in Commerce (Management), in the first half of the MBA. These subjects will serve as an introduction to the subsequent specialisation subjects that follow.

A number of specialisation options are available in the second year of the two year full-time program, representing the final 48CP of the 96CP MBA program. Subjects offered depend on student demand and available resources. Specialisations can include:

- General Management
- Marketing
- Human Resource Management
- Total Quality Management
- Public Sector Management
- International Business
- Operations Management
- Strategic Management
- Technology and Innovation Management
- Finance
- Industrial Relations
- Business Economics
- Systems Management
- Systems Development
- Legal Studies

This is a 96CP course, awarded at Pass or Merit level.

Co-ordinator: Professor Michael Hough.

MASTER OF BUSINESS ADMINISTRATION SCHEDULE

Students intending to enrol in the Master of Business Administration please note:

- Some subjects require prerequisites or are subject to entry requirements. Refer to individual subject descriptions in this Calander.
- Enrolment in some subjects may require the approval of the appropriate Coordinator or Departmental Head.
- Not all subjects and specialisations are offered every year.

MASTER OF BUSINESS ADMINISTRATION SCHEDULE (cont'd).

Number	Subject	Credit Points
Core subjects - 48CP, as specified for the Graduate Diploma in Commerce (Management)		
ACCY901	Accounting for Managers	6
ECON932	Economic Analysis of the Business Environment	6
BUSS903*	Information Systems for Managers	6
MGMT905	Business Ethics and Law	6
MGMT906	Managing People at Work	6
MGMT907	Managerial Skills Workshop	6
MGMT922	Marketing Management	6
MGMT979	Financial Decision Making	6

42CP of approved specialisation studies from one of the following schedules:

1. General Management
2. Marketing
3. Human Resource Management
4. Total Quality Management
5. Public Sector Management
6. International Business
7. Operations Management
8. Strategic Management
9. Technology and Innovation Management
10. Finance
11. Industrial Relations
12. Business Economics
13. Systems Management
14. Systems Development
15. Legal Studies

Plus 6CP of integration studies

MGMT931	Strategic Planning and Policy	6
or		
MGMT976	Competitive Analysis and Strategy	6

* Students who study the specialisation in Systems Development do not enrol for BUS903.

SPECIALISATION SCHEDULES

Most specialisation schedules include the option of a project within the prescribed 42CP.

Number	Subject	Credit Points
Schedule 1: General Management		
Coursework Option		
42CP of MGMT900 subjects (not MBA core subjects)		
<i>and</i>		
MGMT931	Strategic Planning and Policy	6
Project Option		
24CP of project studies		
<i>either</i>		
MGMT980	Business Research Methods	6
MGMT982	Project	18
<i>or</i>		
MGMT981	MBA Project	24
Schedule 2: Marketing		
Compulsory Subjects		
MGMT977	Research for Marketing Decisions	6
MGMT957	International Marketing Strategy	6
MGMT967	Quantitative Methods	6
MGMT931	Strategic Planning and Policy	6
<i>and</i>		
Coursework Option		
24CP of coursework from the following subjects		
ACCY921	Managerial Finance	6
MGMT938	Managing Services Marketing	6
MGMT939	Contemporary Issues in International Marketing	6
MGMT956	New Product Marketing	6
MGMT935	Marketing Planning and Strategy	6
<i>or any 6CP postgraduate subject approved by the Head of the relevant Department.</i>		
Project Option		
24CP of project studies		
<i>either</i>		
MGMT938	Managing Services Marketing	6
MGMT982	Project	18
<i>or</i>		
MGMT981	MBA Project	24

SPECIALISATION SCHEDULES (cont'd).

Number	Subject	Credit Points
Schedule 3: Human Resource Management		
Compulsory Subjects		
MGMT953	Human Resource Management	6
ECON954	Industrial Relations in Australia	6
MGMT931	Strategic Planning and Policy	6
<i>plus either</i>		
MGMT916	Management and Employment Relations	6
<i>or</i>		
MGMT919	Human Resource Strategies and TQM	6
<i>and</i>		
Coursework Option		
<i>24CP either</i>		
MGMT916	Management and Employment Relations	6
<i>or</i>		
MGMT919	Human Resources Strategies and TQM	6
<i>or</i>		
MGMT938	Managing Services Marketing	6
<i>and 18CP from either</i>		
MGMT920	Organisational Analysis	6
MGMT915	Management of Change	6
MGMT918	Organisational Processes	6
MGMT924	Organisations and their Environments	6
MGMT947	Quality Management	6
MGMT963	Management of Occupational Health and Safety	6
ECON948	Employers and Industrial Relations	6
<i>or any 6CP postgraduate subject approved by the Head of the relevant Department.</i>		
<i>or</i>		
Project Option		
<i>24CP of project studies either</i>		
MGMT980	Business Research Methods	6
MGMT982	Project	18
<i>or</i>		
MGMT981	MBA Project	24
Schedule 4: Total Quality Management		
Compulsory Subjects		
MGMT947	Quality Management	6
MGMT915	Management of Change	6
TQM911	Introduction to TQM	6
MGMT931	Strategic Planning and Policy	6
<i>and</i>		
Coursework Option		
<i>24CP of coursework selected from</i>		
MGMT916	Management and Employment Relations	6
MGMT918	Organisational Processes	6
MGMT919	Human Resource Strategies and TQM	6
MGMT920	Organisational Analysis	6
MGMT924	Organisations and their Environments	6
MGMT961	International Business Management	6
MGMT967	Quantitative Methods	6
MGMT970	Contemporary Issues in Service Quality	6
<i>or any 6CP postgraduate subject approved by the Head of the relevant Department.</i>		
Project Option		
<i>24CP of project studies either</i>		
MGMT980	Business Research Methods	6
MGMT982	Project	18
<i>or</i>		
MGMT981	MBA Project	24
Schedule 5: Public Sector Management		
Compulsory Subjects:		
MGMT924	Organisations and their Environments	6
MGMT927	Australian Government Administration	6
MGMT928	Public Policy and Administration	6
MGMT931	Strategic Planning and Policy	6
<i>and</i>		
Coursework Option		
<i>24CP of coursework from</i>		
MGMT919	Human Resource Strategies and TQM	6

SPECIALISATION SCHEDULES (cont'd).

Number	Subject	Credit Points
MGMT916	Management and Employment Relations	6
MGMT920	Organisational Analysis	6
MGMT918	Organisational Processes	6
MGMT915	Management of Change	6
MGMT963	Management of Occupational Health & Safety	6
MGMT948	Project in Regional Administration	6
ACCY983	Studies in Government Accounting	6
ECON903	Public Finance	6
<i>or any 6CP postgraduate subject approved by the Head of the relevant Department.</i>		
<i>or</i>		
Project Option		
<i>24CP of project studies either</i>		
MGMT980	Business Research Methods	6
MGMT982	Project	18
<i>or</i>		
MGMT981	MBA Project	24
Schedule 6: International Business		
Compulsory Subjects		
MGMT931	Strategic Planning and Policy	6
MGMT957	International Marketing Strategy	6
MGMT961	International Business Management	6
ACCY928	Multinational Financial Management	6
<i>and</i>		
Coursework Option		
<i>24CP of subjects from</i>		
MGMT976	Competitive Strategy and Analysis	6
MGMT978	Cross Cultural Management	6
<i>plus 12CP from</i>		
ECON924	International Economic Relations	6
ACCY905	International Accounting	6
MGMT939	Contemporary Issues in International Marketing	6
<i>Any 900-level MGMT subject(s) which are not core subject(s) for the MBA, or previously studied.</i>		
<i>Any 6CP postgraduate subject approved by the Head of the relevant Department.</i>		
<i>or</i>		
Project Option		
<i>24CP of project studies either</i>		
MGMT980	Business Research Methods	6
MGMT982	Project	18
<i>or</i>		
MGMT981	MBA Project	24
Schedule 7: Operations Management		
Compulsory Subjects		
MGMT931	Strategic Planning and Policy	6
MGMT947	Quality Management	6
MGMT952	Production and Operations Management	6
MGMT967	Quantitative Methods	6
<i>and</i>		
Coursework Option		
<i>24CP of coursework from</i>		
ACCY921	Managerial Finance	6
MGMT933	Management of Process Innovation I	6
MGMT976	Competitive Strategy and Analysis	6
<i>plus one elective postgraduate subject from any of the Commerce Schedules as approved by the Head of the relevant Department.</i>		
<i>or</i>		
Project Option		
<i>24CP of project studies either</i>		
MGMT980	Business Research Methods	6
MGMT982	Project	18
<i>or</i>		
MGMT981	MBA Project	24
Schedule 8: Strategic Management		
Compulsory Subjects		
MGMT976	Competitive Strategy and Analysis	6
MGMT915	Management of Change	6
MGMT931	Strategic Planning and Policy	6
MGMT967	Quantitative Methods	6

SPECIALISATION SCHEDULES (cont'd).

Number	Subject	Credit Points
<i>or</i>		
ACCY921	Managerial Finance	
<i>and</i>		
Coursework Option		
24CP of coursework from the 900-level MGMT Schedule except core subjects for the MBA		
<i>or</i>		
Project Option		
24CP of project studies either		
MGMT980	Business Research Methods	6
MGMT982	Project	18
<i>or</i>		
MGMT981	MBA Project	24
Schedule 9: Technology and Innovation Management		
Compulsory Subjects		
MGMT931	Strategic Planning and Policy	6
MGMT933	Management of Process Innovation	6
MGMT934	Management of Process Innovation	6
BUSS952	Information Systems Management	6
<i>and</i>		
Coursework Option		
24CP of coursework from		
MGMT915	Management of Change	6
MGMT954	Special Topic in Management A	6
plus 12CP from any non-core MGMT subjects listed in MBA Specialisation Schedules 3, 4, 7 or 13		
<i>or</i>		
Project Option		
24CP of project study either		
MGMT980	Business Research Methods	6
MGMT982	Project	18
<i>or</i>		
MGMT981	MBA Project	24
Schedule 10: Finance		
Compulsory Subjects		
ACCY923	Investment Management	6
ACCY926	Studies in Business Finance	6
ECON934	Advanced Financial Economics	6
ACCY921	Managerial Finance	6
MGMT931	Strategic Planning and Policy	6
<i>and 18CP of coursework from</i>		
ACCY922	Capital Investment	6
ACCY924	Corporate Financial Information Analysis	6
ACCY925	Australian Financial Institutions	6
ACCY927	Small Business Finance	6
ACCY928	Multinational Financial Management	6
ECON902	Advanced International Monetary Economics	6
Note: A project option is available with permission from the Head of Accountancy or the designated departmental nominee.		
Schedule 11:		
Industrial Relations		
Compulsory Subjects		
ECON954	Industrial Relations in Australia	6
ECON944	Advanced Topics in Economics D	6
MGMT931	Strategic Planning and Policy	6
<i>either</i>		
MGMT953	Human Resource Management	6
<i>or</i>		
MGMT916	Management and Employment Relations	
<i>and</i>		
Coursework Option		
24CP of coursework from either		
MGMT916	Management and Employment Relations	6
<i>or</i>		
MGMT953	Human Resource Management	
<i>and</i>		
ECON948	Employers and Industrial Relations	6
ECON952	Workplace and Enterprise Bargaining	6
ECON953	Political Economy of Australian Wage Determination	6

SPECIALISATION SCHEDULES (cont'd).

Number	Subject	Credit Points
ECON955	Comparative Studies in Industrial Relations	6
ECON956	Advanced Industrial Relations Processes	6
ECON957	Productivity and Labour	6
ECON958	Industrial Relations & Management Thought	6
<i>or one 6CP subject from MBA Specialisation Schedule 3</i>		
<i>or</i>		
Project Option		
ECON992	Research Project	24
Schedule 12: Business Economics		
Compulsory Subjects		
ECON907	Cost-Benefit Analysis	8
ECON936	Graduate Macroeconomics	8
ECON937	Graduate Microeconomics	8
MGMT931	Strategic Planning and Policy	6
<i>and</i>		
Coursework Option		
<i>24CP of coursework from</i>		
ECON909	Econometric Theory	8
<i>and any 2 of</i>		
ECON913	Industrial Economics	8
ECON916	Microeconomic Analysis	8
ECON924	International Economic Relations	8
ECON933	Game Theory	8
ECON934	Advanced Financial Economics	8
ECON935	Advanced Managerial Economics and Operations Research	8
ECON938	Environmental Economics	8
ECON944	Advanced Topics in Economics D	8
<i>or any postgraduate subject approved by the Head of the relevant Department.</i>		
<i>or</i>		
Project Option		
ECON992	Research Project	24
Schedule 13: Systems Management		
Compulsory Coursework		
BUSS945	Information Systems Project	12
BUSS952	Information Systems Management	6
BUSS953	Management of Systems Development	6
MGMT976	Competitive Strategy and Analysis	6
BUSS930	Programming for Managers	6
BUSS931	Database for Managers	6
<i>Plus a 6CP 900-level BUSS subject selected from Schedule 4 in the Business Systems calendar section.</i>		
Schedule 14: Systems Development		
Compulsory Subjects		
BUSS945	Information Systems Project	12
BUSS952	Information Systems Management	6
BUSS953	Management of Systems Development	6
MGMT976	Competitive Strategy and Analysis	6
BUSS950	Systems Development Methodologies	6
BUSS951	Critical Issues in Systems Development	6
<i>Plus 12CP of 900-level BUSS subjects selected from Schedule 4 in the Business Systems calendar section.</i>		
Schedule 15: Legal Studies		
Compulsory Subjects		
LAW810	Law in Society	8
LAW811	Law of Contracts	8
MGMT931	Strategic Planning and Policy	6
<i>and</i>		
Coursework Option		
<i>30CP of coursework from</i>		
LAW951	Taxation Policy and Practice	6
LAW953	Studies in Taxation	6
LAW964	Studies in Business Law	6
LAW965	Studies in Administrative Law	6
LAW966	Studies in Industrial Law	6
LAW967	Studies in Trade Practices and Consumer Law	6
LAW988	Special Topic in Law	6
<i>or any 6CP postgraduate subject approved by Dean of Faculty of Law</i>		

SPECIALISATION SCHEDULES (cont'd).

Number	Subject	Credit Points
<i>or</i>		
Project Option		
<i>6CP selected from one of</i>		
LAW951	Taxation Policy and Practice	6
LAW953	Studies in Taxation	6
LAW964	Studies in Business Law	6
LAW965	Studies in Administrative Law	6
LAW966	Studies in Industrial Law	6
LAW967	Studies in Trade Practices and Consumer Law	6
LAW988	Special Topic in Law	6
<i>and</i>		
24CP of Project study		
MGMT980	Business Research Methods	6
MGMT982	Project	18
<i>or</i>		
MGMT981	MBA Project	24

COURSE REQUIREMENTS**1. MASTER OF BUSINESS ADMINISTRATION**

This degree is offered to allow practising managers to broaden their understanding of key managerial processes including skills, concepts and disciplines. This is achieved by the 1st year of the full-time program (or part-time equivalent) offering the core issues of managerial skills and concepts, followed by the 2nd year of the full-time program (or part-time equivalent) enabling either a deliverate specialisation selected from a range of management focus areas, or the opportunity to study generally across a wide range of advanced management issues.

The degree will be awarded at either Pass or Merit level. For award at Merit level a student must satisfactorily pass all subjects at the first attempt, and maintain a grade average across all subjects of 70% or higher. If a student chooses to study a specialisation successful completion of that specialisation will be acknowledged on the testamur for the degree, as will the achievement of a Merit level award.

Selection for admission to the degree will be on the basis of an appropriate balance between academic qualifications, managerial experience, and career intent. In addition to the requirement of the standard University Application Form candidates are required to submit a detailed statement with supporting documentation of their previous work/managerial experience and a statement of their career strategy. A typical applicant may be expected to have a recognised University degree, 2 years of relevant managerial experience, and be committed to a career in management. Applicants may be required to demonstrate an adequate command of English in a commercial context.

The MBA is intended to be completed in 3-4 sessions full-time and 3-4 years part-

time. It is expected that the 8 core subjects will normally be studied first, followed by the specialisation selected. Within each specialisation there is the option of 24 credit points of project studies. The project must be within in the area of specialisation and wherever possible participants are encouraged to relate their studies into issues or problems connected with their current working environment. The degree concludes with the study of a "capstone subject" which integrates the ideas of the program, and is normally studied in the final session of the program or before the commencement of the project.

Course approval: The program of study for each student must be approved by MBA Director. Students who have substantially covered the content of any of the compulsory subjects, may be exempted by the MBA Director from any such subjects, but will be required to substitute an optional subject for each subject for which exemption is granted.

NOTE: Due to different entry criteria and schedules of study, students will NOT be permitted to transfer between MBA/Graduate Diploma Certificate and MCom programs.

2. GRADUATE DIPLOMA IN COMMERCE (MANAGEMENT)

In accordance with the General Rules for graduate diplomas, candidates for the Graduate Diploma in Commerce must have been admitted to the degree of Bachelor in the University or other approved institution. In special circumstances an applicant holding other academic or professional qualifications and with relevant work experience of not less than five years may be admitted as a candidate. The objective of the Graduate Diploma is to provide practising managers with insights and understandings of the core issues of management skills and concepts. The core subjects covered in the Graduate Diploma provide postgraduate level education with an applied emphasis in the major functional areas of management and administration.

Selection into the program will be on the basis of a balance between academic qualifications, managerial experience, and career intent. Where an applicant for the MBA is otherwise qualified except for meeting the full work experience requirements for the degree, they may be admitted to the Graduate Diploma as a way of establishing their appropriateness and readiness for full MBA study. The core subjects of the Graduate Diploma constitute the first year of study in the MBA, and students who have achieved an average of grade or higher over all subjects, may be admitted to the full MBA program. They will receive a credit of 48 credit points. On satisfactory completion of the MBA they will not be entitled to receive the Graduate Diploma in Commerce (Management).

The Graduate Diploma is intended to be completed over 2 sessions by full-time study, or in 4 sessions by part-time study.

Applicants may be required to have adequate command of English in a commercial context.

3. GRADUATE CERTIFICATE IN MANAGEMENT

In accordance with the general rules for graduate admission, candidates for the Graduate Certificate in Management must have been admitted to the degree of Bachelor in the University or other approved institution. In special circumstances an applicant holding other academic or professional qualifications and with relevant work experience and/or employer support may be admitted as a candidate.

The objective of the Graduate Certificate is to provide a meaningful introductory study of the concepts of management and management practice. The Graduate Certificate is deliberately structured to provide different approved programs of study, including off campus programs for specified employment groups (eg the NSW Police Service) or specified professional groups (eg Public Sector managers). There is an on-campus program of study, each

approved program is discrete, and when successfully completed will lead to the award of the Graduate Certificate in Management.

The Graduate Certificate is intended to be completed in one session of full-time study or in two sessions by part-time study. Students qualifying for the Graduate Certificate in Management who have achieved an average of a credit grade or better over all subjects, may be admitted to the Graduate Diploma program. They will receive a credit of up to 24 credit points, depending upon the particular program of study undertaken. On successful completion of the Graduate Diploma in Commerce (Management) they will not be entitled to receive a Graduate Certificate in Management.

Applicants for the Graduate Certificate may be required to demonstrate an adequate command of English in a commercial context.

INDUSTRIAL RELATIONS

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Commerce by Coursework and Research
Honours Master of Arts by Coursework and Research
3. Master of Commerce by Coursework
4. Graduate Diploma in Commerce (Industrial Relations)

POSTGRADUATE PROGRAM

Industrial Relations

CURRENT RESEARCH AREAS

The areas of research in which staff can offer supervision are indicated by the area covered in Schedules 12 and 13 listed below and by the subjects within those schedules. Other areas may be offered subject to consultation with the Head of Department.

SCHEDULE OF PROGRAMS

SCHEDULE 12: INDUSTRIAL RELATIONS

leading to the Master of Commerce or the Honours Master of Commerce.

Number	Subject	Credit Points
ECON912	Labour Economics	8
ECON913	Industrial Economics	8
ECON944	Advanced Topics in Economics - D	8
ECON945	Advanced Topics in Economics - E	8
ECON946	Advanced Topics in Economics - F	8
ECON948	Employers and Industrial Relations	8
ECON952	Workplace and Enterprise Industrial Relations	8
ECON953	Political Economy of Australian Wage Determination	8
ECON955	Comparative Studies in Industrial Relations	8
ECON957	Productivity and Labour	8
ECON958	Industrial Relations and Management Thought	8
MGMT953*	Human Resource Management	6
MGMT962*	Environmental and Occupational Health	6
LAW966*	Studies in Industrial Law	6
LAW969*	Occupational Health and Safety Law	6
GMHC954*	Organisational Psychology	8
PSYC956*	Occupational Psychology	8

*Subject available only to those doing ECON992 Research Report (24 credit points).
For further details, see *Subject Requirements* in Economics section.

SCHEDULE 13: OTHER POSTGRADUATE SUBJECTS

Number	Subject	Credit Points
ECON954	Industrial Relations in Australia	6
ECON956	Advanced Industrial Relations Processes	8
ECON973	Employers and Industrial Relations - A	6
ECON975	Advanced Industrial Relations Processes	6
ECON991	Project	16
ECON992	Research Report	24
ECON993	Thesis	48

COURSE REQUIREMENTS

1. DOCTOR OF PHILOSOPHY

For the degree of Doctor of Philosophy, candidates enrol in the subject ECON993 Thesis.

2. HONOURS MASTER OF COMMERCE

HONOURS MASTER OF ARTS

The purpose of the Honours Masters degree is to provide graduate students, who have completed the Industrial Relations specialisation for the BCom or BA degree or equivalent, with the opportunity for further in-depth study of advanced topics in

industrial relations in preparation for a professional career as an industrial relations expert. Entry requires a BCom or BA degree with a specialisation in Industrial Relations or an equivalent degree.

The Course Rules governing the Honours Masters degree will apply.

The degree of 96 credit points can be studied full-time over two years, or may be studied part-time.

For the Honours Master Degree students must, subject to the subsequent advanced standing or exemption clause, complete:

Either
ECON993 Thesis - 48 credit points together with 48 credit points of

approved subjects chosen from Schedules 12 and 13;

or
ECON992 Research Report - 24 credit points

and
together with 72 credit points of approved subjects chosen from Schedules 12 and 13.

Students who have completed the BCom(Hons) or BA(Hons) in Industrial Relations, or an equivalent degree, and who have graduated in Honours with a standard of Class II, Division 2 or higher may be given advanced standing or exemption up to a maximum of 48 credit points of the required 96 credit points.

3. MASTER OF COMMERCE

The purpose of this pass degree is to provide graduate students who have completed the Industrial Relations specialisation for the BCom degree or equivalent with the opportunity for further in-depth study of advanced topics in Industrial Relations in preparation for a career in industrial relations. Entry requires a BCom degree with a specialisation in Industrial Relations or an equivalent degree.

The Course Rules governing the Masters Degree will apply. For the Master of Commerce degree students must complete 48 credit points chosen from Schedule 12, including at least 24 credit points of ECON subjects.

In special circumstances the Head of the Department may substitute an approved 900-level subject for a subject or subjects in Schedule 12.

4. GRADUATE DIPLOMA IN COMMERCE

The purpose of this diploma is to provide graduate students who have not completed an Industrial Relations specialisation in their undergraduate degree with the opportunity for advanced study in Industrial Relations.

The Graduate Diploma in Commerce shall be subject to the Course Rules for the award of Graduate Diploma.

The Graduate Diploma will normally occupy two sessions of full-time study or the part-time equivalent.

SUBJECT DESCRIPTIONS

Composition of Subjects

Three hours lectures/seminars per week.

Assessment

Continuous assessment by written assignments, essays and Departmental examinations.

ECON948 Employers and Industrial Relations

8 credit points.

The objective of this subject is to develop a better understanding of the role of management/employers in industrial relations. The subject matter divides into two main areas. First, the role of management in industrial relations within the individual enterprise or organisation, which involves a critical analysis of various theories about management and the enterprise and a survey of management strategies in industrial relations, including negotiating and advocacy techniques. The second area concerns the combination of individual managements into coalitions in the form of employer associations. This covers the bases of employer organisation, the structure and function of employer associations in Australia, and a comparison of Australian employer associations with those in other countries.

Co-ordinator: Dr C Nyland.

ECON952 Workplace and Enterprise Industrial Relations

8 credit points.

This subject will focus on the employment relationship at the level of the firm and workplace with particular reference to contemporary micro-level reform, in a variety of countries in Asia and Pacific Rim. The nature and effects of the economic environment on managerial styles and trade union organisation will also be examined.

Co-ordinator: Ms D Kelly.

ECON953 Political Economy of Australian Wage Determination

8 credit points.

An examination of the broad political and economic contexts which have shaped wage-effort bargaining and the major institutions of industrial relations in Australia from 1850 to the present. Some comparative perspectives will also be developed.

Textbook: Not applicable.

Co-ordinator: Associate Professor R Markey.

ECON954 Industrial Relations in Australia*

6 credit points.

Topics include: the structure and nature of Trade Unions; the structure and nature of Employer Organisations; issues in Industrial Relations; strategies and tactics in Industrial Relations; the role of the state in Industrial Relations.

Note: ECON954 is available only to students enrolled in the Diploma in Management or in the Master of Business Administration.

Co-ordinator: to be advised.

ECON955 Comparative Studies in Industrial Relations

8 credit points.

A comparative examination of the development and organisation of industrial relations systems in a variety of different countries.

Textbook:

Bean, R, *Comparative Industrial Relations: An Introduction to Cross-National Perspectives*, Croom Helm, London, 1985.

Co-ordinator: Associate Professor R Markey.

ECON956 Advanced Industrial Relations Processes

8 credit points.

This subject will develop concepts, theories and techniques for the choice and evaluation of strategies and tactics in collective bargaining and advocacy.

Co-ordinator: Ms D Kelly.

ECON957 Productivity & Labour

8 credit points.

An examination of the meaning and measurement of labour productivity, and its relationship to wage bargaining at national industry and enterprise levels. The subject also examines the impact of productivity based wage bargaining on unions, employer organisation and the economy.

Textbook: Readings as prescribed.

Co-ordinator: Associate Professor R Castle.

ECON958 Industrial Relations and Management Thought

8 credit points.

An examination of the ideas and strategies which modern management theorists have developed in order to deal effectively with the open-ended nature of the employment relationship. Particular attention is paid to the reasons why management has developed and applied these theories and the extent to which they have proven successful.

Textbook:

Wren, D A, 1987, *The Evolution of Management Thought*, (Third Edition), John Wiley and Sons, New York.

Co-ordinator: Dr C Nyland.

ECON973 Employers and Industrial Relations - A

6 credit points.

Not to count with ECON948.

The subject aims to develop an understanding of the role of employers/management in industrial relations, at the level of the firm and at the level of employer association. It examines theories and strategies of IR management in the firm, and the structure and function of employer associations in Australia and overseas.

Co-ordinator: Dr C Nyland.

ECON975 Advanced Industrial Relations Processes

6 credit points.

Not to count with ECON956.

The subject develops concepts and techniques for the choice and evaluation of strategies and tactics in collective bargaining and advocacy. Much of subject will involve case studies and role playing.

Co-ordinator: Ms D Kelly.

For descriptions of subjects not listed here, refer to Economics section.

* Not on offer in 1996.

MANAGEMENT

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Commerce
3. Honours Master of Arts by Coursework or Research
4. Master of Commerce
5. Master of Business Administration
6. Graduate Diploma in Commerce (Management)
7. Graduate Certificate in Management

MASTER OF COMMERCE PROGRAMS

Human Resource Management
Marketing
Operations Management
Organisational Behaviour
Public Sector Management

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking research degrees.

Advertising and customer satisfaction
Business policy
Enterprise development and entrepreneurship
Human resource management
International management
Interorganisational relations
Management of Change
Management training
Manufacturing strategy
Marketing communication and consumer behaviour
Marketing Research
Operations management
Organisational behaviour and structure
Organisational politics and culture
Professional services marketing
Public sector management
Regional Development
Sociology of Work
Services marketing
Strategic management
Technology and Organisational Change
Total quality management
Women in management

SCHEDULE OF PROGRAMS

GRADUATE CERTIFICATE IN MANAGEMENT

This is a 24 credit point course which may be taken from several approved schedules.
Refer Graduate Business and Professional Education Unit, page 69.

GRADUATE DIPLOMA IN COMMERCE (MANAGEMENT)

This is a 48 credit point course.
Refer Graduate Business and Professional Education Unit, page 69.

MASTER OF BUSINESS ADMINISTRATION

This is a 96 credit point course, offered at Pass or Merit level.
Refer Graduate Business and Professional Education Unit, page 69.

A number of subjects in this schedule have been annotated for further explanation. A key to the numbering of the notes is provided below:

Key to Notes

- 1 Core subjects only available to MBA/Graduate Diploma/Graduate Certificate students.
- 2 This subject requires prerequisites - see subject descriptions.
- 3 MGMT931 will normally be taken as the concluding subject in the MBA sequence, except where specifically stated otherwise by a specialisation schedule or approval by Head of Department of Management.
- 4 Subject to approval, Head of Department of Accountancy.
- 5 Students with a sufficient prior background in Economics may be permitted by the Head, Department of Economics to substitute two other subjects listed for these subjects.
- 6 Enrolment only with permission from the Graduate Co-ordinator, Industrial Relations.
- 7 Not on offer in 1996.
- 8 Subjects only available in MCom Program.
- 9 Subject to the approval of the Program Director.

GENERAL POSTGRADUATE PROGRAM SCHEDULE

Number	Subject	Credit Points
BUSS903	Information Systems for Managers	6
LAW961	Selected Legal Topics in Management	6
ACCY975	Special Topic in Accounting A	6
ACCY976	Special Topic in Accounting B	6
MGMT911	Organisational Behaviour	6
MGMT915	Management of Change ²	6
MGMT916	Management and Employment Relations	6
MGMT917	Business Ethics ⁷	6
MGMT918	Organisational Processes	6
MGMT919	Human Resource Strategies and TQM	6
MGMT920	Organisational Analysis	6
MGMT924	Organisations and their Environments	6
MGMT925	Selected Topics A	6
MGMT926	Selected Topics B	6
MGMT927	Australian Government Administration	6
MGMT928	Public Policy Administration	6
MGMT931	Strategic Planning & Policy	6
MGMT933	Management of Process Innovation 1	6
MGMT934	Management of Process Innovation 2	6
MGMT935	Marketing Planning and Strategy ²	6
MGMT936	Consumer Behaviour ²	6
MGMT937	Relationship Marketing and Communications ^{2, 8}	6
MGMT938	Managing Services Marketing ^{2, 8}	6
MGMT939	Contemporary Issues in International Marketing ²	6
MGMT940	Innovation and Entrepreneurship	6
MGMT941	Small Business Management I	6
ACCY942	Small Business Finance ⁷	6
MGMT943	Small Business Management II ⁷	6
MGMT944	Enterprise Project ⁷) only one of these	12
MGMT945	Technology Enterprise Project) may be selected	6
MGMT947	Quality Management	6
MGMT948	Project in Regional Administration ⁷	6
MGMT952	Production and Operations Management	6
MGMT953	Human Resource Management	6
MGMT956	New Product Marketing ²	6
MGMT957	International Marketing Strategy ²	6
MGMT960	Case Study	6
MGMT961	International Business Management	6
MGMT963	Management of Occupational Health and Safety ⁷	6
MGMT965	Occupational Hazards I ⁷	6
MGMT966	Occupational Hazards II ⁷	6
MGMT967	Quantitative Methods	6
MGMT968	Communication ⁷	6
MGMT970	Contemporary Issues in Services Quality ^{2, 8}	6
MGMT976	Competitive Strategy & Analysis	6
MGMT977	Research for Marketing Decisions ²	6
MGMT978	Cross Cultural Management ²	6
MGMT979	Financial Decision Making	6
MGMT980	Business Research Methods	6
MGMT981	MBA Project ²	24
MGMT982	Project ²	18
MGMT996	Managing for Innovation	6
ECON907	Cost Benefit Analysis	8
ECON954	Industrial Relations in Australia	6
GHMA914	Ergonomics	8

For further details, see *Course Requirements* below.

MASTER OF COMMERCE PROGRAMS

The MCom is currently under review and students are required to obtain an approved program of study in conjunction with their MCom Specialisation Director.

Subjects in approved programs will be selected from, but not necessarily confined to, the specialisation outlines described below.

MCom Program Director: Dr Robert Jones.

MASTER OF COMMERCE - HUMAN RESOURCE MANAGEMENT SPECIALISATION

Number	Subject	Credit Points
MGMT911	Organisational Behaviour	6
MGMT920	Organisational Analysis	6
MGMT919	Human Resource Strategies and TQM	6

MASTER OF COMMERCE - HUMAN RESOURCE MANAGEMENT SPECIALISATION (cont'd).

Number	Subject	Credit Points
MGMT915	Management of Change ²	6
MGMT916	Management and Employment Relations	6
MGMT953	Human Resource Management	6
LAW960	Law for Professionals	6

and an Industrial Relations Subject approved by the Course Director

For further details, see *Course Requirements* below.

Specialisation Director: Associate Professor C Romm.

MASTER OF COMMERCE - MARKETING SPECIALISATION

Subjects to be taken from the following list after discussion and approval from the MCom-Marketing director:

Number	Subject	Credit Points
MGMT922	Marketing Management	6
MGMT931	Strategic Planning and Policy ²	6
MGMT938	Managing Services Marketing ^{2, 8}	6
MGMT939	Contemporary Issues in International Marketing ²	6
MGMT967	Quantitative Methods	6
MGMT976	Competitive Strategy and Analysis	6
MGMT977	Research for Marketing Decisions ²	6
MGMT936	Consumer Behaviour ²	6
MGMT937	Relationship Marketing and Communications ²	6
MGMT956	New Product Marketing ²	6
MGMT957	International Marketing Strategy ²	6
MGMT970	Contemporary Issues in Services Quality ²	6

For further details, see *Course Requirements* below.

Specialisation Director: Associate Professor P Patterson.

MASTER OF COMMERCE - PUBLIC SECTOR MANAGEMENT SPECIALISATION

Number	Subject	Credit Points
MGMT911	Organisational Behaviour	6
MGMT920	Organisational Analysis	6
MGMT915	Management of Change ²	6
MGMT927	Australian Government Administration	6
MGMT928	Public Policy and Administration	6
MGMT924	Organisations and their Environments	6
<i>plus one of</i>		
ACCY983	Studies in Government Accounting	6
ECON903	Public Finance	8

plus a subject from the General Postgraduate Schedule.

For further details, see *Course Requirements* below.

Specialisation Director: to be advised.

This specialisation is not on offer in 1996.

MASTER OF COMMERCE - OPERATIONS MANAGEMENT SPECIALISATION

Number	Subject	Credit Points
MGMT911	Organisational Behaviour	6
MGMT947	Quality Management	6
MGMT952	Production and Operations Management	6
MGMT953	Human Resource Management	6
MGMT967	Quantitative Methods	6
MGMT979	Financial Decision Making	6
MGMT933	Management of Process Innovation 1	6
or		
MGMT934	Management of Process Innovation 2	6

plus a subject from the Postgraduate Schedules.

For further details, see *Course Requirements* below.

Specialisation Director: Mr J Flanagan.

MASTER OF COMMERCE - ORGANISATIONAL BEHAVIOUR SPECIALISATION

Number	Subject	Credit Points
MGMT911	Organisational Behaviour	6
MGMT920	Organisational Analysis	6
MGMT915	Management of Change ²	6
MGMT924	Organisations and their Environments	6
MGMT953	Human Resource Management	6
MGMT979	Financial Decision Making	6
plus either MGMT918	Organisational Processes	6
or MGMT961	International Business Management ⁹	6

For further details, see *Course Requirements* below.
Specialisation Director: to be advised.

This specialisation is not on offer in 1996.

GRADUATE DIPLOMA IN COMMERCE (OCCUPATIONAL HEALTH AND SAFETY)

Course Director: Dr M Zanko.

This course will not be offered in 1996.

HONOURS MASTER OF ARTS, AND HONOURS MASTER OF COMMERCE

Compulsory subjects for students not holding an Honours degree in Management or similar and undertaking a 96 credit point Masters degree.

Number	Subject	Credit Points
MGMT986	Special Topic A	12
MGMT987	Special Topic B	12
MGMT988	Special Topic C	12
MGMT989	Special Topic D	12
plus MGMT991	Major Thesis	48

For students with an Honours degree or equivalent, an agreed combination of course work from the list of 900-level subjects offered by Management and one of the following:

MGMT990	Minor Thesis	24
MGMT991	Major Thesis	48

Course Director: Dr M Cicic

DOCTOR OF PHILOSOPHY

Number	Subject
MGMT991	Major Thesis

Course Director: Professor S Linstead.

COURSE REQUIREMENTS**1. DOCTOR OF PHILOSOPHY**

Candidates for this degree enrol in MGMT991. Candidates should refer to the University's general PhD Rules.

2. HONOURS MASTER OF COMMERCE

(1)(a)

Candidates who have completed the requirements for the award of the BCom (Hons) in Accountancy, Economics, Management, or Marketing at a standard of Class II, Division 2 or higher, or an equivalent degree, may qualify for the award of the MCom (Hons) degree by completing at honours standard any one of the following courses of study -

- (i) Thesis (48 credit points),
or
- (ii) Research report (24 credit points) and coursework aggregating not less than 24 credit points,

or

(iii) Coursework aggregating not less than 48 credit points.

(b) Subjects are to be selected from 900-level subjects offered by the Department of Management or from the Department of Accountancy or the Department of Economics and included in the Schedule of Graduate Subjects; provided that:

- (i) A combination of subjects may be approved by the Heads of the relevant units, *and*
- (ii) Subjects aggregating not more than 12 credit points may be selected from those offered by other Departments, where approval is given by the Heads of the respective Departments (ie the Department offering the subject on one hand, and on the other, either Accountancy, Economics or Management as appropriate in each case. The appropriate Department would be the Department in which the student had taken or planned to take more than 48 credit points in

Honours subjects for the undergraduate degree and graduate subjects for this degree).

(c) A candidate may not include for this degree subjects similar in content to subjects included in the honours part of the undergraduate course.

(2) Candidates who have completed the requirements for the BCom degree at a standard less than Honours Class II, Division 2, or equivalent degree, may, subject to the attainment of a satisfactory standard in that degree, be permitted to register as candidates for the MCom (Hons) degree. Such candidates may qualify for the award of the degree by completing at honours standard subjects aggregating not less than 96 credit points of which subjects aggregating not less than 48 credit points shall be selected from the specialisation Schedule.

(3) Candidates holding the combined BCom(Hons) degree including the compulsory 400-level subjects aggregating 30 credit points may

proceed to the 48 credit point MCom(Hons) degree; other candidates (with the combined Honours degree who have not completed all the compulsory subjects) will be required to complete any of the compulsory subjects plus subjects aggregating 48 credit points.

- (4) Candidates required to undertake a preliminary program or required to complete designated subjects at an appropriate standard in accordance with the Honours Master Rules may have their enrolment cancelled in the event that the preliminary program of designated subjects is not completed at the appropriate standard.

3. HONOURS MASTER OF ARTS

- (1)
(a) Candidates who have completed at an acceptable standard the requirements for the award of the BA(Hons) in Accountancy, Economics or Management at a standard of Class II, Division 2 or higher, or an equivalent degree, may qualify for the award of the MA (Hons) degree by completing at honours standard any one of the courses of study listed below under the Honours Master of Commerce degree.
- (b) See corresponding comments under the Honours Master of Commerce degree, Management.
- (2) Candidates who have completed the requirements for the BA (Hons) degree at a standard less than Class II, Division 2, or equivalent degree, may, subject to the attainment of a satisfactory standard in that degree, be permitted to register as candidates for the MA (Hons) degree. Such candidates may qualify for the award of the degree by completing at honours standard subjects aggregating not less than 96 credit points of which subjects aggregating not less than 48 credit points shall be selected from the specialisation Schedule.

4. MASTER OF COMMERCE

The purpose of this pass degree is to provide graduate students, who have completed a BCom, BBus degree or equivalent, from an Australian University or equivalent tertiary institution, with the opportunity of further in-depth study of advanced topics in management.

The degree of 48 credit points may be studied full-time over one year, or may be studied part-time.

Candidates are required to take one of the following specialisations:-

- Human Resource Management
- Public Sector Management
- Marketing
- Operations Management
- Organisational Behaviour

Candidates who do not have a BCom or BBus but have successfully completed management/commerce subjects to second year level in their undergraduate degree may be permitted to study for the degree

provided they first pass a program of 24 points of 200 or 300 or 900-level "Commerce" subjects approved by the MCom Course Director or Head of Department. Thus the total credit points required for these candidates is 72.

A candidate who has not completed a BCom or BBus and not studied any commerce subjects at undergraduate level will be required to take a 96 credit point course, which may include 48 credit points of undergraduate subjects from the Commerce Schedule, as determined by the Program Director. 24 credit points of this undergraduate course work must be taken at the 300-level.

5. MASTER OF BUSINESS ADMINISTRATION

Refer Graduate Business and Professional Education Unit.

6. GRADUATE DIPLOMA IN COMMERCE (MANAGEMENT)

Refer Graduate Business and Professional Education Unit.

7. GRADUATE CERTIFICATE IN MANAGEMENT

Refer Graduate Business and Professional Education Unit.

SUBJECT DESCRIPTIONS

MGMT903 Investment Management

6 credit points (2 hrs lectures per wk).

Pre-requisite: ACCY221 or MGMT921 or ACCY921.

Assessment: seminars, essay(s) and examinations.

The theory of optimal investment decisions. Cost of capital. Introduction to portfolio theory and capital markets. Portfolio analysis. Sources of investment information. Investment media and strategies. Analysis of corporate performance and securities.

Textbook: to be advised.

Co-ordinator: to be advised.

MGMT905 Business Ethics and Law**

6 credit points (3 hrs per wk).

Assessment: projects, tutorials and examination.

The legal studies component covers the following: legal basis of business and organisations; the liabilities of managers and company directors in law; legal processes that impinge on the managerial function eg EEO, FOI, IR, anti discrimination legislation. The ethics component will cover both Australian and international business environments to deal with the ethical issues of: codes of conduct and practice; morality and business; controlling and coding ethical practices within organizations; ethical issues in running organizations; environmental and personal factors affecting ethical choices; professional codes of conduct.

Textbook: to be advised.

Co-ordinator: to be advised.

MGMT906 Managing People At Work***

6 credit points (3 hrs per wk).

Assessment: seminar(s), assignment(s) and examination.

STUDENTS TAKING MGMT906 CANNOT ALSO ENROL IN MGMT911

It is recommended that MGMT906 and MGMT907 be studied in parallel or MGMT906 taken before MGMT907.

A study of the contemporary environment of human resource management with particular reference to organisational strategy and human resource development, line and staff managerial roles, and the effects of institutional framework and industrial agreements on workplace management. Human behaviour and productive performance including needs and motivation, individual and group behaviour, work organisation and management. Managing organisational change in the workplace will be a particular focus of this subject.

Textbook: Kakabadse, A, Ludlow, R, Vinnicombe, S, *Working in Organisations*, Penguin, 1994.

Goldratt, E M and Cox, J *The Goal*, Gower, 1994.

Co-ordinator: Professor S Linstead.

MGMT907 Managerial Skills Workshop**

6 credit points (3 hrs per wk).

Assessment: tutorials, workshops, and examination.

This subject focuses on the individual and group skills needed by managers to function in organisational settings. The skill focus will include: communication skills in a managerial environment; time and stress management; conflict and dispute resolution; negotiation skills; staff selection and dismissal/counselling skills; personal effectiveness skills; managing personal and group performance; networking; information gathering, evaluating skills and environmental scanning skills.

Textbook: to be advised.

Co-ordinator: to be advised.

MGMT911 Organisational Behaviour

6 credit points (2 hrs per wk).

Assessment: seminars, case studies, essay(s) and examination(s).

STUDENTS TAKING MGMT911 CANNOT ALSO ENROL IN MGMT906.

A study of the behaviour of individuals in organisations, groups and group processes, leadership and communication, organisation design and job design, appraisal of performance, processes of organisational change and development.

Textbook: to be advised.

Co-ordinator: Dr R Jones.

MGMT915 Management of Change

6 credit points (3 hrs lectures/seminars).

Pre-requisite: MGMT911 OR MGMT906.

This subject examines the process of change within an organisation. Issues under

*** This subject is only available to MBA/GDipCom(MGMT)/GCertMgmt and GCert/GDipTQM students unless specific approval is sought from the MBA Director.

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discussion will be: change models; characteristics of innovative organisations; acceptance/resistance of change; factors of change; reasons for change; intervention strategies; planning and monitoring change; sustaining change.

Textbook: to be advised.

Co-ordinator: Dr R Jones.

MGMT916 Management and Employment Relations

6 credit points: (3 hrs per wk).

Assessment: assignments, seminars, examination.

The subject explores the use of different social theories of management for the analysis of the managerial policies that cover the employment relationship. The impact of technical, administrative skill, of negotiation and of culture creation in the management of work and employment relationships are assessed. The development of policies on recruitment and selection, training and career development, job design, organisational design, job evaluation, performance appraisal and incentive payment schemes are analysed.

Textbook:

Gardner and Palmer, *Australian Employment Relations*, Macmillan, Part IV, 1992.

Co-ordinator: Professor G Palmer.

MGMT917 Business Ethics*

6 credit points (3 hrs per wk).

Pre-requisite: Not to count with MGMT351

Assessment: essay, case study, examination.

An examination of central issues in business ethics. Topics covered will be ones such as: the concept of social responsibility; individual values and corporate values; competing models for making ethical decisions, ie consequentialist and non-consequentialist; ethics for the employee, the customer, the environment, the community, the government and the multinational context. Specialised assignments and tutorials will relate these topics to postgraduate levels of analysis and experience in the business environment.

Textbook:

Brady, F N, *Ethical Managing: Rules and Results*, Macmillan, 1990.

Co-ordinator: to be advised.

MGMT918 Organisational Processes

6 credit points (3 hrs per wk).

Assessment: assignments, seminars, examination.

This subject will examine the nature of organisational processes using three primary levels of analysis: the organisation, the work group and the individual. The focus will be on advanced theoretical and applied skills in a range of topic areas including: inter and intra-organisational power, emergence and social boundaries of organisations, self-directed work arrangements, goal setting, organisational aspects of communication, and substantive problem solving techniques in the human resource domain.

Textbook: to be advised.

Co-ordinator: Dr W Rifkin

MGMT919 Human Resource Strategies and TQM

6 credit points (3 hrs lectures/seminars per wk).

Assessment: assignments, seminars, examination.

This subject will examine the human resource management aspects of Total Quality Management (TQM). TQM developed as a set of managerial practices, a focus on teamwork and cultural change intended to create management systems able to compete in world markets. The specific elements of TQM that relate to the management of people will be analysed in terms of their theoretical and practical implications for management. Case studies on the implementation of TQM will be discussed. Future trends in management practice and management theory arising from the development of TQM will be assessed.

Textbooks:

include Dawson and Palmer, *Quality Management, The Theory and Practice of Implementing Change, Case Studies from Eight Australasian Companies*, Melbourne Longman Cheshire 1995.

Co-ordinator: Dr G Sewell.

MGMT920 Organisational Analysis

6 credit points (3 hrs per wk).

Assessment: seminars, essays examinations.

This subject examines organisations and the development of organisation design, structure and control. Topics will include: major components of structure, determinants of structure and organisational design. Application of theory in the areas of job design, the management of change, management of conflict, new technology, organisation culture, and organisation-environment relations will also be considered.

Textbook: to be advised.

Co-ordinator: Dr G Sewell.

MGMT922 Marketing Management**

6 credit points (3 hrs per wk).

Assessment: case studies, essays, examination.

The subject examines the contemporary view of marketing and focuses on the following areas: identification of market opportunities; segmentation and target marketing; marketing mix decisions; service marketing; international marketing

Textbook: to be advised.

Co-ordinator: Dr M Cicic.

MGMT924 Organisations and their Environments

6 credit points (3 hrs/wk lectures/seminars).

Assessment: assignments, seminars examinations.

Relations between the different levels of Australian government, public-private sector interactions, relations between unions, government and business, and inter-departmental relations. These inter-organisational relations will be examined as bases for collaborative planning and action within regions, including processes and problems of developing such bases.

Textbook: to be advised.

Co-ordinator: Dr M Zanko.

MGMT925 Selected Topic A

6 credit points.

A special topic selected from any area of management. The selection would be made by the Head of the Department, taking into account the expertise of academic staff, including visiting staff, and the interests of students.

Co-ordinator: to be advised.

MGMT926 Selected Topic B

6 credit points.

A special topic selected from any area of management. The selection would be made by the Head of the Department, taking into account the expertise of academic staff, including visiting staff, and the interests of students.

Co-ordinator: to be advised.

MGMT927 Australian Government Administration

6 credit points (2 hrs per wk lecture/seminar).

Assessment: assignments, tutorials, examinations.

An introduction to the development of government administration in the Australian States, the Commonwealth and Local Government. Inter-governmental relations within a federal system. Basic principles of government administration including the Westminster parliamentary system and features of Australian Government administration such as federation and statutory authorities. An introduction to regional government administration, including an overview of its development in Australia and the political and administrative issues raised.

Textbook: to be advised.

Co-ordinator: to be advised.

MGMT928 Public Policy and Administration

6 credit points (2 hrs per wk lectures/seminars).

Assessment: assignments, tutorials, examinations.

The process of formulating public policy through existing governmental machinery, the pressures created by present and emerging public policy issues, problems and issues in regional public policy formulation, and the role and problems of regional administration.

Textbook: to be advised.

Co-ordinator: to be advised.

MGMT931 Strategic Planning and Policy

6 credit points (3 hrs per wk).

Pre-requisite: This is the Capstone course for the MBA and as such is to be taken only during the final semester of the MBA programme.

Assessment: examination and essays.

The subject will use case studies as a key teaching vehicle and will examine strategy in the context of organisations. Key topic areas may include: strategy formulation, choice and implementation; strategy and structure and the organisational context; strategy and competitive advantage; interrelationships, diversification, integration, acquisition and internal development; global strategies.

Textbook: to be advised.

Co-ordinator: Associate Professor AB Sim.

** This subject is only available to MBA/GDipCom(MGMT)/GCertMgmt students unless specific approval is sought from the MBA Director.

* Not on offer in 1996.

MGMT933 Management of Process Innovation 1

6 credit points (3 hrs per wk).

Assessment: group project, essays, and examination.

A key concern of contemporary technology management is improving the rate and quality of process innovation by adopting new methods to successfully integrate the human, organisational and technological factors. This subject introduces the student to the interdependent human and technological character of production systems and methods for integrating technical and organisational expertise in new production system designs. The nature of production systems and process innovation is introduced through a critique of traditional technological determinist and contingency models, and the use of contemporary configurational theory. The different approaches to production system design are introduced through a critical examination of the changing perspectives within organisations of process engineering, employee management, information systems management, and workers representatives.

*Textbook:*Lund, R et al, *Designed to Work*, Prentice Hall, Englewood Cliffs, 1993.*Co-ordinator:* Associate Professor RJ Badham.**MGMT934 Management of Process Innovation 2**

6 credit points (3 hrs per wk).

Assessment: group presentation, essays, and examination.

Contemporary management literature on process innovation is dominated by universalistic contingency models of 'best practice'. In contrast, this subject develops a more 'contextual' model of innovation, critically reviews alternative explanations of the nature and direction of process innovation, and examines a range of implementation strategies and methods for integrating technical and organisational innovation in the effective realisation of new production systems. This subject introduces students to the following models of process innovation: sequential-engineering model; labour process and socio-technical models; strategic choice and processual models; paradigm, trajectory and configurational models; and inter-organisational and network models of incremental learning and innovation. Implementation strategies and methods are investigated through a discussion of the implied strategies in different models of innovation, strategic choices in implementation strategies, and contemporary strategic planning, cross functional team formation, participation, and problem solving methods.

*Textbooks:*Bessant, J, *Fifth Wave Manufacturing*, 1992.McLoughlin, I and Clark, J, *Technological Change at Work*, Open University, 1993.*Co-ordinator:* Associate Professor RJ Badham.**MGMT935 Marketing Planning and Strategy**

6 credit points (3 hrs per wk).

Prerequisite: MGMT922.*Assessment: case studies, presentations and examination.*

With the use of case studies, this subject will examine the development and implement-

tation of marketing plans and strategies at the organisational level. Key issues may include: marketing's strategic role in the organisation, marketing strategy and competitive advantage, including marketing mix strategies, marketing strategy formulation, implementation and control.

*Textbook: to be advised.**Co-ordinator:* Ms L White.**MGMT936 Consumer Behaviour**

6 credit points (3 hrs per wk).

Pre-requisite: MGMT922 or equivalent.*Assessment: group project, assignment, final examination.*

The subject will explore the motives of consumers during the purchase of products and services. It will investigate sociological and psychological concepts as they specifically apply to the behaviour of consumers in order to learn how to make more effective marketing decisions. In addition to a required text that will be used to understand the theory, readings and case studies will be assigned for practical application of the concepts.

*Textbook: to be advised.**Co-ordinator:* Dr C Hill.**MGMT937 Relationship Marketing and Communications**

6 credit points (2 hrs lectures/seminars per wk).

Pre-requisite: MGMT922.*Assessment: case studies and essays.*

Traditionally marketing has been about getting customers. Relationship marketing addresses the twin concerns - getting and keeping customers. The subject also examines the nature of communication in marketing and critically evaluates the promotional strategy planning process: situation analysis; promotional objectives; promotional budget; management of advertising and sales promotion efforts; evaluation of the effectiveness of promotion. This subject only available to MCom students.

*Textbook: to be advised.**Co-ordinator:* Mr P Scott.**MGMT938 Managing Services Marketing**

6 credit points (3 hrs lectures per wk).

Pre-requisite: MGMT922 or equivalent.*Assessment: assignment, class presentation, examination.*

This advanced course is designed to provide an in-depth analysis of the problems facing services marketing managers in both consumer and business-to-business service firms. Through lectures, class discussions, readings and case analysis, plus observation of firms in actual service situations, students will develop insights concerning the unique characteristics of marketing in the services sector. Major topics include: Problems and Strategies in Services Marketing; Understanding the Service Experience; Application of Consumer Decision Models to Service Marketing; Role Theory Perspectives on Dyadic Interactions; Dimensions of Service Quality; Services Marketing Mix; Growth Strategies for Service Firms; Marketing Implementation Issues. This subject only available to MCom students.

*Textbook: to be advised.**Co-ordinator:* Associate Professor P Patterson.**MGMT939 Contemporary Issues in International Marketing**

6 credit points (3 hrs per wk lectures/seminars).

Pre-requisite: MGMT922.

This subject examines the role of marketing in national economic development. The major focus will be Developing countries as a market segment. Topics will include: marketing to developing countries the applicability of marketing concepts, marketing channels, the formal and informal marketing sectors, technology licensing and marketing, consumer issues in developing countries and the role of government in marketing.

*Textbook: to be advised.**Co-ordinator:* to be advised.**MGMT940 Innovation and Entrepreneurship**

6 credit points (2 hrs lectures per wk).

Assessment: essay(s) and examinations.

The nature and role of entrepreneurs and entrepreneurship. The economic, behavioural and institutional conditions associated with entrepreneurship. Entrepreneurship and new high technology enterprises: empirical analysis at a firm and industry level, spin-off enterprises. Entrepreneurship and managing the corporate venturing process.

*Textbook: to be advised.**Co-ordinator:* Mr L Kirchmajer.**MGMT941 Small Business Management I**

6 credit points (2 hrs lectures per wk)

Assessment: essay(s) and examinations.

This subject develops financial, marketing, organisational and production strategies for established and growing small businesses. It integrates functional knowledge developed in earlier subjects and examines this in a small business context through the development of business planning procedures.

*Textbook: to be advised.**Co-ordinator:* Mr L Kirchmajer.**MGMT943 Small Business Management II***

6 credit points (2 hrs lectures per wk).

Assessment: essay(s) and examinations.

Selected issues in small business management. These may draw from a wide field depending on student interest. Topics may include licensing, franchising, use of advisory services, negotiating skills, stress management, service sector management and marketing, co-operatives, family business and management succession.

MGMT944 Enterprise Project*

12 credit points (2 hrs lectures per wk).

Assessment: project work.

Students will develop their own small business project. This would normally involve them in developing new product/service proposals and planning the establishment of a new enterprise. The completion of a business plan in a form that could be assessed by potential investors and/or financiers would be a major goal of this project.

* Not on offer in 1996.

MGMT945 Technology Enterprise Project

6 credit points (2 hrs lectures per wk).

Assessment: assignment, examination, seminar.

This subject will cover the preparation of feasibility studies, sources of business opportunities, key elements of business plans and development of a business plan. Not to be taken with MGMT944.

*Textbook: to be advised.**Co-ordinator: Mr L Kirchmajer.***MGMT947 Quality Management**

6 credit points (2 hrs lectures per wk).

Assessment: assignments and examination.

This subject provides the student with an undertaking of how an organisation can successfully make the transition to Total Quality Management (TQM). Specific topics will include: Japanese management practices and the impact on competitive advantage; TQM as part of corporate strategy; Kanban and JIT production management; quality circles; statistical tools and controls; Kaizen management; applications, implementation and auditing of TQM. Special emphasis is placed on the necessary changes in organisational structure and culture.

*Textbook: to be advised.**Co-ordinator: Mr J Flanagan.***MGMT948 Project in Regional Administration***

6 credit points (3 hrs per wk lectures/seminars).

Assessment: major project.

Participants will be challenged to investigate a regional issue or the application of a wider public policy to a region and develop proposals for effective strategies, working in the mode of a governmental task force.

*Co-ordinator: to be advised.***MGMT952 Production and Operations Management**

6 credit points (3 hrs per wk).

Assessment: case studies, essay(s) and examination.

A study of the design and operation of activities for the production of goods and services. Topics include: qualitative and quantitative forecasting, production planning and scheduling, management of quality and productivity, project management, and flexible manufacturing systems (FMS). Particular emphasis will be placed on a comparison of Japanese production and quality management methods with the traditional Western methods, total quality management (TQM), computer aided manufacturing (CAM), and implications for human resource management.

*Textbook: to be advised.**Co-ordinator: Mr J Flanagan.***MGMT953 Human Resource Management**

6 credit points (3 hrs per wk).

Assessment: seminars, case studies, essay(s) and examination(s).

Managing people at work, including recruitment, selection, human resources planning, performance appraisal, training and development, compensation, health and safety, and ergonomics.

*Textbook: to be advised.**Co-ordinator: Dr G Sewell.***MGMT954 Special Topic in Management A¹**

6 credit points.

Assessment: seminars, case studies, essay(s) and examination(s).

A special topic selected from any area of management. The selection would be made by the Head of the Department, taking into account the expertise of academic staff, including visiting staff, and the interest of students.

*Co-ordinator: to be advised.***MGMT955 Special Topic in Management B¹**

6 credit points.

Assessment: seminars, case studies, essay(s) and examination(s).

A special topic selected from any area of management. The selection would be made by the Head of the Department, taking into account the expertise of academic staff, including visiting staff, and the interest of students.

*Co-ordinator: to be advised.***MGMT956 New Product Marketing**

6 credit points (3 hrs per wk).

*Pre-requisite: MGMT922 or equivalent**Assessment: seminars, case studies and examination(s).*

The subject will be taught in two parts. The first part will involve critical analysis of certain concepts that can be used to obtain a deeper understanding about the nature of products. This includes product life cycle, segmentation, product positioning and the product portfolio concepts. The major emphasis of the subject will be placed on the second part which will be concerned with the new product development process. This process will be examined in detail and special consideration will be given to new industrial products. In essence, the subject will be concerned with the question of how to reduce the risk of new product failure.

*Textbook: to be advised.**Co-ordinator: Ms L White.***MGMT957 International Marketing Strategy**

6 credit points (3 hrs lecture/seminar).

*Pre-requisite: MGMT922.**Assessment: class participation, two essays and final examination.*

The course will encompass the issues involved in International Marketing. Primary focus will be on the strategic aspects with particular emphasis on environmental consideration and international marketing decisions in the global context. A managerial perspective will be adopted and decision-making skills will be imparted through the case method of instruction.

*Textbook: to be advised.**Co-ordinator: Dr M Cicic.***MGMT960 Case Study**

6 credit points.

An in depth analysis of a particular managerial problem encountered in a specific company or industry situation.

*Textbook: to be advised.**Co-ordinator: Dr M Zanko.***MGMT961 International Business Management**

6 credit points (2 hrs lectures/tutorials/seminars).

Assessment: examination and/or coursework.

This course will deal with the identification, analysis and resolution of managerial issues of strategy and action within the context of firms operating in international and global business environment. Through the study of major issues in strategic and functional areas of international business operations and the analysis of complex cases and project topics, students will develop skills in analysing competitive forces in global markets and in understanding the basis for successful international strategies.

*Textbook: to be advised.**Co-ordinator: Associate Professor AB Sim.***MGMT963 Management of Occupational Health and Safety***

6 credit points (3 hrs per wk).

Assessment: assignments, seminars, examination.

This subject examines issues associated with the establishment of programs for the effective management of Occupational Health, Safety and Rehabilitation. Topics include: Technical and motivational programs, the role of the specialist, benefit-cost analysis, emergency and disaster management, networking within and between organisations, design of accident investigation and hazard assessment reporting systems, and the impact of work organisation on occupational health and safety.

MGMT965 Occupational Hazards I*

6 credit points (3 hrs per wk lecture/seminar).

Assessment: assignments, tutorials, examinations.

This subject will deal with the various hazards which may affect the health of employees; significant agents of injury or disease encountered in work places: their effects, methods of avoidance or control and preliminary as well as rehabilitative treatment of workers affected by those agents will be discussed.

MGMT966 Occupational Hazards II*

6 credit points (3 hrs per wk lecture/seminar).

Assessment: research report.

This subject extends the study initiated in Occupational Hazards I, and affords the opportunity for students to make an intensive study of a hazard or group of hazards of particular interest to them.

MGMT967 Quantitative Methods

6 credit points (3 hrs per wk lecture/seminar).

Assessment: assignments, tutorials, examinations.

This subject introduces the quantitative techniques used to compile, interpret and analyze data. A particular emphasis will be given on the role of the computer, and the subject will provide a coverage of the main quantitative techniques used in business as an aid to decision-making.

*Textbook: to be advised.**Co-ordinator: to be advised.*

¹ Enrolment subject to approval by Head of Department of Management.

* Not on offer in 1996.

MGMT968 Communication*

6 credit points (3 hrs per wk lecture/seminar).

Assessment: assignments, tutorials, examinations.

This subject enables a study of effective communication techniques, with a view to optimising students' intervention on organisational issues. This subject requires a high standard of English. Students with limited fluency will be encouraged to take MGMT961 as an alternative.

Textbook: to be advised.

Co-ordinator: to be advised.

MGMT970 Contemporary Issues in Services Quality

6 credit points (3 hrs per wk).

Pre-requisite: MGMT938 - not applicable to TOM students.

Assessment: critique of academic literature, case presentations, assignments.

This advanced course is designed to follow on from MGMT938 (Managing Services Marketing). It will focus on advanced topics in service quality, customer satisfaction with services, and strategic issues relating to the marketing of service firms. Emphasis will be placed on reviewing contemporary readings in the academic and professional literature. Available only to MCom and TOM students.

Co-ordinator: Associate Professor P Patterson.

MGMT976 Competitive Strategy and Analysis

6 credit points (3 hrs per wk).

Assessment: seminars, essays and examination.

This subject introduces a conceptual framework for analysing competitors and competition in industry. Topics include: structural frameworks for analysis; generic strategies; strategies in fragmented, emerging, declining, transitional and mature industries; global strategies, vertical integration, new entry and diversification.

Textbook: to be advised.

Co-ordinator: to be advised.

MGMT977 Research for Marketing Decisions

6 credit points (3 hrs per wk).

Assessment: seminars, essays and examination
Pre-requisite: MGMT922. If students have not studied *Quantitative Methods* in their previous undergraduate work, it is strongly recommended that they take MGMT967 prior to, or concurrently with MGMT977.

This subject is concerned with examining the techniques and principles for systematically collecting, recording, analysing, and interpreting data that can aid decision makers who are involved with marketing products, services, or ideas. Topics include: the structure and function of research information; problem definition and research design; the measurement of consumer attitudes and preferences; design of sampling plans; collecting primary and secondary data; analysing and interpreting statistical research results.

Textbook: to be advised.

Co-ordinator: Associate Professor P Patterson.

MGMT978 Cross Cultural Management

6 credit points (3 hrs per wk).

Assessment: case analysis, seminar presentation, project and/or examination.

Pre-requisite: MGMT961.

This course will cover management practices, issues and theory across cultures in international business. Topics include the impact of different cultural dimensions on international management, comparative management practices and implications for international/global managers. On successful completion of this course, students will have an appreciation and knowledge of managing across cultural boundaries in international business.

Textbook: to be advised.

Co-ordinator: to be advised

MGMT979 Financial Decision Making**

6 credit points (3 hrs per wk).

Assessment: seminars, assignments, essays, and examination.

This subject focuses on the quantitative and qualitative techniques available to managers in problem solving and decision making in organizations. The quantitative dimensions will be based on decision models and criteria for rational decision making under conditions of risk and uncertainty. Emphasis will be given to financial decision making in areas such as capital investments, forecasting, budgeting and financial planning.

Textbook: to be advised.

Co-ordinator: to be advised.

MGMT980 Business Research Methods

6 credit points (3 hrs per wk).

Assessment: seminars, assignments, essay(s), examination(s).

The subject is designed to familiarise students with the basic tools and techniques of empirical research methods in business. A part of the assessment procedures will include a problem identification project in which students will be given some "hands-on" experience in identifying suitable business problems and formulating an appropriate research design. These "problem identification" projects would normally form the basis for the students' research project. Topics include the following: Introduction to philosophy of research; Problem identification and hypothesis development; Modes of designing research; Validity and reliability problems; Techniques for measuring characteristics; Sample size and response rates; Analysis of data.

Textbook: To be advised.

Co-ordinator: Associate Professor C Romm.

MGMT981 MBA Research Project

24 credit points.

Assessment: project report.

Pre-requisite: MGMT980 and completion of at least 42 credit points of MBA subjects at an average grade of credit or higher or by permission of the Head of Department.

An examination and analysis of a selected

management problem or issue. The project traditionally forms a link between several subjects and there will be regular integrating seminars during the project period for students to make presentations of their research questions, methods and conclusions.

Co-ordinator: Professor M Hough.

MGMT982 Project

18 credit points (individual contact with supervisor).

Pre-requisite: MGMT980.

This subject constitutes the second component of the project study option within the MBA. This subject enables the research proposal developed in MGMT980 to be implemented, under the guidance of a nominated supervisor. A substantive project report to an approved format will be the output from this subject.

Textbook: to be advised.

Co-ordinator: Professor M Hough.

MGMT986 Special Topic A

12 credit points.

NB. May be taken only with permission of the Head of Department of Management.

MGMT987 Special Topic B

12 credit points.

NB. May be taken only with permission of the Head of Department of Management.

MGMT988 Special Topic C

12 credit points.

NB. May be taken only with permission of the Head of Department of Management.

MGMT989 Special Topic D

12 credit points.

Master of Commerce Honours qualifying subjects consisting of a program of course work and reading as prescribed by the Head of the Department of Management.

Co-ordinator: to be advised.

MGMT990 Minor Thesis

24 credit points.

MGMT991 Major Thesis

48 credit points.

Approved program of study agreed with the Head of the Department of Management or Course Director.

MGMT996 Managing for Innovation

6 credit points (2 hrs per wk).

Assessment: assignments, examinations.

This subject will deal with the development and creation of innovative business opportunities for both the start-up entrepreneurial team and the existing organisation. The material to be covered shall include: Developing an innovative culture in organisations; Sourcing innovative opportunities for the organisation both internally and externally; Overcoming barriers to innovation; Changing bias toward creativity in employees and management; Initial screening and evaluation of innovative opportunities; Critique of contemporary innovation literature.

Textbook: to be advised.

Co-ordinator: to be advised.

** This subject is only available to MBA/GDipCom(MGMT)/GCertMgmt students unless specific approval is sought from the MBA Director.

* Not on offer in 1996.

FACULTY OF
CREATIVE ARTS

FACULTY OF CREATIVE ARTS

FACULTY OFFICE

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Associate Dean: Associate Professor Peter Shepherd

Sub Dean: Dr Lindsay Duncan

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The Faculty offers Master of Creative Arts, Honours Master of Arts, Doctor of Creative Arts and Doctor of Philosophy degrees by research.

POSTGRADUATE PROGRAMS

Postgraduate programs are available in the Faculty in the following areas:

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Keith Yates, retired Technical Manager,
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CREATIVE ARTS

COURSES OFFERED

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1. Doctor of Philosophy
2. Doctor of Creative Arts
3. Honours Master of Arts by Research
4. Master of Creative Arts

POSTGRADUATE PROGRAMS

Creative Writing
Music
Theatre
Visual Arts

CURRENT RESEARCH AREAS

The following areas are available to students undertaking research degrees:

Creative Writing
Poetry
Prose Fiction
Script Writing

Music
Composition
Musicology and Analysis
Performance

Theatre
Acting and Movement
Directing
Drama Studies
Lighting Design
Stage Management
Theatre Design
Theatre Technology
Theories of Theatre

Visual Arts
Ceramics
Design
Drawing
Media Arts
Painting
Printmaking
Sculpture
Textiles
Visual Arts Theory

The Faculty also conducts interdisciplinary research relating to the above areas.

SCHEDULE OF PROGRAMS

POSTGRADUATE SUBJECTS

leading to the Doctor of Philosophy, Doctor of Creative Arts, Honours Master of Arts.

Number	Subject	Credit Points
CREA901	Thesis Creative Arts	48
CREA905	Advanced Topics in Creative Arts	48

POSTGRADUATE PROGRAM IN CREATIVE WRITING

leading to the Master of Creative Arts.

Number	Subject	Credit Points
CREA913	Major Presentation	24
WRIT910	Analysis of Texts	12
WRIT911	Literary Composition	12

For further details, see *Course Requirements* below.

POSTGRADUATE PROGRAM IN MUSIC

leading to the Master of Creative Arts.

Number	Subject	Credit Points
CREA913	Major Presentation	24
MUS910	Musical Analysis	12
MUS911	Studies in Technique	12

For further details, see *Course Requirements* below.**POSTGRADUATE PROGRAM IN THEATRE**

leading to the Master of Creative Arts.

Number	Subject	Credit Points
CREA913	Major Presentation	24
THEA910	Theatre Analysis	12
THEA911	Advanced Techniques in Theatre	12

For further details, see *Course Requirements* below.**POSTGRADUATE PROGRAM IN VISUAL ARTS**

leading to the Master of Creative Arts.

Number	Subject	Credit Points
CREA913	Major Presentation	24
VIS910	Visual Arts Theory	12
VIS911	Studio Analysis	12

For further details, see *Course Requirements* below.**COURSE REQUIREMENTS****1. DOCTOR OF PHILOSOPHY**

Candidates for the PhD in Creative Arts shall normally submit by written thesis in an approved area of research. However, with the approval of the Dean of Faculty a candidate may be permitted to submit by a combination of written thesis and creative work. The written thesis shall constitute the major part of the work. In all cases a candidate must perform satisfactorily in both components to be awarded the degree.

Requirements for Admission

Applicants should have a relevant first degree with Honours Class II, Division 2, or higher, or possess equivalent qualifications. In certain circumstances students may be required to commence their enrolment in the MA (Hons) and seek transfer to the PhD at a later stage.

Candidates for this degree enrol in CREA901.

2. DOCTOR OF CREATIVE ARTS

The Doctor of Creative Arts is a doctoral degree based on presentation of creative work and supported by written documentation of the work.

Requirements for Admission

Applicants for admission to the DCA should hold a relevant Bachelor degree with Honours Class II, Division 2 or higher (or its equivalent) and be able to demonstrate evidence of high artistic attainment. If this degree or equivalent is not in creative arts practice, the applicant must also submit evidence of artistic attainment to an approved standard.

In some circumstances, outstanding arts practitioners without the required formal qualifications may be permitted to enrol in

the DCA provided that the applicant submits evidence of such artistic, professional and academic attainments as may be approved.

Candidates for this degree enrol in CREA901.

3. HONOURS MASTER OF ARTS

Candidates may undertake a study which deals with the relationships between specific areas of arts practice.

For students with an Honours Class II, Division 2 degree or higher (or its equivalent) in an appropriate discipline, the Master of Arts (Honours) involves one year of full-time research (or part-time equivalent) presented in the form of a thesis.

Candidates for this degree enrol in the subject CREA901 Thesis Creative Arts. Other students will be required to complete an additional preliminary year of course work (two years for part-time students) by enrolling in CREA905 Advanced Topics in Creative Arts.

4. MASTER OF CREATIVE ARTS

The Master of Creative Arts is a pass masters degree which consists of a major presentation of creative work and two coursework units in related practical and theoretical studies.

Applicants for the MCA shall have qualified for a degree of the University in an appropriate area or possess an equivalent qualification from another approved institution.

An applicant who does not hold a degree or its equivalent may be permitted to enrol provided that the applicant submits evidence of such tertiary, academic and

professional attainment as may be approved. Such candidates may be required to complete up to 48 credit points additional study of relevant subjects prior to, or in conjunction with, commencement of the MCA program.

SUBJECT DESCRIPTIONS**CREA901 Thesis Creative Arts**

Double session (A); 48 credit points per year.

Assessment: external examination of thesis, or of thesis and presentation or performance of creative work.

The submission of the PhD will normally be by written thesis.

The submission of the DCA will normally be by exhibition, performance or publication, supported by substantial written documentation analysing such aspects as origins of the work, structures and techniques used, artistic theories underpinning the work and critical evaluation of the work. In many cases it will be appropriate to support written documentation with documentation in other forms e.g. photographic material, sound and video recordings, etc.

Textbooks:

Reference list supplied by Faculty.

Co-ordinator: Associate Professor A Schultz.

CREA905 Advanced Topics in Creative Arts

Double session (A); 48 credit points.

Assessment: combination of essays, thesis, and presentation or performance of creative work.

Research areas available include a wide range within the creative writing, music, theatre and visual arts disciplines as previously listed. Candidates may undertake a study of the relationships of more than one of these areas.

Textbooks:

Reference list supplied by Faculty.

Co-ordinator: Associate Professor A Schultz.

CREA913 Major Presentation

Double session (A); 24 credit points.

Co-requisite: any two of MUS910, MUS911, THEA910, THEA911, VIS910, VIS911, WRIT910, WRIT911 as approved by the Faculty of Creative Arts.

Assessment: based on report of External and Internal Examiners on candidate's Major Presentation and accompanying documentation.

Candidates will be required to undertake a major project on a topic decided upon after consultation with their supervisor. This project may be either research based or performance based. That is, presentation may be by thesis, or it may be by exhibition, performance, presentation of a fictional text etc. Some theoretical explication of the work, however, will normally be required in the case of performance-based presentations.

Textbooks:

Reference list supplied by Faculty.

Co-ordinator: Associate Professor A Schultz.

MUS910 Musical Analysis

Autumn or Spring or Double (A) session; 12 credit points.

Assessment: 10,000 word analytical dissertation on a topic approved by the supervisor.

Students will be expected to have a secure grounding in analytical techniques (from Tovey to Schenker and beyond). Attendance at Musical Analysis seminars will be compulsory. In addition, the candidate will be expected to make detailed analyses in specialist areas (eg: late Beethoven string quartets; piano works of Boulez; Schumann symphonies) which display original, creative and thorough thinking to an advanced level. Work should be in dissertation form.

Textbooks:

Reference list supplied by Faculty.

Co-ordinator: Associate Professor A Schultz.

MUS911 Studies in Technique

Autumn or Spring or Double (A) session; 12 credit points.

Assessment: completion of a project in one of the following areas, following consultation with the supervisor: orchestration; studies in counterpoint or imitative compositional style; preparation of a new performance edition; studies in computer music; multi-media collaborative project.

Students may study in any practical musical area (composition, conducting, instrumental playing or singing). Students will be required to develop and refine their techniques until they have achieved a high professional standard. The course will include working with University Ensembles and will culminate in a recital, concert or public performance.

Textbooks:

Reference list supplied by Faculty.

Co-ordinator: Associate Professor A Schultz.

THEA910 Theatre Analysis

Autumn or Spring or Double (A) session; 12 credit points.

Assessment: two seminar papers, each of 5,000 words.

This course will be presented through weekly tutorials dealing with research into a particular aspect of theatre production or technology, according to the needs and specialisation of the students involved. Examples of research might include such topics as Theatre in Education in NSW or Types and Styles of Professional Productions

in Sydney over the past decade. The student will be expected to apply appropriate procedures and methodology in higher research.

Textbooks:

Reference list supplied by Faculty.

Co-ordinator: Dr I McGrath.

THEA911 Advanced Techniques in Theatre

Autumn or Spring or Double (A) session; 12 credit points.

Assessment: written evaluations of the techniques explored, 2 x 5,000 word papers.

In weekly tutorials, students will examine the latest techniques in their chosen field in Theatre. This will be a practical course, with the emphasis upon developing and refining techniques, some of which may be unfamiliar to students.

Textbooks:

Reference list supplied by Faculty.

Co-ordinator: Dr I McGrath.

VIS910 Visual Arts Theory

Autumn or Spring or Double (A) session; 12 credit points.

Assessment: two seminar papers of 5,000 words on topics approved by the subject co-ordinator.

Candidates will be required to attend and participate fully in a series of lectures and tutorials dealing with visual arts theory and the history of art.

Textbooks:

Reference list supplied by Faculty.

Co-ordinator: to be advised.

VIS911 Studio Analysis

Autumn or Spring or Double (A) session; 12 credit points.

Assessment: documentation of studio work of approximately 5,000 words and appropriate visual material 50%; review of studio work 50%.

Candidates will be expected to work at an advanced level and with a high degree of independence in their chosen studio discipline. Work presented at the Review must demonstrate a questioning and exploratory attitude to form and content. The work must be imaginative, original and considered, with a high level of technical proficiency. Students will be expected to discuss their ongoing studio projects, ideas and preparatory work with their supervisors each week. Informal reviews of work will take place. Students may be required to give a seminar presentation of their work to other students. Students will prepare a documentation of their work, which may be presented as the documentation of the Major Presentation. The Documentation should include a record of the work by the student in an appropriate visual form, such as photographs, slides, videos, etc. A suitably presented copy of the Documentation will be retained by the Faculty of Creative Arts.

Textbooks:

Reference list supplied by Faculty.

Co-ordinator: to be advised.

WRIT910 Analysis of Text

Autumn or Spring or Double (A) session; 12 credit points.

Assessment: three seminar papers of 3,000 words each based on close analysis of texts chosen for study.

This course will be concerned with a detailed study of relevant texts in the candidate's specialisation, which may be in

poetry, prose fiction or scriptwriting. The course aims to develop and refine the ability to trace in detail the relationship between the effects gained by a text and the techniques of writing used to achieve them. To some extent the course will resemble advanced literary criticism, except that the emphasis will be on the techniques used by the writer rather than the reader's response.

Textbooks:

Reference list supplied by Faculty.

Co-ordinator: Associate Professor R Pretty.

WRIT911 Literary Composition

Autumn or Spring or Double (A) session; 12 credit points.

Assessment: based on 10,000 words of experimental writing, including written self-evaluation of the effectiveness of the techniques used.

In this course, candidates will be required to develop and refine their awareness of the techniques and processes of literary composition, and to demonstrate their control of these techniques and processes in their own writing. Candidates will be required to outline the effects they are seeking in their writing, and to describe and evaluate the techniques they are using to achieve those effects.

Textbooks:

Reference list supplied by Faculty.

Co-ordinator: Associate Professor R Pretty.

JOURNALISM

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Arts (Journalism) by Research
3. Honours Master of Arts (Journalism) by Coursework
4. Master of Arts (Journalism) by on-campus coursework and by distance education through the PAGE Consortium
5. Graduate Diploma in Journalism by distance education through the PAGE Consortium
6. Graduate Certificate in Multicultural Journalism by on-campus coursework and distance education

POSTGRADUATE PROGRAM

Journalism

CURRENT RESEARCH AREAS

Journalism practice and history
 Australian media structure
 Journalism and multi-media applications
 On-line journalism

PAGE CONSORTIUM COURSES

Distance education courses offered by the Graduate School of Journalism through the PAGE Consortium are not listed in this Calendar. For information on these distance education courses, please contact the PAGE Consortium at the University of Wollongong, or the Graduate School of Journalism Office.

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN JOURNALISM

leading to the Graduate Certificate (in Multicultural Journalism), Master of Arts or Honours Master of Arts by coursework.

Number	Subject	Credit Points
<i>Core Subjects:</i>		
JOUR901	News and Feature Writing	6
JOUR902	Journalistic Method and Practice	6
JOUR903	Journalism, Ethics and Standards	6
JOUR933	Journalism, Research and Investigation	6
<i>Elective Subjects:</i>		
JOUR904	Journalism, History and Structure	6
JOUR905	Specialist Journalism 1	6
JOUR906	Specialist Journalism 2	6
JOUR931	Radio Journalism	6
JOUR932	Television Journalism	6
JOUR934	Print Production and Publication	6
JOUR936	International Journalism	6
JOUR942	Current Affairs Journalism	6
JOUR943	Directed Readings in Journalism	6
JOUR945	Applied Journalism Project	6
JOUR947	Advanced Journalism	6
JOUR948	News Design	6
JOUR949	Multicultural Journalism	6
JOUR954	Journalism and Multi-media	6
JOUR955	Journalism and the Law	6
JOUR956	On-line Journalism	6
JOUR961	Community Journalism	6
JOUR991	Major Journalism Project	12
JOUR992	Major Journalism Presentation (Honours students only)	24

Not all courses are offered in each academic year.
 For further details, see *Course Requirements* below.

POSTGRADUATE SUBJECT

leading to the Doctor of Philosophy and Honours Master of Arts by Research.

Number	Subject	Credit Points
JOUR999	MA (Jour) by Thesis	48

COURSE REQUIREMENTS

1. DOCTOR OF PHILOSOPHY

Candidates for this degree enrol in JOUR999.

2. HONOURS MASTER OF ARTS (JOURNALISM) BY RESEARCH

Candidates for this degree enrol in JOUR999.

3. HONOURS MASTER OF ARTS (JOURNALISM) BY COURSEWORK

Candidates for this degree enrol in JOUR992.

4. MASTER OF ARTS (JOURNALISM)

1. The purposes of the Master of Arts in Journalism are:
 - (a) to provide a sound education in vocational journalism;
 - (b) to allow graduates in journalism to proceed to higher studies in that discipline;
 - (c) to provide the same opportunity for those whose professional experience is judged as an equivalent in attainment to a pass degree;
 - (d) to assist students in categories (b) and (c) to prepare for, and adjust to, structural and technological change in journalism;
 - (e) to promote a critical and scholarly evaluation of journalism through teaching and research.
2. Students shall be admitted under the rules covering the Master of Arts degree, with the additional provisions below:
 - (a) admission to candidates shall be on the recommendation of the Professor of Journalism, who may recommend an advanced standing;
 - (b) pass students are required to complete successfully a program of studies approved by the Professor of Journalism which must total 72 points, except where advanced standing is given for professional experience or completion of equivalent subjects in a comparable course. All students must complete the core subjects, except where advanced standing is awarded or exemptions given, and such other compulsory subjects as the Professor of Journalism may prescribe. It is compulsory, also, for all students who are not overseas students to complete JOUR955 Journalism and the Law;
 - (c) with the approval of the Professor of Journalism, and the relevant Faculties and Departments, students may also take a maximum of three subjects from other postgraduate and undergraduate courses where it can be shown that this will assist in the development of specialist skills in journalism. Recommended subjects for specialist sequences are set out in the Graduate School of Journalism Handbook;
 - (d) students may also complete a major project approved by the Professor of Journalism, or an internship in a professional media organisation approved by the Professor of Journalism, or such field work as the Professor of Journalism may prescribe;
 - (e) Honours students are required to complete successfully a program of studies approved by the Professor of Journalism which must total 96 credit points, except where advanced standing is given. As well as fulfilling the requirements of the pass degree, Honours students must undertake a major presentation or other advanced studies approved by the Professor of Journalism to the total value of 24 points;
 - (f) students shall discuss their proposed program with an academic adviser from the School of Journalism prior to enrolment;

- (g) the Master of Arts in Journalism shall be available both as a full-time and part-time program. Full-time pass students are expected to complete the degree in three academic sessions, and part-time pass students in six sessions. Full-time Honours students are expected to complete the degree in four academic sessions. Part-time Honours students are expected to complete the degree in eight sessions.

Major Presentation

The topic for a major presentation by honours students must be approved by the Professor of Journalism or the Professor's nominee. The length of the presentation should be at least 15,000 words, or its equivalent, and the candidate may submit sound, video and multi-media material. In addition to excellence in Journalism, the presentation will need to demonstrate the candidate's ability to research individually, to construct a scholarly argument, and to evaluate professional practice in national and international contexts. The major presentation will be worth 24 credit points.

5. GRADUATE DIPLOMA IN JOURNALISM (BY DISTANCE EDUCATION)

Details available from the PAGE Consortium.

6. GRADUATE CERTIFICATE IN MULTICULTURAL JOURNALISM

1. The purposes of the Graduate Certificate in Multicultural Journalism are:
 - (a) to provide a professional qualification for journalists working in the multicultural news media, both print and electronic;
 - (b) to educate members of the multicultural communities wanting to contribute to multicultural news services in news writing, method, practice and law;
 - (c) to provide a professional context in standard journalistic practice, ethics, law and organisation for specialist journalists working in multicultural print and electronic publications;
 - (d) to provide a grounding in journalism for students who are not professional journalists but want to work in, or contribute to, multicultural print and electronic news publication.
2. Candidates for the course should normally hold a degree or be able to show evidence of at least two years of relevant work experience. In special circumstances, representatives of multicultural communities wanting to contribute to multicultural news media services may be admitted as candidates on the basis of other academic qualifications or relevant professional experience.
3. Students are required to successfully complete a program of studies which must total 24 credit points to include JOUR903 Journalism Ethics and Standards, JOUR933 Journalism Research and Investigation, JOUR949 Multicultural Journalism and, except

where advanced standing has been given, one of the following three subjects: JOUR901 News and Feature Writing, JOUR931 Radio Journalism and JOUR932 Television Journalism. Students shall discuss their proposed program with an academic adviser from the School of Journalism prior to enrolment.

4. Advanced standing will be given only on the basis of substantial professional experience in either print, radio or television journalism.

SUBJECT DESCRIPTIONS

JOUR901 News and Feature Writing

*Autumn session; 6 credit points (3 hrs newsroom work a wk plus practical work).
Assessment: written assignments and practical work.*

This subject develops news and feature writing skills from basic news stories to extended feature writing for newspapers and magazines. Attention will also be given to subjective aspects of news and feature writing, including the use of comment and opinion; colour stories; editorial writing; the contribution of new journalism; writing human interest stories.

Textbooks:

Dunlevy, M, *Feature Writing*, Deakin University Press, 1987.

White, S, *Reporting in Australia*, MacMillan, 1993.

Graduate School of Journalism Course Materials.

Co-ordinator: Professor Clem Lloyd.

JOUR902 Journalistic Method and Practice

Autumn session; 6 credit points (3 hrs per wk plus fieldwork).

Assessment: written assignments, practical exercises and an essay.

This subject considers the basic attributes of news, the nature of news content, notions of news value, the conventions of news sources, and the structure of news gathering. It introduces students to the initiation and conduct of a news assignment, the structure and conventions of a news round, use of recording devices, checking stories, interview techniques, working with photographers and camera teams, presentation of news copy, follow-ups, competition and co-operation in news gathering, news management and news manipulation.

Textbooks:

White, S, *Reporting in Australia*, MacMillan, 1993.

Graduate School of Journalism Course Materials.

Co-ordinator: Mr E Loo.

JOUR903 Journalism, Ethics and Standards

Autumn session; 6 credit points; (3 hrs lectures and practical work).

Assessment: written assignments, one hr examination in class.

This subject examines the ethical framework which governs the work of journalists. It considers the nature, efficacy and administration of ethical codes relevant to journalism, particularly the Australian

Journalists' Association's Code of Ethics and the Australian Press Council's Statement of Principles. Other aspects of professional conduct and professional standards considered include breach of privacy; confidentiality; protection of sources; standards of accuracy, objectivity and subjectivity in journalism.

Textbooks:

Henningham, J (ed), *Aspects of Australian Journalism*, Longman Cheshire 1990.

White, S and Hurst, J, *Journalism Ethics in Australia*, Longman Cheshire, 1994.

Graduate School of Journalism Course Materials.

Co-ordinator: Mr E Loo.

JOUR904 Journalism, History and Structure

Autumn session; 6 credit points (3 hrs lectures).

Assessment: written essays, 1 hr examination in class.

This subject provides an historical context for studying the contemporary structure of the Australian media and the professional milieu in which Australian journalists work. Principal subjects covered include the origins of British and American journalism; the development of the press in Colonial Australia; the emergence of contemporary news organisations; the growth of electronic media organisations in Australia; the transformation of Australian media ownership in the 1980s and the technological development of news organisations through the 1990s.

Textbooks:

Graduate School of Journalism Course Materials.

Co-ordinator: Professor C Lloyd.

JOUR905 Specialist Journalism 1

Spring and Summer session: 6 credit points (3 hrs lectures and project work).

Assessment: practical assignments and project.

This subject offers a range of options in specialist areas of journalism. It is designed to complement and amplify preliminary courses which cover broader aspects of news gathering and presentation. Specialist areas dealt with include environmental journalism; science and technology journalism; public affairs journalism; arts journalism; lifestyle and leisure journalism; economics and business journalism; sports journalism. Topics will cover conceptual approaches and skills in print and electronic journalism. NOTE: Usually, only one specialist area will be dealt with in this subject. A further option for study in specialist journalism will be available in JOUR906 Specialist Journalism 2 below.

Textbooks:

Graduate School of Journalism Course Materials.

Co-ordinator: Professor C Lloyd.

JOUR906 Specialist Journalism 2

Autumn and Summer session; 6 credit points (3 hrs lectures and project work).

Assessment: practical assignments and project.

This subject provides an additional option of specialist study in a major area of contemporary journalism. Specialist areas are set out under JOUR905 Specialist Journalism 1 above.

Textbooks:

Graduate School of Journalism Course Materials.

Co-ordinator: Professor C Lloyd.

JOUR931 Radio Journalism

Autumn session; 6 credit points (3 hrs lectures, field and studio work).

Assessment: assignments and studio work.

This subject provides advanced skills in writing, editing, producing and presenting radio news and current affairs programs. The course has a strong practical component and will involve use of the School's radio studio.

Textbooks:

Masterton, M and Patching, R, *And Now the News in Detail*, Deakin University Press, 1990.

Co-ordinator: Mr D Blackall.

JOUR932 Television Journalism

Spring session; 6 credit points (3 hrs lectures, field and studio work).

Assessment: assignments and assessment of field work.

This subject provides advanced skills in writing, editing, producing and presenting television news and current affairs programs. A primary emphasis will be placed on techniques for gathering television news in the field.

Textbooks:

Masterton, M and Patching, R, *And now the News in Detail*, Deakin University Press 1990.

Co-ordinator: Mr D Blackall.

JOUR933 Journalism, Research and Investigation.

Autumn or Spring session; 6 credit points (3 hrs lectures and practical work).

Assessment: written and field assignments.

This subject is designed to develop a range of research and investigative skills for practical journalism. It will include the use of data bases, information retrieval, statistical analysis packages, library and archive work, registry offices and other sources of public information. The use of survey material in journalism will be studied, particularly the presentation of this data in a news format. The organisation of news investigation teams, the techniques that they use, and what they produce will be analysed.

Textbooks:

Graduate School of Journalism Course Materials.

Co-ordinator: Professor C Lloyd.

JOUR934 Print Production and Publication

Autumn session; 6 credit points (3 hrs lectures and workshop production).

Assessment: written assignments and workshop assessment.

This subject provides advanced skills in copy editing, proofreading, application of house styles in preparing news copy, typographical style, news layout, use of graphics and desktop publishing applications.

Textbooks:

Graduate School of Journalism Course Materials.

Co-ordinator: Mr E Loo.

JOUR936 International Journalism

Autumn or Spring session; 6 credit points (3 hrs lectures and seminars).

Assessment: assignments and one hr examination in class.

This subject comprises three parts: (a) the organisation and technology of

international news gathering; (b) a comparative account of the organisation of news gathering in other countries, particularly the nations of East and South East Asia and the Pacific and (c) news coverage of limited conflict.

Textbooks:

Merrill, J C, *Global Journalism: A Survey of the World's Mass Media*, Longman, 1983.

Hachten, W A, *The World News Prism*, Iowa University Press, 1993.

Co-ordinator: Mr E Loo.

JOUR942 Current Affairs Journalism

Spring session; 6 credit points (3 hrs lecture/field work).

Assessment: assignments and fieldwork.

This subject provides practical instruction in preparation of current affairs programs in radio, television and multi-media applications. The subject will give a broad introduction to current affairs production in each of the three media areas. Field and practical work will provide opportunities for specialisation in one of the three media areas.

Textbook: no set text.

Co-ordinator: Mr D Blackall.

JOUR943 Directed Readings in Journalism

Autumn, Spring and Summer sessions; 6 credit points (1 hr tutorial, directed reading).

Assessment: tutorial paper and major written evaluation of the selected reading program.

This subject enables students to extend their knowledge of the history, theory and practice of journalism by directed reading courses in selected topics. These readings are designed to complement and develop topics studied in earlier subjects. Topics available include: the journalism of Colonial Australia; structure of the Australian news media; news media management; current affairs radio and television; principles of layout and design; the role of the editor; studies of individual journalists and their work.

Textbooks:

There are no prescribed textbooks. Reading lists will be issued according to topics chosen.

Co-ordinator: Professor C Lloyd.

JOUR945 Applied Journalism Project

Autumn, Spring and Summer sessions; 6 credit points (one hr tutorial, directed research).

Assessment: written evaluations of progress; final research report which may include electronic media and print production material.

This subject provides a shorter alternative project for final session students not wanting to undertake the major project, or electing to do additional course work, or wanting to develop skills acquired in previous vocational subjects. Project areas available include: historical issues in Australian journalism; defamation law; structure of Australian news gathering; electronic news gathering; electronic print production.

Textbooks: no set text.

Co-ordinator: Professor C Lloyd.

JOUR948 News Design

Spring session; 6 credit points (3 hrs lecture/fieldwork).

Assessment: assignments and publications.

This subject provides practical instruction in imaging, graphics and design applicable to print news publications. Students are instructed in the latest digital software for producing print news materials.

Textbooks:

Graduate School of Journalism Course Materials.

Co-ordinator: Mr E Loo.

JOUR949 Multicultural Journalism

Spring session; 6 credit points (3 hrs lecture/fieldwork per wk).

Assessment: assignments and publications.

This course provides an historical, cultural and social background for students wanting to work in Australia's growing multicultural media. It will give practical instruction in multicultural print, electronic and multi-media news applications. Particular emphasis is placed on differences between multicultural media and traditional media.

Textbooks:

Graduate School of Journalism Course Materials.

Co-ordinator: Professor C Lloyd.

JOUR954 Journalism and Multi-media

Autumn or Spring session; 6 credit points (3 hrs lectures, practical and laboratory work).

This subject prepares journalists for the impact on their profession of rapidly-developing interactive multi-media technology. It emphasises both theoretical and practical aspects of multi-media relevant to print and electronic media journalism. Particular attention is given to prospective changes generated by interactive multi-media to news gathering, news delivery, and news presentation.

Textbook:

Graduate School of Journalism Course Materials.

Co-ordinator: Mr E Loo.

JOUR955 Journalism and the Law

Autumn session: 6 credit points.

Assessment: long essay and problem assignments.

This subject describes and analyses the legal framework within which Australian journalists work. It considers in detail the principal elements of media law which influence the conduct of news gathering and presentation. Subjects covered include the constitutional basis of press freedoms, the Australian judicial system, defamation, contempt, privilege, intellectual property, obscenity, blasphemy, official secrets legislation, restrictions on publications and broadcasting, Freedom of Information legislation.

Textbooks:

Armstrong, M, Blakeney, M and Watterson, M, *Media Law in Australia: A Manual*, Oxford University Press, 1989.

Walker, S, *The Law of Journalism in Australia*, Law Book Company, 1989.

Co-ordinator: Professor C Lloyd.

JOUR956 On-Line Journalism

Autumn session: 6 credit points (3 hrs instruction and project work).

Assessment: assignment and project.

This subject introduces students to news research and production on Internet and the World Wide Web (WWW). Projects will include publishing of home pages, on-line

magazines and newspapers. Students will learn to link specific Web resources, navigate Webspace, use a variety of searching tools, and apply principles of page design to publishing on the Web. Content will also cover on-line information networking, editorial framing and composition for on-line presentation, typography and graphic design for on-line publications. The subject aims to expand the definition of print editorial design to include presentation in on-line format and provide a basis for the critical examination of existing and future non-print news media.

Textbooks:

Graduate School of Journalism Course Materials.

Co-ordinator: Mr E Loo.

JOUR961 Community Journalism

Autumn and Summer sessions; 6 credit points (3 hrs lectures and project work).

Assessment: assignments and project work.

This subject offers a theoretical and practical introduction to the role of the journalist as a mediator in the community and in the production of community news material. It aims to develop in students a critical understanding of their community functions and responsibilities and to identify ways in which they can assist in adapting new technologies and skills for community usage and enhancement. Finally, it looks at ways in which communities acquire access to media production facilities and how they may use these facilities most effectively in the production of news material at the community level.

Textbooks:

Graduate School of Journalism Course Materials.

Co-ordinator: Mr E Loo.

JOUR991 Major Journalism Project

Autumn, Spring and Summer sessions; 12 credit points (supervised research and fieldwork).

Assessment: two interim reports and major research or fieldwork report.

This subject is designed to give students the opportunity to undertake either a major research project or substantial supervised practical work. In particular, it allows students to take an employment placement or internship in a news media or related area. Such placement should generally have a minimum duration of three to four weeks. Students undertaking such placement or internship are required to submit detailed records and assessments of their work experience, supported by certificates of verification from news media or related agencies. Research projects should be linked directly to subject areas represented in the journalism schedule, and may include essay, visual, sound and multi-media components.

Textbooks: no set text.

Co-ordinator: Professor C Lloyd.

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FACULTY OF EDUCATION

FACULTY OFFICE

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RESEARCH COURSES AVAILABLE

The Faculty offers Doctor of Philosophy, Doctor of Education, Honours Master of Education and Honours Master of Arts by research.

POSTGRADUATE PROGRAMS

Postgraduate programs are available in the Faculty in the following areas:

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* Fee paying course through PAGE consortium only.

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Associate Deans

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Senior Lecturers

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Lecturers

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FACULTY VISITING COMMITTEE

Chair of the Committee - Dr Greg Ramsey,
Senior Executive Officer, NSW Public
Service

Mr Steven Buckley, Assistant Director-
General, South Coast Region, NSW
Department of School Education

Mr Ray Cavenagh, Deputy President, NSW
Teachers' Federation

Mr Les Gregory, Divisional Training and
Development Manager, BHP Sheet &
Coil Products Division

Mrs Rae Mitchell, Principal, Smiths Hill
High School

Mr Terry White, Director of Education,
Catholic Education Office, Diocese of
Wollongong

Professor Shirley Grundy, Faculty of
Education, Murdoch University,
Western Australia and Chair of AARE

Dr Terry Burke, Deputy Director-General,
NSW Department of School Education,
Sydney

Mr Alan Ruby, Deputy Secretary,
Department of Employment, Education
and Training, Canberra

EDUCATION

COURSES OFFERED

The following postgraduate degrees and diplomas are available:

1. Doctor of Philosophy
2. Doctor of Education
3. Honours Master of Education
4. Honours Master of Arts
5. Master of Education
6. Master of Education(TESOL)
7. Graduate Certificate in Adult Career Development
8. Graduate Certificate in Computer-Based Learning
9. Graduate Certificate in Environmental Education
10. Graduate Certificate in Gifted Education
11. Graduate Certificate in Higher Education
12. Graduate Certificate in History Education
13. Graduate Certificate in Language Education (ESL)*
14. Graduate Certificate in Language Education (Literacy)*
15. Graduate Certificate in Literacy
16. Graduate Certificate in Special Education
17. Graduate Certificate in TESOL
18. Graduate Diploma in Adult Education and Training
19. Graduate Diploma in Education
20. Graduate Diploma in TESOL

*Fee paying course through PAGE consortium only.

The Graduate Schedule of subjects offered by the Graduate School of Education is structured to offer a series of articulated courses progressing from Graduate Certificate to Doctoral level. Candidates without the teacher training background of many of our traditional graduate students can enter postgraduate study in the School at either Graduate Certificate or Graduate Diploma level, and then proceed through the higher degree structure in their area of interest. A range of Graduate Certificates in the areas of Literacy, TESOL, Special Education, Gifted Education and Environmental Education have been introduced to provide access to graduate study in educational settings to holders of degrees in other disciplines and working in non-school areas. In addition the Graduate School offers a Graduate Certificate in Literacy (ESL or Literacy) and a Master of Education program in Literacy or TESOL as full-fee courses through the Professional and Graduate Education Consortium (PAGE) using SBS Broadcasting facilities.

The Graduate Diploma in Education is a professional pre-service course in education for graduates of this or another university who seek teacher qualifications. The main aim of the course is to provide a professional certification course of pre-service education for intending primary and secondary school teachers.

Study in all areas other than teacher training (the GDipEd) takes place in a framework provided by the Graduate School of Education, part of the Graduate Faculty of the University. The aim of the Graduate School of Education is to co-ordinate research and study in a way which provides an orderly and coherent exposure to critical issues in contemporary educational theory and practice, and also provides an avenue for professional development for committed educators. Postgraduate work is grouped into Programs which provide specialisations in areas in which staff have particular expertise. In 1996 it is expected that the major Programs will be as follows:

Programs:

- Adult Education and Training
- Curriculum Development and Evaluation
- Education Policy and Planning
- Information Technology in Education and Training
- Language and Literacy
- Physical and Health Education
- Special Education
- Teaching English to Speakers of Other Languages (TESOL)

In subsequent years there will be further changes to the Programs so as to reflect changes in both staffing resources and student interests. All students should obtain a copy of the relevant Graduate School of Education Handbook to check subject and course availability before enrolling. Any student who is unsure of their course progression as new Programs are introduced should consult the Teaching Program Co-ordinator for their specialisation regarding their enrolment in 1996. Students who maintain the University's normal progression patterns (for details see below) can be assured of completing their degree on terms no less favourable than at the time of their enrolment.

CURRENT RESEARCH AREAS

- Curriculum change and professional development in the Pacific
- Curriculum development and evaluation
- Education policy theory
- Educational information systems
- Educational policy and planning in Australia, the Asia-Pacific region and the OECD countries
- Equity in education
- Information technology in education and training
- Interactive multimedia, design and evaluation
- Language and education
- Learning
- Literacy development in education including functional language studies
- Literacy education and teacher development
- Performance technology and adult learning
- Policies for health and physical education

Policy theory
 Professional development of teachers
 Social and cultural context of education
 Special education
 Talented and gifted education
 Women and girls' education

Research Programs and Groups are the University's major mechanism for fostering research. The University Research Program structure was reviewed at the end of 1994 and the School received strong support for its research to continue to be focused in the areas indicated by the Research Programs.

These were:

- the *Centre for Educational Policy and Performance Technology Research* (Co-ordinator: Professor Carla Fasano): CEPPTTR pursues a wide range of research activities into educational policy and planning issues in Australia, the Asia Pacific region and OECD countries. In addition, the Center has a strong focus on policies and strategies related to information technology in education and training, particularly through the applications of interactive multimedia;
- the Research Group, *Social Literacy* (Co-ordinator: Dr Bill Winser) researches all areas concerned with first and second language learning and teaching, including literacy development, functional language and discourse studies in education, language curricula and the role of language in school and other social environments, and examines the variables involved in access to educational and social opportunities;
- the Research Group, *Curriculum Research*, (Co-ordinator: Dr Christine Fox), has focused on enhancing research into Key Learning Areas of School Education, and across-curriculum areas in early childhood, school and adult education. Team members have specialised in researching intercultural and international aspects of curriculum policy, programs and evaluation, with particular emphasis on the relationship between curriculum innovation and professional development.

COURSE REQUIREMENTS

A. HIGHER DEGREES

The Master of Education, Master of Education (Honours), Master of Arts (Honours), Doctor of Philosophy and Doctor of Education do not lead to teaching qualifications, but are instead designed for those students already qualified in Education and working in the area who wish to undertake advanced study and/or research in education.

1. DOCTOR OF PHILOSOPHY

Entry to this degree is available to candidates who meet the University entry requirements for PhD candidature. In the first instance this requires the completion of a Bachelors degree with Honours Class II or higher in an appropriate area, or an equivalent qualification with an appropriate research component.

Candidates for this degree enrol in a major thesis, subject number EDGA905. Interested candidates should contact the Head of the Graduate School of Education to discuss their area of research and supervision. All new students enrolling in a research degree are expected to prepare and defend a research proposal early in their candidature and to become involved in Graduate School activities such as student colloquia. See subject descriptions for further information.

2. DOCTOR OF EDUCATION

The Doctorate of Education is a program to prepare professional leaders in Education. It is a doctoral level program completed by a combination of coursework and thesis, offered in 1996 in the areas of:

- Curriculum
- Information Technology in Education
- Language and Literacy
- Physical and Health Education
- Policy and Planning
- Special Education
- Teaching English to Speakers of Other Languages (TESOL, including TEFL)

Entry Requirements for the EdD Program

Entry to this degree is available to candidates who:

1. Meet the University entry requirements for Doctoral candidature. In the first instance this requires the completion of a Bachelors degree with Honours Class II or higher in an appropriate area, or an equivalent qualification. Normally this would be an appropriate Masters degree, completed at credit (65%) level or better. Limited Advanced Standing may be available for candidates who have completed Masters level coursework at a credit level or better; and
2. Candidates must have completed a minimum of three years relevant professional experience.

Time Limits

Normally, the degree will be completed in not less than six, and not more than eight, academic sessions of full-time study. Completion of the degree in a minimum of five sessions will be permitted to those candidates granted Advanced Standing for previous graduate study.

Patterns of Study

1. The program for the degree will require successful completion of:
 - (i) at least 72 credit points (9 subjects) chosen from the Graduate Schedule of Subjects in the Graduate School of Education. At least five of these subjects must be chosen from one Program in line with the requirements for that Program (see 4 below). Where a student is granted advanced standing, additional subjects sufficient to make at least five including the advanced standing, must be chosen from one Program. A student who is awarded the maximum advanced standing of 3 subjects (24 cp) and who has already completed the equivalent of five subjects in one Program through previous studies at an appropriate level will be required to select at least two subjects from a related area in consult-

ation with the Program Co-ordinator and the Head of the Graduate School.

- (ii) a supervised thesis (EDGA909) on a topic in the Program chosen for specialisation, to be examined externally. This thesis will contribute fifty percent towards the final assessment. All new students enrolling in a research degree are expected to prepare and defend a research proposal early in the thesis component. See subject descriptions for further information.
2. Each candidate will be required to select a program of study in consultation with the Program Co-ordinator and the Head of the Graduate School to ensure that subjects chosen do not duplicate previous graduate work.
3. Candidates will be required to pass all coursework subjects at the first attempt, at not less than Credit (65%) level. Students who do not meet this requirement will have their doctoral candidature terminated, and may enrol in an appropriate Masters program.
4. The coursework requirements for each Program are as follows:
 - (1) **Curriculum and Evaluation**

The coursework component of a Doctorate of Education in the Program of Curriculum consists of:

 - (i) either EDGA901 Advanced Qualitative Research Methods or EDGA902 Advanced Quantitative Research Methods is compulsory. It is recommended that both of these subjects, or their equivalent, be completed. If there is satisfactory evidence that one of these subjects or their equivalents has already been completed the student will undertake another subject of his/her choice from the Graduate School of Education Schedule; and

- (ii) at least five subjects chosen from the Curriculum Program in line with the requirements listed in *Patterns of Study*.

These subjects are listed below:

- EDGA910 Curriculum in a changing context
 EDGA911 Managing curriculum change
 EDGA912 Curriculum special topic
 EDGA913 Program evaluation
 EDGA915 Quality learning and teaching
 EDGA917 International and intercultural perspectives
 EDGA918 Environmental education: Pedagogy and curriculum perspectives
 EDGA919 Advanced studies in the Key Learning Areas

- (iii) the balance of subjects to be chosen from anywhere in the Schedule of Subjects of the Graduate School of Education (e.g. curriculum related subjects in language, special education and TESOL; curriculum policy related subjects in the Policy Area; or curriculum technology related subjects in the Information Technology Area), or from any 900-level Graduate Schedule in the University, provided that prior approval has been obtained from the Head of the Graduate School of Education and the Head of the relevant School or Department.

(2) Education Policy and Planning

The coursework component of a Doctorate of Education in the Program Area of Policy and Planning consists of:

- (i) EDGA902 Advanced Quantitative Research Methods is compulsory. If there is satisfactory evidence that this subject or its equivalent has already been completed the student will undertake another subject of his/her choice from the Graduate School of Education Schedule;
 (ii) at least five subjects chosen from the Policy and Planning Program in line with the requirements listed in *Patterns of Study*.

These subjects are listed below:

- EDGA960 Foundations of policy studies
 EDGA961 Policy research and policy analysis
 EDGA963 Education policy in Australia
 EDGA964 Educational management and administration
 EDGA965 Resource allocation in education
 EDGA966 Leadership and school management

- (iii) The balance of subjects may be chosen from anywhere in the Schedule of Subjects of the Graduate School of Education, or from any 900 level Graduate Schedule in the University, provided that prior approval has been obtained from the Head of the Graduate School of Education and the Head of the relevant School or Department.

(3) Information Technology in Education

The coursework component of a Doctorate of Education in the Program of Information Technology in Education consists of:

- (i) both EDGA901 Advanced Qualitative Research Methods and EDGA902 Advanced Quantitative Research Method are compulsory. If there is satisfactory evidence that one or both of these subjects or their equivalent has already been completed the student will undertake another subject(s) of his/her choice from the Graduate School of Education Schedule; and

- (ii) at least five subjects chosen from the Information Technology Program in line with the requirements listed in *Patterns of Study*.
 These subjects are listed below:

- EDGA950 Information Technology and education and training
 EDGA951 Information systems and educational management
 EDGA952 Designing instructional software
 EDGA954 Interactive multimedia in education
 EDGA955 Information Technology and cognitive processes
 EDGA956 Advanced studies in interactive learning
 EDGA957 Implementation and evaluation of technology-based learning
 EDGA958 Instructional strategies and authoring

- (iii) The balance of subjects may be chosen from anywhere in the Schedule of Subjects of the Graduate School of Education, or from any 900 level Graduate Schedule in the University, provided that prior approval has been obtained from the Head of the Graduate School of Education and the Head of the relevant School or Department.

(4) Language and Literacy

The coursework component of a Doctorate of Education in the Program of Language and Literacy consists of:

- (i) either EDGA901 Advanced Qualitative Research Methods or EDGA902 Advanced Quantitative Research Methods is compulsory. It is recommended that both of these subjects, or their equivalent, be completed. If there is satisfactory evidence that one of these subjects or their equivalent has already been completed the student will undertake another subject of his/her choice from the Graduate School of Education Schedule; and
 (ii) at least five subjects chosen from the Language and Literacy Program in line with the requirements listed in *Patterns of Study*.

These subjects are listed below:

- EDGA970 Language and literacy development
 EDGA971 Assessment and evaluation of language and literacy
 EDGA972 Literacy: theory into practice
 EDGA973 Language, ideology and culture

- EDGA975 Educational linguistics
 EDGA976 Text and context
 EDGA977 Communication and learning
 EDGA978 Literacy Practices for Diverse Needs*

*If done in Literacy module through the PAGE Consortium as part of the GCertLangEd or MEd.

- (iii) The balance of subjects may be chosen from anywhere in the Schedule of Subjects of the Graduate School of Education, or from any 900 level Graduate Schedule in the University, provided that prior approval has been obtained from the Head of the Graduate School of Education.

(5) Physical and Health Education

The coursework component of a Doctorate of Education in the Program of Physical and Health Education consists of:

- (i) either EDGA901 Advanced Qualitative Research Methods or EDGA902 Advanced Quantitative Research Methods is compulsory. It is recommended that both of these subjects, or their equivalent, be completed. If there is satisfactory evidence that one of these subjects or their equivalents has already been completed the student will undertake another subject of his/her choice from the Graduate School of Education Schedule; and

- (ii) at least five subjects chosen from the Physical and Health Education Program in line with the requirements listed in *Patterns of Study*.
 These subjects are listed below:

- EDGA920 Curriculum problems and issues in physical and health education
 EDGA921 Studies in the scientific bases of health education and health promotion
 EDGA922 Theoretical and practical bases of coaching
 EDGA923 Sport, culture and education
 EDGA924 Adolescent health status and behaviour
 EDGA925 Advanced seminar
 EDGA926 Theory and practice of outdoor education and recreation

- (iii) the balance of subjects to be chosen from anywhere in the Schedule of Subjects of the Graduate School of Education (e.g. PE/Health related subjects in language, special education and TESOL; PE/Health policy related subjects in the Policy Area; or PE/Health technology related subjects in the Information Technology Area), or from any 900 level Graduate Schedule in the University, provided that prior approval has been obtained from the Head of the Graduate School of Education and the Head of the relevant School or Department.

(6) Special Education

The coursework component of a Doctorate of Education in the Program of Special

Education consists of:

(i) both EDGA901 Advanced Qualitative Research Methods and EDGA902 Advanced Quantitative Research Methods are compulsory. If there is satisfactory evidence that one or both of these subjects or their equivalent has already been completed the student will undertake another subject(s) of his/her choice from the Graduate School of Education Schedule; and

(ii) at least five subjects chosen from the Special Education Program in line with the requirements listed in "Patterns of Study".

These subjects are listed below:

EDGA936	Learning theories and exceptionalality
EDGA937	Approaches to reading difficulties
EDGA938	Teaching students with learning difficulties
EDGA939	Approaches to behaviour management
EDGA946	Teaching gifted children
EDGA947	Giftedness in special populations

(iii) The balance of subjects may be chosen from anywhere in the Schedule of Subjects of the Graduate School of Education, or from any 900 level Graduate Schedule in the University, provided that prior approval has been obtained from the Head of the Graduate School of Education and the Head of the relevant School or Department.

(7) Teaching English to Speakers of Other Languages (TESOL)

The coursework component of a Doctorate of Education in the Program of TESOL consists of:

(i) either EDGA901 Advanced Qualitative Research Methods or EDGA902 Advanced Quantitative Research Methods is compulsory. It is recommended that both of these subjects, or their equivalent, be completed. If there is satisfactory evidence that one of these subjects or their equivalent has already been completed the student will undertake another subject of his/her choice from the Graduate School of Education Schedule; and

(ii) at least five subjects chosen from the TESOL Program in line with the requirements listed in "Patterns of Study".

These subjects are listed below:

EDGA970	Language and literacy development*
EDGA976	Text and context
EDGA978	Literacy practices for diverse needs*
EDGA981	Second language literacy
EDGA983	Assessment in TESOL
EDGA984	Language and Learning in TESOL
EDGA985	English in specific contexts

*If done as TESOL module in GCertLangDev or MEd through the PAGE Consortium.

(iii) The balance of subjects may be chosen from anywhere in the Schedule of Subjects of the Graduate School of Education, or from any 900 level Graduate Schedule in the University, provided that prior approval has been obtained from the Head of the Graduate School of Education and the Head of the relevant School or Department.

Advanced Standing

Candidates in the Doctor of Education program may apply for up to 24 credit points of Advanced Standing for subjects completed at Masters level. This Advanced Standing will be granted as Specified Credit, ie; there must be a direct correspondence between the prior subject and a subject in the Doctor of Education Schedule. Advanced Standing will only be granted if the subject has been passed at Credit (65%) level or better in the Masters degree.

3. HONOURS MASTER OF EDUCATION

The Honours Master of Education is a specialised research degree for students who either wish to pursue research careers in education or whose future career will require them to interpret and apply the findings of educational research. This degree is intended for students who are professionally qualified educators.

Entry requirements

The degree of Honours Master of Education (MEd(Hons)) in the Faculty of Education shall be subject to the University's rules for the award of the degree of Honours Master together with the following guidelines:

- Entry to the degree program will normally be available to a person who has:
 - completed the requirements for an approved Bachelor's degree with Honours Class II Division 2 or higher and who holds an approved teaching qualification; or
 - completed the University's Master of Education Degree with results averaging credit level or better; or
 - completed qualifications deemed by the Graduate Faculty to be the equivalent of the University's Master of Education Degree with results averaging credit level or better; or
 - completed such other qualifications as might be approved by the Graduate Faculty on the recommendation of the Head of the Graduate School provided that in the view of the Graduate Faculty any such person shall have accumulated the equivalent of 48 credit points beyond a Pass degree.
- Students who have completed an MEd degree in the professional development orientation (see section 5) or its equivalent with results averaging credit level or better must complete 24 credit points of coursework at Credit level or better, before proceeding to a 24 credit points thesis.

These 24 credit points will comprise:

- 8 credit points of an advanced methodology subject (EDGA901 or EDGA902)

(ii) EDGA903 Minor Project (8 credit points).

(iii) An elective subject, chosen in consultation with the thesis supervisor.

The first two subjects must be completed prior to enrolment in EDGA904 (Minor Thesis), and must be passed at credit level or better, at the first attempt. Failure to achieve a credit average in these two subjects at the first attempt will lead to termination of MEd(Hons) candidature.

Patterns of Study

Either

EDGA905 48 credit point thesis; for candidates who have completed the research orientation in the Master of Education program, or an equivalent program.

or EDGA906 Directed Study in Education I,

and

EDGA907 Directed Study in Education II,

and

EDGA908 Directed Study in Education III

and

EDGA904 24 credit point thesis;

Each Directed Study subject is an 8 credit point individualised program of study in an area supporting the 24 credit point thesis. Students will generally replace a Directed Study subject with subject(s) chosen from the Master of Education (Pass) schedule, in consultation with their supervisor(s) and the Head of the Graduate School. (See section 2 above) to satisfy the entry requirements for higher degree study.

Requirements for the Degree Program

- The degree program will normally be completed in two sessions of full-time study or four sessions of part-time study.
- The degree program shall involve:
 - a thesis embodying the results of an investigation to the value of 48 credit points; or
 - a minor thesis embodying the results of an investigation whose credit point value is 24 together with satisfactory completion of coursework subjects to the value of 24 credit points prior to commencing thesis.
- A candidate may not include in this degree program any subject which the candidate has previously taken and had credited towards a qualification accepted for admission under Section 1 of these requirements.
- The Graduate Faculty shall appoint supervisor/s for each candidate on the recommendation of the Head of the Graduate School of Education.

4. HONOURS MASTER OF ARTS

Candidates for the degree who have completed a Bachelors Honours Degree at the level of Class II, Division 2 or higher in an appropriate area will enrol in a 48 credit point major thesis, subject number EDGA905. Interested candidates should

contact the Head of the Graduate School of Education.

5. MASTER OF EDUCATION

The Master of Education is an introductory higher degree allowing two alternative patterns of study. One pattern focuses on a professional development orientation for educators, and the other pattern has a research orientation for candidates interested in pursuing study beyond this degree.

Entry Requirements for the Degree Program

The degree of Master of Education (MEd) in the Faculty of Education shall be subject to the University's rules for the award of the degree of Master together with the following guidelines:

- To qualify for admission as a candidate for the Master of Education, a student shall have qualified for a Bachelors degree of the University, or an equivalent qualification from an approved institution, with a major study in Education, provided that the degree or equivalent qualification has a minimum study duration of four years. Other qualifications or substantial professional experience may be considered as meeting these requirements and should be discussed with the Head of the Graduate School of Education.
- A candidate may not include in this degree program any subject which the candidate has previously taken and had credited towards a qualification accepted for admission under Section 1 of these requirements.

Patterns of Study

1. Either

- the *professional orientation* stream:
 - EDGA900 Introduction to Research Methods in Education (8 credit points)

and

- at least 24 credit points (at least 3 subjects each of 8 credit points) from a single Program (major specialisation). The core of subjects to be covered to complete a specialisation will vary from Program to Program.

and up to

- 16 credit points of electives (2 subjects each of 8 credit points) chosen from any Program. The amount of choice available will vary from Program to Program.

or

- The *research orientation* stream, for students wishing to proceed directly to MEd (Hons) by thesis or Doctoral programs:

- EDGA900 Introduction to Research Methods in Education (8 credit points)

and

- 8 credit points of advanced studies in qualitative or quantitative research methods (either EDGA901 Advanced Qualitative Research Methods or EDGA902 Advanced Quantitative Research Methods)

and

- at least 24 credit points (at least 3 subjects each of 8 credit points) from a single Program. The core of subjects to be covered to complete a specialisation will vary from Program to Program.

and

- EDGA903 Minor Project in Education (8 credit points) in the same Program.

- Students who have completed an MEd degree in the professional development orientation may proceed to MEd(Hons), provided they meet the program requirements for students who do not have a research component in the MEd (see MEd(Hons) entry requirements).

Suggested progression patterns

The Master of Education degree will normally be completed in two sessions of full-time study, or in four to six sessions of part-time study. The first two sessions of part-time study are the same for both the professional and research orientation streams.

A part-time student will complete up to two subjects each session. The sequence of study in the specialisation will be determined by the subjects on offered in each year and by the pattern of pre- and co-requisites in each Program. Any alternative patterns of study must be discussed with both the Program Co-ordinator and the Head of the Graduate School.

Note: EDGA900 Introduction to Research Methods in Education is a single session subject which is repeated each session. Students have the choice of session in which to complete it, but should consider the advice of the Program Co-ordinator for their specialisation. It is a compulsory component of the Master of Education program and must be completed as one of the first four subjects studied. No exemptions will normally be considered.

Course of study

It should be noted that not all the following subjects will necessarily be offered in 1996. Final arrangements will depend upon student numbers and staff resources. Prospective students are strongly recommended to discuss their program of study with the Co-ordinator responsible for the Program in which they are interested or the Head of the Graduate School and obtain a copy of the relevant Graduate School of Education Handbook.

Details of all offerings in the Graduate School are available from the Graduate School of Education Postgraduate Courses Handbook, available from the Office of the Dean or the Graduate School Office. A suggested program of study is available for each Program.

All MEd students are required to include EDGA900 Introduction to Research Methods in Education in their program. Additional specific requirements for program specialisations are listed below.

Program: Adult Education and Training
EDGA991 Instructional design*

EDGA992 Psychology of adult learning
EDGA993 Evaluation and assessment
EDGA994 Learning strategies and communication
EDGA995 Management and organisational context of learning
EDGA966 Issues in adult education and training
EDGA997 Introduction to tertiary teaching#

- * Compulsory subjects for students wishing to complete a major specialisation in Adult Education and Training
- # Available to University staff members only

A specialisation in this Program requires the completion of at least three subjects chosen from the Adult Education and Training Program. Variations must be approved by the Program Area Co-ordinator (Dr Max Gillett). Not all subjects are offered every year, and students must consult with the academic adviser before completing enrolment procedures.

Program: Curriculum Development and Evaluation

EDGA910 Curriculum in a changing context*
EDGA911 Managing curriculum change#
EDGA912 Curriculum special topic
EDGA913 Program evaluation
EDGA915 Quality learning and teaching#
EDGA917 International and intercultural perspectives
EDGA918 Environmental Education: Pedagogy and Curriculum Perspectives
EDGA919 Advanced Studies in the Key Learning Areas

- * Compulsory subject for students wishing to complete a major specialisation in Curriculum and Evaluation.
- # Run jointly with the NSW Department of School Education as part of a Joint Masters program.

A specialisation in this Program requires the completion of three subjects. Normally these subjects will be chosen from the Curriculum and Evaluation Program. Variations must be approved by the Program Co-ordinator (Dr Ted Booth). Not all subjects are offered every year, and students must consult with the academic adviser before completing enrolment procedures.

Program: Education Policy and Planning

EDGA960 Foundations of policy studies*
EDGA961 Policy research and policy analysis*
EDGA963 Education policy in Australia
EDGA964 Educational management and administration
EDGA965 Resource allocation in education
EDGA966 Leadership and school management#

- * EDGA960 and EDGA961 are compulsory subjects for students wishing to complete a major specialisation in Educational Policy and Planning. In addition to these two compulsory subjects, students choose one other subject from the list to complete 24 credit points.
- # Run jointly with the NSW Department of School Education as part of a Joint Masters program.

Program: Information Technology in Education and Training

- EDGA950 Information Technology and education and training*
- EDGA951 Information systems and educational management
- EDGA952 Designing instructional software
- EDGA954 Interactive multimedia in education
- EDGA955 Information Technology and cognitive processes
- EDGA956 Advanced studies in interactive learning
- EDGA957 Implementation and evaluation of technology-based learning
- EDGA958 Instructional strategies and authoring*

* Compulsory subjects for students wishing to complete a major specialisation in Information Technology in Education and Training. In addition to the compulsory subjects, students choose other subjects from the list to complete at least 24 credit points. The choice of subject will depend on the background of the students. Specialist subjects are available for students who already have a background in the area, and professional subjects available for students with an interest, but little background, in the area. Students should discuss their proposed course of study with the Program Co-ordinator (Associate Professor J Hedberg).

Program: Language and Literacy Education

- EDGA970 Language and literacy development*
- EDGA971 Assessment and evaluation of language and literacy
- EDGA972 Literacy: theory into practice
- EDGA973 Language, ideology and culture
- EDGA975 Educational linguistics
- EDGA976 Text and context
- EDGA977 Communication and learning
- EDGA978 Literacy Practices for Diverse Needs#

* Compulsory subject for students wishing to complete a major specialisation in Language and Literacy. A specialisation in this Program requires the completion of three subjects chosen from the Language and Literacy Education Program.

If done as the Literacy Module in the Grad.CertLangEd or MEd offered through the PAGE Consortium.

Program: Physical and Health Education

- EDGA920 Curriculum problems and issues in physical and health education
- EDGA921 Studies in the scientific bases of health education and health promotion
- EDGA922 Theoretical and practical bases of coaching
- EDGA923 Sport, culture and education
- EDGA924 Adolescent health status and behaviour
- EDGA925 Advanced seminar
- EDGA926 Theory and practice of outdoor education and recreation

A specialisation in Physical and Health Education requires the completion of three subjects. Normally these subjects will be chosen from the Physical and Health Education Program. Variations must be

approved by the Program Co-ordinator Dr Paul Webb. Not all subjects are offered every year, and students must consult with the academic adviser before completing enrolment procedures.

Program: Special Education

- EDGA936 Learning theories and exceptionality*
- EDGA937 Approaches to reading difficulties
- EDGA938 Teaching students with learning difficulties
- EDGA939 Approaches to behaviour management
- EDGA946 Teaching gifted children
- EDGA947 Giftedness in special populations

* Compulsory subject for students wishing to complete a major specialisation in Special Education. A specialisation in this Program requires the completion of three subjects chosen from the Special Education Program. Students should discuss their proposed course of study with the Program Co-ordinator (Ms Deslea Konza) as teaching accreditation requirements in the Special Education and Gifted and Talented Education areas will depend on subject choice.

Program: Teaching English to Speakers of Other Languages (TESOL)

- EDGA970 Language and literacy development#
- EDGA976 Text and context*
- EDGA978 Literacy practices for diverse needs#
- EDGA981 Second language literacy
- EDGA983 Assessment in TESOL
- EDGA984 Language and Learning in TESOL
- EDGA985 English in specific contexts

* Compulsory subject for students wishing to complete a major specialisation in TESOL. A specialisation in this Program requires the completion of three subjects chosen from the TESOL Program. Students should discuss their proposed course of study with the Program Co-ordinator (Dr Jan Wright) as teaching accreditation requirements in the TESOL area will depend on subject choice.

If done as TESOL module in GCertLangDev or MEd through the PAGE Consortium.

Research Methodology and Project Subjects

- EDGA900 Introduction to Research Methods in Education
- EDGA901 Advanced Qualitative Research Methods
- EDGA902 Advanced Quantitative Research Method
- EDGA903 Minor Project in Education

Subjects in this group do not constitute a separate area of specialisation, but provide the various methodology and project subjects which are required for completion of the MEd and higher degrees as explained above in the section Patterns of Study.

Advanced Standing

The Faculty of Education has approved up to 8 credit points of Advanced Standing in the Master of Education to candidates who have completed any of the following

Department of School Education, AMES and other accredited professional development courses:

- Adult Literacy Teaching: A Professional Development Course, *or*
 Certificate in School Leadership and Management, *or*
 Certificate of Special Education(Integration)*, *or*
 Certificate of Faculty Administration*, *or*
 Collaborative Learning and Reflective Practice*, *or*
 Computing Studies Intensive Methodology Course (CSIM), *or*
 Design and Technology Training Agents (Completion of this course with the Tertiary Extension Lobe will allow candidates 8 credit points of Advanced Standing in the Curriculum specialisation plus 8 credit points Advanced Standing for an elective subject), *or*
 Diploma in TESOL (UNSW/WELC) *or*
 Educative Leadership, *or*
 ESL Basic Training K-12, *or*
 Faculty Leadership for Effective change (FLEC), *or*
 Frameworks: A Literacy & Learning Course*, *or*
 Frameworks: Assessment & Evaluation Module*, *or*
 Interactive Multimedia Workshop (Univ. Wollongong)*, *or*
 Introduction to Functional Grammar (NSW AMES), *or*
 Learning Assistance Support Team (LAST), *or*
 LOTE Intensive Methodology (LIM), *or*
 Supervision for Effective Teaching (SET), *or*
 Team Leadership Course (TLC)* formerly FLEC.

* Accreditation of these courses requires completion of an extended assessment lobe. See relevant Program Co-ordinator for details.

Specialisation requirements must still be met by the candidate, ie, normally this credit cannot be substituted for a compulsory subject within a program, or form part of a specialisation within a program. Candidates may claim a maximum of eight credit points of Advanced Standing on this basis in one program of study.

Joint Masters Subjects

The Graduate School of Education will be running three Joint Masters subjects in co-operation with the Department of School Education in 1996. These are:

- EDGA911 Managing curriculum change
- EDGA915 Quality learning and teaching
- EDGA966 Leadership and school management

These subjects are taught jointly by Faculty of Education staff and staff from the Department of School Education and are available to all students from all areas of specialisation. EDGA966 Leadership and School Management may be taken as one subject in the specialisation of Policy and Planning. EDGA911 Managing Curriculum Change and EDGA915 Quality Learning and Teaching may be included as part of a specialisation in Curriculum. Any of these subjects may be taken as an elective subject by students from other Program areas. Financial support may be available for students currently employed by the Depart-

ment of School Education and CEO, and further information regarding arrangements should be available from the relevant employer. Students must meet the normal entry criteria for the Master of Education program and follow the standard University application and enrolment procedures.

Requirements for the Degree Program

Please refer to the Pass Master Degree Rules and note the following additions:

1. Each 48 credit point program shall include a minimum of 24 credit points comprising a major specialisation within the degree. The area of specialisation shall be chosen from the Programs listed in the Schedule of Subjects for the Master of Education;
2. A candidate for the Master of Education degree, may, with the approval of the Head of School, include in his/her program subjects not exceeding 16 credit points in aggregate selected from the Schedule of Graduate subjects offered by other schools or departments, provided that the Head of the other Department or School approves such selection;
3. A person wishing to use the Master of Education degree as a qualifying program for admission to the Honours Master of Education or Doctoral degrees will normally be expected:
 - (a) to complete satisfactorily those subjects in the research orientation strand of the Master of Education Degree; and
 - (b) to achieve results averaging credit level or better in the Master of Education Degree.
4. Students who have completed an MEd degree in the professional development orientation with results averaging credit level or better are eligible for admission to the Honours Master of Education, but should consult the entry requirements for this degree (Section 3) for the required pattern of study.

MASTER OF EDUCATION through the PAGE Consortium

Subjects at the Masters level in the areas of Language and Literacy Education and TESOL are available through the PAGE Consortium on a full-fee basis to provide a specialist qualification at Masters level in the areas of ESL or Literacy Education for graduates interested in qualifying in these areas. Entry is available to candidates who satisfy the University's entry requirements for the Master of Education (ie a four year teaching qualification or equivalent). The course consists of 48 credit points as follows:

- | | |
|---------|--|
| EDGA900 | Introduction to Educational Research Methodology |
| EDGA903 | Minor Project |
| EDGA970 | Language and literacy development |
| EDGA976 | Text and context |
| EDGA978 | Literacy practices for diverse needs |
| EDGA983 | Assessment in TESOL |
- Up to 16 credit points (two subjects) of

appropriate graduate level subjects may be chosen from related subject areas in consultation with the Program Co-ordinator (Dr Jan Wright). These two subjects would replace two of the elective subjects in this program.

Interested candidates should contact the PAGE Consortium Office on (042) 214444 for course, enrolment and cost details.

6. MASTER OF EDUCATION (TESOL)

The Master of Education (TESOL) is a specialised Masters course which allows students to build on the practically oriented subject matter covered in previous specialised TESOL courses with the discussion of more theoretical issues. The course will be available as a full-fee off-campus program to selected cohorts, and as a HECS-fee course to on-campus students.

Entry

Entry requirements and course of study requirements as listed for the Master of Education (*above*) must be met.

Course of study

- | | |
|---------|--|
| EDGA900 | Introduction to Education Research Methodology |
| EDGA976 | Text and context |
| EDGA981 | Second language literacy |
| EDGA983 | Assessment in TESOL |
| EDGA984 | Language and Learning in TESOL |
| EDGA985 | English in specific contexts |

Advanced Standing

Students who have successfully completed the Graduate Diploma in TESOL or the Graduate Certificate in TESOL will be credited with 24 credit points of Advanced Standing in the MEd(TESOL) providing the previous qualification is in addition to the normal Masters entry requirements.

B. GRADUATE CERTIFICATES

7. GRADUATE CERTIFICATE IN ADULT CAREER DEVELOPMENT

This is a specialised course aimed at those working with the development of adult careers. The course is offered on a full-fee basis in a self-study open-learning format, with many of the materials available on Macintosh CD-ROM disk. It consists of three subjects:

- | | |
|---------|------------------------------------|
| EDGA831 | Career management and organisation |
| EDGA832 | Career development and support |
| EDGA836 | Practicum and project |

8. GRADUATE CERTIFICATE IN COMPUTER-BASED LEARNING

The Graduate Certificate in Computer-Based Learning is designed to enable graduates to extend their knowledge of the use of computer technology in teaching. It replaces the Graduate Diploma in Computer-Based Learning and entry is available to candidates who satisfy the University's entry requirements for Graduate Certificates (ie a three year degree

or equivalent). The Graduate Certificate in Computer-Based Learning comprises 24 credit points chosen as follows:

- | | |
|---------|--|
| EDGA950 | Information technology and education and training; and |
| EDGA958 | Instructional strategies and authoring |

plus

one other subject chosen from the subjects listed in the Program *Information Technology in Education and Training* in the Graduate School schedule chosen in consultation with the Course Co-ordinator.

9. GRADUATE CERTIFICATE IN ENVIRONMENTAL EDUCATION

The Graduate Certificate in Environmental Education is designed to assist educators whose task it is to instruct the public about environmental issues. It focuses upon efficient management of the natural and built resources that are used daily by environmental educators, the delivery of effective instruction in, about and for the environment to all members of the community, and the critical evaluation of current teaching practices.

The structure of the Master of Education Degree and Graduate Diploma in Adult Education allows students from the Graduate Certificate in Environmental Education to extend into either of these degrees following successful completion of the award.

The Graduate Certificate in Environmental Education comprises 24 credit points (three subjects):

- | | |
|---------|---|
| EDGA991 | Instructional Design |
| EDGA918 | Environmental Education: Pedagogy and Curriculum Perspectives |
| ENVI920 | Scientific Basis of Environmental Management |

10. GRADUATE CERTIFICATE IN GIFTED EDUCATION

The Graduate Certificate in Gifted Education is designed to provide a specialist qualification in the area of Gifted Education for graduates interested in qualifying in this area. Entry is available to candidates who satisfy the University's entry requirements for Graduate Certificates (ie a three year degree or equivalent). The course consists of 24 credit points completed over twelve months, as follows:

- | | |
|---------|--------------------------------------|
| EDGA936 | Learning theories and exceptionality |
| EDGA946 | Teaching gifted children |
| EDGA947 | Giftedness in special populations |

11. GRADUATE CERTIFICATE IN HIGHER EDUCATION

The Faculty of Education introduced in 1993 the award of Graduate Certificate in Higher Education. This program is available to all existing and newly appointed academic staff of the University. The course will allow staff to develop their teaching capabilities and obtain a formal award as evidence of appropriate teaching skills.

The Graduate Certificate in Higher Education will comprise -
 EDGA997 Introduction to tertiary teaching
 EDGA991 Instructional design
 EDGA993 Evaluation and assessment

EDGA997 Introduction to Tertiary Teaching may also be pursued independently as part of a staff development program. Staff who successfully complete the Graduate Certificate in Higher Education would be eligible to enrol in the Graduate Diploma in Adult Education and Training with Advanced Standing for three subjects on condition that the applicant surrender the Graduate Certificate.

12. GRADUATE CERTIFICATE IN HISTORY EDUCATION

The Graduate Certificate in History Education is a professional development course for qualified teachers of History in NSW secondary schools. It focuses on the development of modern inquiry techniques and new teaching approaches in History. Candidates for this award complete the following two subjects over one year of study:

- EDGA822 New technologies and approaches to learning
 HIST934 The re-making of Australian history

13. GRADUATE CERTIFICATE IN LANGUAGE EDUCATION (ESL)*

14. GRADUATE CERTIFICATE IN LANGUAGE EDUCATION (LITERACY)*

The Graduate Certificates in Language Education (ESL or Literacy) are designed to provide a specialist qualification in the areas of ESL or Literacy Education for graduates interested in qualifying in these areas. Entry is available to candidates who satisfy the University's entry requirements for Graduate Certificates (ie a three year degree or equivalent). The course consists of 24 credit points as follows:

- EDGA970 Language and literacy development
 EDGA976 Text and context
 EDGA978 Literacy practices for diverse needs

* Interested candidates should contact the PAGE Consortium Office on (042) 214444 for course, enrolment and cost details. No enquiries will be handled through the Graduate School of Education.

15. GRADUATE CERTIFICATE IN LITERACY

The Graduate Certificate in Literacy is designed to provide a specialist qualification in the area of Literacy Education for teachers interested in qualifying in this area. Entry is available to candidates who satisfy the University's entry requirements for Graduate Certificates (ie a relevant three year degree or equivalent). The course consists of 24 credit points completed over twelve months, chosen as follows:

EDGA970 Language and literacy development

- plus two subjects chosen from
 EDGA971 Assessment and evaluation of language and literacy
 EDGA972 Literacy: theory into practice
 EDGA973 Language, ideology and culture
 EDGA975 Educational linguistics
 EDGA976 Text and context
 EDGA977 Communication and learning

16. GRADUATE CERTIFICATE IN SPECIAL EDUCATION

The Graduate Certificate in Special Education is designed to provide a specialist qualification in the area of Special Education for graduates interested in qualifying in this area. Entry is available to candidates who satisfy the University's entry requirements for Graduate Certificates (ie a three year degree or equivalent). The course consists of 24 credit points completed over twelve months, chosen as follows:

- EDGA936 Learning theories and exceptionality
 plus two subjects chosen from
 EDGA937 Approaches to reading difficulties
 EDGA938 Teaching students with learning difficulties
 EDGA939 Approaches to behaviour management

17. GRADUATE CERTIFICATE IN TESOL

The Graduate Certificate in TESOL (Teaching English to Speakers of Other Languages) is designed to provide a specialist qualification in the area of TESOL Education for graduates interested in qualifying in this area. Entry is available to candidates who satisfy the University's entry requirements for Graduate Certificates (ie a three year degree or equivalent). The course consists of 24 credit points completed over twelve months, as follows:

- EDGA976 Text and context
 EDGA984 Language and Learning in TESOL
 EDGA985 English in Specific Contexts

C. GRADUATE DIPLOMAS

The Graduate Diploma in Education is designed for those seeking a teaching qualification recognised by employing bodies in the NSW Primary and Secondary school systems.

The Graduate Diploma in Adult Education & Training is designed to extend existing three year qualifications and provide an educational/training qualification for candidates working in the adult education area.

The Graduate Diploma in TESOL is designed to extend existing three year qualifications and provide an educational qualification for candidates working in the English language teaching area.

The Graduate Diploma in Computer-Based Learning is no longer offered, and has been replaced by the Graduate Certificate in Computer-Based Learning. Interested

candidates should consult Section 8 of this Handbook.

18. GRADUATE DIPLOMA IN ADULT EDUCATION AND TRAINING

The Graduate Diploma in Adult Education and Training is a coursework postgraduate Diploma designed to meet the specific educational development needs of a broad range of adult education practitioners. The course is designed to cover the generic professional skills for all those who work in the training and education of adults in a variety of settings - business, industry, community education, government and private organisations. Candidates will pursue studies in five major subject areas and demonstrate their skills and knowledge in a special project/practicum. The course is designed on the assumption that students undertaking the course will have already obtained their first professional qualification and that their current employment requires that they obtain professional qualifications in the training and development of adults. It may also serve as an alternative form of entry into the Master of Education, which requires a formal background in the discipline of Education.

Advanced Standing

Candidates enrolled in the Graduate Diploma in Adult Education and Training who have completed the BHP in-house program in Curriculum and Instructional Design are eligible for 8 credit points of Advanced Standing specified as EDGA991 Instructional Design.

Advanced standing for other professional development courses may also be available.

Pattern of study

The course will consist of a core of four subjects,

- EDGA991 Instructional design
 EDGA993 Evaluation and assessment
 EDGA994 Learning strategies and communication
 EDGA806 Practicum and project

plus,

two electives chosen from EDGA831, EDGA832, EDGA992, EDGA995, or other subjects in the Graduate School Schedule chosen in consultation with the Course Coordinator, Dr M Gillett.

19. GRADUATE DIPLOMA IN EDUCATION

The Graduate Diploma in Education (GDE) is a professional pre-service course in education for graduates of this or another approved university who seek teacher qualifications. It also serves as an introduction to the study of education for those who will later pursue further studies in the field, for example at the Masters level.

Intending applicants for the Graduate Diploma course are advised that it may be necessary to restrict enrolments. If this is necessary, selection to the course will be made on the basis of academic merit and suitability of the first degree to teaching requirements. Preference will be given to

graduates of the University of Wollongong. A statement of interests and experience in Education will also be requested from applicants and will be considered as part of the selection process.

The main aim of the course is to provide a professional course of pre-service education for intending primary and secondary school teachers. The structure of the program seeks to combine the practical and theoretical elements of teaching by engaging students in professional aspects, including Methods work and classroom practice, from the beginning of the course. Underpinning and integrated with the professional aspects are curriculum studies and the "Foundation" disciplines of education.

Each component is intended to contribute to the development of concepts and skills relating to an understanding of and competence in teaching. It is expected that prospective teachers will develop as autonomous professionals who will be competent, innovative, capable of contributing to the formulation of curriculum in schools and most important committed to their own continuous professional growth.

The course is for one year full-time, over an extended academic year of 36 teaching weeks from early February to early December and it is not possible to commence the course in the middle of the year. The GDE program involves lectures, seminars, tutorials, individual assignments, group exercises and nine weeks of full-time work in local schools. Methods work and practice teaching are provided in co-operation with local schools. Students are advised that the structure of the course makes it preferable that it be undertaken full-time. Students who wish to pursue the course part-time should consult the GDE Director (Dr Michael Wilson) or the Professional Officer before enrolling.

Assessment

Students must satisfactorily complete every subject and major component in their program of study before the Diploma will be awarded. Assessment for each subject in the GDE program will be determined by individual lecturers. More specific details of assessment will be given in individual subject outlines.

Attendance

Each session is divided into a number of blocks, each of which is either school or University based. As a result the course timetable changes several times during the year. Details of lecture contact hours, and other time commitments expected of students, are outlined in the Graduate Diploma of Education Handbook distributed to students at the beginning of the academic year.

Course Outline

Students are required to complete subjects as set out below, with a total of 48 credit points:

For those students pursuing secondary school methods:

EDUC800 Professional Studies A
8 credit points

EDUC816 Professional Studies B
8 credit points
EDUC817 Curriculum Studies
8 credit points
EDUC815 Perspectives in Education A
4 credit points
EDUC801 Learners with Special Needs
4 credit points
EDUC819 Perspectives in Education B
8 credit points

and

8 credit points of Secondary Methods

For those students pursuing primary school methods:

EDUC800 Professional Studies A
8 credit points
EDUC816 Professional Studies B
8 credit points
EDUC817 Curriculum Studies
8 credit points
EDUC815 Perspectives in Education A
4 credit points
EDUC801 Learners with Special Needs
4 credit points
EDUC820 Perspectives in Education C
4 credit points

and

12 credit points of Primary Methods

Methods Subjects

Students are required to complete successfully two Primary or Secondary methods. Methods subjects are central to the program and are offered throughout the year. The Method areas which may be available will differ from year to year. Students are advised to check with the Faculty regarding the availability of specific Methods subjects. Students are also advised to check with the Faculty through the Professional Officer, Directorate of Teacher Education, regarding the combinations of methods which will satisfy the requirements of the NSW Department of Education. A letter from the NSW Department of School Education stating that the student's undergraduate program is acceptable to the Department for recognition as a teacher of the chosen methods area(s) is required of each student by the beginning of the course.

20. GRADUATE DIPLOMA IN TESOL

The Graduate Diploma in TESOL is a coursework postgraduate Diploma designed to meet the specific educational development needs of a broad range of English language teachers and educators. The course is designed to cover the generic professional skills for all those who work in the TESOL area in a variety of settings - business, industry, community education, government and private organisations. Candidates will pursue theoretical studies and demonstrate their skills and knowledge in a special project/practicum.

The Graduate Diploma in TESOL may also serve as an alternative form of entry into the Master of Education, which requires a formal background in the discipline of Education.

The course can be undertaken as a full-fee off-campus program, if an appropriate cohort is available, or as an on-campus HECS-fee course.

Entry

Candidates must meet the normal University requirements for Graduate Diploma entry, ie a three year Bachelor degree or equivalent.

Advanced standing

Candidates who have successfully completed the undergraduate Diploma in TEFL in addition to meeting these entry requirements, will be granted 24 credit points of Specified Credit in the Graduate Diploma in TESOL for the subjects taken as part of the DipTEFL.

Pattern of study

Candidates will be required to complete

- 24 credit points chosen from 300-400 level subjects listed in the B.Ed schedule, chosen in consultation with the Course Co-ordinator, *plus*
- The following three subjects:
EDGA976 Text and Context
EDGA981 Second Language Literacy
EDGA984 Language and Learning in TESOL

Enquiries regarding this program should be directed to the TESOL Program Co-ordinator, Dr Jan Wright.

Full details of entry requirements, patterns of study, and the schedule of subject descriptions for the Diplomas are given in Sections 18, 19 and 20.

SUBJECT DESCRIPTIONS

Due to the articulated structure of the postgraduate degree program in the Graduate School of Education, many subjects are listed in more than one Degree schedule. Candidates must consult the course requirements for the Degree in which they are enrolled to ensure they are following the correct sequence for their course of study.

All subjects are listed in alphanumeric order in the subject descriptions following.

The subjects EDGA900-997 form the MEd, MEd(Hons), MA(Hons), EdD and PhD programs. See previous sections for details of course structures and requirements.

EDGA806 Practicum and Project

Autumn or Spring session or Annual (A); 8 credit points (3 hrs tutorial).

Pre-requisite: Students must have completed three subjects in the Grad Dip Adult Ed and Training.

Co-requisite/Pre-requisite: EDGA991, EDGA994.

Assessment: one major report/essay 100%.

The project/practicum allows students' to demonstrate their knowledge and performance skills in their work environment. The project must demonstrate that the student has acquired the basic professional competencies of presentation, needs assessment, design, development, evaluation, implementation, and change management required of an adult learning program. The project/practicum is an individually defined and negotiated topic. Some initial meetings will focus on refining ideas and the development of a learning contract proposal. Students would then undertake their project with some help from a nominated supervisor.

Textbooks:

No set text, reference lists to current journals and monographs will be provided as relevant to each student's project.

Co-ordinator: Dr M Gillett.

EDGA822 New Technologies and Approaches to Learning

Autumn or Spring session or Annual (A); 12 credit points (3 hrs per wk).

Co-requisite: minimum of 12 credit points of study at postgraduate level in a relevant discipline.

Assessment: development of a computer-based project 50%; project report 30%; seminar and paper 20%.

This subject will enhance students' understanding of curriculum design, expertise in the development of information technology-based instructional materials and their implementation and evaluation in classroom settings. The instructional design processes will require students to design systems to allow learners to access and link traditional sources of knowledge. Emphasis will be placed upon the development of related inquiry process skills. These skills include the critical examination, interpretation and evaluation of sources, combined with database techniques to store and retrieve records. Sources will include visual and aural components in addition to traditional text and numerical information. The techniques and processes will emphasise the appropriate matching of instructional strategies with learning outcomes. The information technology component will develop skills and understandings in processes such as scripting, linking data and sources, information navigating, database construction and multimedia, while focussing upon the metacognitive aspects of learning with the information technology.

The students will also develop understanding of action research and case study approaches to classroom inquiry, and relevant process of data analysis. Within the context of the new syllabi in Key Learning Areas, this understanding will then be applied to the design, implementation and evaluation of a curriculum development and teaching project. The focus of this project will be on enhancing pupil learning of selected aspects of a syllabus through the use of innovative teaching methods, including applications of relevant information technology. The communication to colleagues of the projects undertaken will be an important process within the unit.

Textbooks:

Bell J, *Doing Your Research Project*, Open University, Milton Keynes, 1989.

Reference will be made to a series of technical resources and published research material as appropriate to the topic.

Co-ordinator: Associate Professor J Hedberg / Dr E Booth.

EDGA831 Career Management and the Organisation

Autumn or Spring session or Annual (A); 8 credit points. (Self-study using CD-Rom materials equivalent to approximately 9 hrs study per wk).

Assessment: 4 essays 25% each. Available as full-fee subject only.

This subject will address current trends in career development theory and introduce their application to individuals as they move from early career choice through life changes. The subject will focus on the organisation's perspective and identify the tools, resources and strategies available to the employer to provide for career development within the training and human resource development function. The importance of organisational change and planning on career development will be considered in the provision of facilities and resources to support the process by the organisation. It will discuss methods for linking career development to organisational plans, and strategies to financial plans within the human resource and training functions. Specific facilities such as computer based career information and guidance systems, action planning, for current job enrichment, promotion and transfer, mentoring, redeployment, coaching and outplacement will be discussed and demonstrated.

Textbooks:

Lea, H D & Leibowitz, Z B, *Adult Career Development*, Alexandria, VA, National Career Development Association, 1992.
Stevens, P, *Career Transitions*, Sydney, The Centre for Worklife Counselling, 1990.

Co-ordinator: Associate Professor J Hedberg.

EDGA832 Career Development and Support

Autumn or Spring session or Annual (A); 8 credit points. (Self-study using CD-Rom materials equivalent to approximately 9 hrs study per wk).

Assessment: 4 essays 25% each.

Available as full-fee subject only.

This subject will focus upon the understandings and skills required of a person providing career development support services. It will identify the differences between this role and other counselling roles. In order to address these issues, the subject will examine styles of helping and identify methods of conflict resolution. It will examine specific work life issues and the importance of work, relationships, milestones, personal events in an employee's work life. The subject will develop specific career support skills including, problem exploration and clarification, client agreements, dynamics of the helping relationship and client occupational decision-making. The context will be examined through issues such as ethics and privacy, effective outcomes for the client, accreditation, possible conflict of interest. The effective career outcomes will be examined by reference to roadblocks, constraints, mapping and implementing options, action planning, resources and the problems of transition.

Textbooks:

Lea, H D & Leibowitz, Z B, *Adult Career Development*, Alexandria, VA, National Career Development Association, 1992.
Stevens, P, *Career Transitions*, Sydney, The Centre for Worklife Counselling, 1990.

Additional articles and specific readings will be provided.

Co-ordinator: Associate Professor J Hedberg.

EDGA836 Practicum and Project

Autumn or Spring session or Annual (A); 8 credit points (self study equivalent to 3 hrs tutorial per week).

Pre-requisite: EDGA831 and EDGA832.

Assessment: one major report/essay 100%.

Available as full-fee subject only.

This subject is the final subject in the Graduate Certificate in Adult Career Development. It is offered on a full-fee basis in an open-learning format. Students must contact the subject co-ordinator before enrolling. The project/practicum allows students' to demonstrate their knowledge and performance skills in their work environment. The project must demonstrate that the student has acquired the basic professional competencies of presentation, needs assessment, design, development, evaluation, implementation, and change management required of an adult learning program. The project/practicum is an individually defined and negotiated topic. Some initial meetings will focus on refining ideas and the development of a learning contract proposal. Students would then undertake their project with some help from a nominated supervisor.

Textbooks:

No set text, reference lists to current journals and monographs will be provided as relevant to each student's project.

Co-ordinator: Associate Professor J Hedberg.

EDGA900 Introduction to Educational Research Methodology

Autumn or Spring session; 8 credit points (3 hrs per wk lectures and seminars).

Assessment: 1 major assignment 40%, 2 minor assignments 15% each, 1 examination 30%.

This subject is compulsory for all Master of Education students. Topics to be studied will be chosen from: Principles and Epistemology of Educational Research; Descriptive and Inferential Techniques; Case Study and Action Research; Problem Identification; Design and Analysis; Interpretation of Findings; Information and Computer Based Technology in Research; Overview of Research Paradigms (quantitative and qualitative); Ethics in Education Research. The subject should be included in the first four subjects studied in an MED program.

Textbooks:

Cohen, L and Manion L, *Research Methods in Education*, Croom Helm, London, 1985.

Burns, R, *Introduction to Research Methods in Education*, Melbourne, Longman-Cheshire, 1990.

Co-ordinator: Dr P Harris.

EDGA901 Advanced Qualitative Research Methods

Autumn or Spring session; 8 credit points (2 hrs lecture and 2 hr seminar each fortnight plus one full-day workshop).

Assessment: research proposal or case study and literature review 40%, seminar 20%, critical essay 20% review of research paper 20%.

An examination of the rationale for the use of the qualitative research paradigm will be undertaken before the details of the research process are discussed. Topics will include: selection of samples, role of the ethnographer, data collection strategies, interpretation of data and the communication of findings.

Textbooks:

Bogdan, R C and Biklen, S K, *Qualitative Research for Education*, Allyn and Bacon, 1992.

Glesne, C and Pushkin, A, *Becoming*

Qualitative Researchers: An Introduction, Longmans, 1992.

Strauss, A and Corbin, J, *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*, Sage, 1990.

Co-ordinator: Dr E Booth.

EDGA902 Advanced Quantitative Research Methods

Autumn session; 8 credit points (2 hrs lecture and 1 hr laboratory per wk).

Assessment: assignments 20%, examinations 80%.

Topics will include: experimental and quasi-experimental designs for research, planning research, sampling, interviewing questionnaires, data processing, personality assessing, attitude measurement, observation and case studies, interpreting results and report writing.

Textbook:

Ferguson, G A, *Statistical Analysis in Psychology and Education*, McGraw-Hill, Tokyo, 1981.

Co-ordinators: Professor K Gannicott.

EDGA903 Minor Project in Education

Autumn or Spring or Double session (A); 8 credit points (3 hrs per wk on a single session basis: lectures and seminars).

Co-requisite: three subjects from the student's area of specialisation.

Assessment: research oriented project.

This subject is part of the research orientation in the MEd program. It enables a student to explore a research issue in a sustained piece of writing, as preparation for higher degree studies. No project work should be commenced without approval from the Program Area Co-ordinator and/or the Head of the Graduate School.

Co-ordinator: Program Co-ordinator.

EDGA904 Minor Thesis

Double session(A); 24 credit points.

Prerequisite: completion of 24 credit points of appropriate coursework, including EDGA901 or EDGA902, completed at Credit level or better.

This is the thesis subject for candidates enrolling in the Minor Thesis component of the Master of Education (Honours) program in the Faculty of Education. Candidates are required to submit a research thesis in line with the relevant University Rules. No thesis work should be commenced without approval from an appropriate academic supervisor and the Head of the Graduate School of Education. Candidates in this subject will be required as part of their candidature to participate in and present reports of their research to seminars and in other appropriate forums. Continuation of candidature will be subject to the satisfactory progress of the research, and to regular participation in such events as monitored through the Annual Progress Report. All candidates are required to be familiar with the current University policies and practices related to research degrees as outlined in the University of Wollongong Code of Practice-Supervision. Candidates enrolling with effect from Autumn Session, 1995 are required to present a defence of their proposed research topic within the first session (full-time students) or two sessions (part-time students) of their candidature. The nature of this defence

should be discussed with the Head of the Graduate School and the Supervisor(s) in first session of the candidature. Continuation of candidature will be conditional on the satisfactory presentation of the defence and acceptance of the proposal by the appropriate Committee of the Graduate School of Education.

Intending candidates should consult the information on admission and course requirements contained in the current Graduate School of Education Handbook.

EDGA905 Major Thesis

Double session (A); 48 credit points per year.

This is the thesis subject for candidates enrolling in a Major Thesis (MEd(Hons) or PhD), supervised in the Faculty of Education. Candidates are required to submit a research thesis in line with the relevant University Rules. No thesis work should be commenced without approval from an appropriate academic supervisor and the Head of the Graduate School of Education. Candidates in this subject will be required as part of their candidature to participate in and present reports of their research to seminars and in other appropriate forums. Continuation of candidature will be subject to the satisfactory progress of the research, and to regular participation in such events as monitored through the Annual Progress Report. All candidates are required to be familiar with the current University policies and practices related to research degrees as outlined in the University of Wollongong Code of Practice-Supervision. Candidates enrolling with effect from Autumn Session, 1995 are required to present a defence of their proposed research topic within the first session (full-time students) or two sessions (part-time students) of their candidature. The nature of this defence should be discussed with the Head of the Graduate School and the Supervisor(s) in first session of the candidature. Continuation of candidature will be conditional on the satisfactory presentation of the defence and acceptance of the proposal by the appropriate Committee of the Graduate School of Education. Intending candidates should consult the information on admission and course requirements contained in the current Graduate School of Education Handbook.

EDGA906 Directed Study in Education I

EDGA907 Directed Study in Education II

EDGA908 Directed Study in Education III

Autumn or Spring or Double session (A); 8 credit points.

Assessment: assignments and associated projects, optional examination.

For each Directed Study, the student in consultation with his or her supervisor outlines a program of study to support the student's successful completion of the Minor Thesis. Subjects may be selected from the Master of Education schedule of subjects, or negotiated on an individual basis to suit the student's specialisation.

Co-ordinator: Program Co-ordinator.

EDGA909 Doctoral Thesis

Double session (A); 48 credit points per year.

Prerequisite: completion of required coursework at appropriate level.

This is the thesis subject for candidates enrolled in the Doctorate of Education, supervised in the Faculty of Education. Candidates are required to submit a research thesis in line with the relevant University Rules. No thesis work should be commenced without approval from an appropriate academic supervisor and the Head of the Graduate School of Education. Candidates in this subject will be required as part of their candidature to participate in and present reports of their research to seminars and in other appropriate forums. Continuation of candidature will be subject to the satisfactory progress of the research, and to regular participation in such events as monitored through the Annual Progress Report. All candidates are required to be familiar with the current University policies and practices related to research degrees as outlined in the University of Wollongong Code of Practice-Supervision. Candidates enrolling with effect from Autumn Session, 1995 are required to present a defence of their proposed research topic within the first session (full-time students) or two sessions (part-time students) of their candidature. The nature of this defence should be discussed with the Head of the Graduate School and the Supervisor(s) in first session of the candidature. Continuation of candidature will be conditional on the satisfactory presentation of the defence and acceptance of the proposal by the appropriate Committee of the Graduate School of Education.

Intending candidates should consult the information on admission and course requirements contained in the current Graduate School of Education Handbook.

EDGA910 Curriculum in a Changing Context

Autumn or Spring session; 8 credit points (1 hr lecture and 2 hr tutorial per wk).

Assessment: 1 major assignment 30%, 2 minor assignments 15% each, short tasks and exercises 20%, class test 20%.

An introduction to a number of broad and contrasting approaches to and models of the curriculum and their relation to contemporary curriculum issues, policies and concerns. Curriculum decision making - school based curriculum development and the common core curriculum. Curriculum development and implementation at the classroom and institutional levels.

Textbook:

Smith, DJ and Lovat, TJ, *Curriculum Action on Reflection*, Wentworth Falls, NSW, Social Science Press, 1991.

Co-ordinator: Dr M Wilson.

EDGA911 Managing Curriculum Change

Spring session (1 hr lecture, 2 hrs tutorials per wk).

Assessment: literature review 30%, seminar paper 20%, seminar 10%, major assignment 40%.

This subject will critically examine curriculum theory, instructional design and curriculum evaluation, including contemporary approaches to change theory, change processes and the management of change.

Different types of change as reflected at the international, national, state and school-levels will be examined in relation to curriculum policies and pedagogical practices. The subject will focus on theoretical and policy issues related to leading and evaluating change processes. Students will be encouraged throughout the session critically to reflect on their own professional involvement in the management of curriculum change.

Textbook:

Fullan, M with Stiegelbauer, S, *The New Meaning of Educational Change*. London, Cassell, 1991.

Co-ordinator: Dr C Fox.

EDGA912 Curriculum Special Topic

Autumn or Spring session; 8 credit points (supervision based, or group tutorials if group size allows)

Pre-requisite: EDGA910.

Co-requisite: 8 credit points of curriculum specialisation.

Assessment: major review 60%, project report 40% (or by negotiation).

The Special Curriculum Topic will allow students following a subject-specific specialisation to appraise, extend and apply understanding and skills in their area of professional or academic concern. Students will be required to undertake a critical reading and reporting program. Some students may extend their investigation via a field based inquiry project which will explore the related theory and program issues in a professional setting.

Textbooks:

Bell, J, *Doing Your Research Project*. Milton Keynes, OUP, 1993.

Co-ordinator: Dr E Booth.

EDGA913 Program Evaluation

Autumn or Spring session, 8 credit points, (3 hours of lectures/tutorial and workshops per week which may be scheduled on alternative weeks plus a full day workshop).

Pre-Requisite: EDGA900 or EDGA993.

Assessment: two seminar papers 40%, critical review 20% and project 40%. (Weightings are negotiable).

Program Evaluation identifies the range of evaluation approaches which may be applicable in formal educational, non-formal and business and industry environments. A range of evaluation models will be reviewed. Each of the models' assumptions and major methodologies will be critiqued in relation to a number of evaluation scenarios. Students will have the opportunity to participate in evaluation simulations and undertake their own evaluation as part of the subject. Issues to be addressed in the subject will include; QA, accreditation, skill transfer and site based action research. The assessment components will encourage the participants to critically review each phase of the evaluation model selected for specialist study and to critique the overall fit of the approach to the various stakeholders' interests and purposes.

Textbooks:

Owen, J, *Program Evaluation: Forms and Approaches*, Allen and Unwin, Sydney, 1993.

Hopkins, D, *Evaluation for School Improvement*, Open University, Milton Keynes, 1992.

Elliott, J, *Action Research for Educational Change*, Open University, Milton Keynes, 1991.

Co-ordinator: Dr E Booth.

EDGA915 Quality Learning and Teaching

Autumn or Spring Session: 8 credit points (3 hrs per week of lectures and seminars).

Prerequisite: EDGA910 for students specialising in the Curriculum Program, eight credit points in the major specialisation for students from any other Program.

Co-requisite: EDGA900.

Assessment: Critical review paper (30%), seminar presentation (30%), project report (40%).

This subject will critically examine the notion of 'quality learning and teaching' in contemporary educational theory, policy and practice in the context of schools and their curricula. Participants will review recent research on learning styles, curriculum process, approaches to assessment of learning outcomes, and the influences of learning environments on quality learning and teaching. The literature on school improvement and schools as learning organisations will be examined and 'best practice' approaches to the enhancement of learning outcomes will be critiqued. In relation to these studies, participants will reflect critically on the impact on learning communities of changing instructional needs and the introduction of new information technology. A range of developments in instructional methodology will be examined, including such concepts as cooperative learning, accelerated learning, reflective learning, and interactive multimedia teaching and learning strategies.

On successfully completing this subject class participants will be able to: reflect and critique their own beliefs about learning; become more knowledgeable about the teaching practices which best align these beliefs with their students' learning styles to maximise learning outcomes; demonstrate a knowledge and understanding of contemporary theory, policy and approaches to quality learning and teaching; undertake an action orientated inquiry in a learning setting; report on the results of this inquiry and the manner in which it has improved their own professional practice.

Textbook:

Aspin, DA, Chapman, JD with Wilkinson, VR, *Quality Schooling: A Pragmatic Approach to Some Current Problems, Topics and Issues*, Cassell, London, 1994.

Co-ordinator: Dr C Fox.

EDGA917 International and Intercultural Perspectives

Autumn or Spring session; 8 credit points (3 hrs per wk).

Assessment: major paper 40%, seminar presentation 30%, 2 short critical reviews 15% each.

The curriculum including curriculum change and classroom practice, is strongly influenced by international developments in education and multicultural contexts in the classroom. Students will critically analyse curriculum developments and curriculum resources from contemporary international and intercultural perspectives. Topics will include: implementing

Key Learning Areas in a multicultural classroom; international publishers and their influence on curriculum through texts; critical theories about intercultural communication in the classroom; issues of ethnicity and classroom participation; and a comparative view of education in cultural contexts both inside and outside Australia.

Textbooks:

The course will require extensive reading from recommended journals and a selection of texts. Suggested preliminary reading:

Jones, P, *Australia's International Relations in Education*, ACER, 1986.

Young, RE, *Critical Theory and Classroom Talk*, Multilingual Matters, 1991.

Co-ordinator: Dr C Fox.

EDGA918 Environmental Education: Pedagogy and Curriculum Perspectives

Annual (A,B): 8 credit points (3 hrs per week lectures and seminars).

Methods of Assessment: 2 major assignments totalling 80%, 1 minor assignment 20%.

Pre-requisites: nil.

Co-requisites: nil.

This subject explores pedagogical models used by various successful centres for environmental education. It critically evaluates the educational research that supports these models and then develops methods for the development, implementation and modification of environmental education programs that are appropriate to the context of the student.

Objectives: Students are required to critically evaluate environmental education programs in the context of their own work situation. The methods of evaluation employed will then be used to establish whether a clear link exists between the broad learning outcomes of the educational programs administered by students and the educational theory that supports them. Students will use the findings from this process to help them improve the environmental education programs that they currently offer.

Textbooks:

NCEET, *Environmental Education: Complete Workshop Resource Manual*, University of Michigan, USA, 1994.

Set readings will be also be provided from the Australian Journal of Environmental Education, the Journal of Environmental Education and other sources.

Co-ordinator: Mr B Ferry.

EDGA919 Advanced Studies in the Key Learning Areas

Autumn or Spring session; 8 credit points (3 hour per week of lectures and seminars).

Prerequisite: EDGA910 for students specialising in the Curriculum Program; eight credit points in the major specialisation for students from any other Program.

Co-requisite: EDGA900.

Assessment: Seminar presentation (25%), Review paper (25%) Project report (50%).

This subject will require students to identify the factors that are driving current curriculum changes in their Key Learning Area (KLA) and examine these factors in relation to their source and area of impact. An analysis of these change processes will be

undertaken within the context of contemporary curriculum theory and through a critical review of the current literature. Students will negotiate the planning, conduct and reporting of an educational investigation about an educational issue in a Key Learning Area.

On successfully completing this subject, students will be able to identify the change processes and forces in their KLA of specialisation; discuss the implications of change for their own professional work; negotiate and undertake an investigation of change within in a KLA; report the findings of their investigation in a formal report and as a seminar to the class group.

Textbook: to be advised

Co-ordinator: Dr N Temmerman.

EDGA920 Curriculum Problems and Issues in Physical and Health Education

Autumn or Spring or Double session (A); 8 credit points (3 hrs per wk on a single session basis; lectures, seminars, workshops).

Assessment: assignments 60%, examinations 40%.

The subject is concerned with an expansion of the conceptual framework of curriculum theory, planning and instructional design with special application to Physical and Health Education. Specific problems and issues associated with curriculum development in the secondary school will be examined.

Textbooks:

None specified - students will draw from an extensive bibliography of selected primary and secondary literature.

Co-ordinators: Dr J Wright.

EDGA921 Studies in the Scientific Bases of Health Education and Health Promotion

Autumn or Spring or Double session (A); 8 credit points (3 hrs per session on a single session basis).

Assessment: 1 examination 50%, 2 assignments 20% each, probes 10%.

Health promotion has progressed through its infancy and is here to stay. The literature on the value of risk factor reduction is substantial and compelling. The purpose of this subject will be to examine epidemiological, physiological and intervention studies related to health promotion and disease prevention. Special emphasis will be given to educational components of health promotion programs and health promotion in educational settings.

Textbooks:

Journal articles and portions of books will be used in lieu of a set text.

Co-ordinator: Dr J Patterson.

EDGA922 Theoretical and Practical Bases of Coach Education

Spring session; 8 credit points (3 hrs per wk).

Assessment: student presentation 25%, seminar paper 25%, practical assessment 25%, practical field work 25%.

Pedagogical issues, time management and overseas developments in coaching will be covered. Students will undertake an in-depth analysis of behavioural coaching, assessment and skill acquisition as applied to coaching. A conceptual framework of

coaching both in Australia and overseas will be used with practical implications related to practice sessions and the athletic environment.

Textbooks:

Martin, GL, and Lumsden, JA, *Coaching: An Effective Behavioural Approach*, Toronto, Mosby College Publishing, 1987.

And other selected primary reference material.

Co-ordinator: Dr P Webb.

EDGA923 Sport, Culture and Education

Spring session; 8 credit points (3hr lecture/seminar).

Co-requisite: EDGA900.

Assessment: seminar presentation and paper 30%, minor assignment 20%, major assignment 50%.

This subject will examine physical education, sport and other physical activities such as dance, as social forms that are produced by and in specific historical and social contexts. The economic, political and cultural forces influencing this production in the present and recent past will be discussed generally and in the context of schooling. As a major social institution, sport contributes to the reproduction of systems of beliefs and practices that constitute a particular culture. In this context the function of sport in maintaining and changing attitudes and practices that relate to class, age, gender and ethnicity will be discussed, particularly in relation to the representations of sport in the media. Various forms of analysis, including text analysis, surveys and interviewing will be examined as they apply to this field of study. Students will be expected to complete at least one assignment that includes primary data collection and analysis.

Textbook:

No set text. Students will draw from a variety of current journal and monograph materials

Co-ordinator: Dr J Wright.

EDGA924 Adolescent Health Status and Behaviour

Autumn or Spring session; 8 credit points (3 hrs per wk).

Assessment: assignments 60%, examinations 40%.

Adolescence provides a crucial access point for the improvement of health, not only now but in adult life and in the next generation. Health Education is recognised as a valuable means of realising this goal. A necessary precursor to the development of effective health education programs is the understanding of adolescent health status and behaviour and its relationship to the programming task. Subject content, therefore, will include an appraisal of health status indices and health behaviour patterns among young people. Factors affecting health behaviour will be discussed and models of adolescent health behaviour explored. An investigation of selected health behaviour-oriented programs for adolescent groups will be examined.

Textbooks: no set text.

Co-ordinators: Dr J Patterson and Ms Y Kerr.

EDGA925 Advanced Seminar

Autumn or Spring session; 8 credit points (3 hrs per wk seminars and workshops).

Pre-requisite: EDGA900; one subject of Health and Physical Education specialisation completed.

Assessment: 2 seminar presentations 25% each, written paper 50%.

The advanced seminar will allow students to evaluate and extend knowledge in a specific area of physical and health education. Students will be required to undertake a critical reading program in this area and extend their work by applying their understanding in a school or community based project which integrates the theory and application. Regular seminars will be presented detailing issues, understandings, progress & final outcome.

Textbooks: to be advised.

Co-ordinator: Dr P Webb.

EDGA926 Theory and Practice of Outdoor Education and Recreation

Autumn or Spring session; 8 credit points; (3hrs per wk, lecture/seminar).

Assessment: seminar paper 20%, major project 25%, minor project 10%, fieldwork 25%, log-book 20%.

Increasing pressure in urban and contemporary living has placed greater awareness on environmental and outdoor opportunities for educational, community and corporate groups. A variety of learning experiences will be presented which enable students to gain an insight into how Outdoor Education is used as a catalyst for social and personal development and/or environmental sensitivity. Topics include: the philosophy of Outdoor Education; innovations in National Curriculum for Outdoor Education; an exposure to various school programs incorporating Outdoor Education; and an examination of technical skills required in this field. Practical fieldwork experiences on a regular basis also form part of this course.

Textbook: to be advised

Co-ordinator: Ms T Gray.

EDGA936 Learning Theories and Exceptionality

Autumn session; 8 credit points (3 hrs per wk).

Assessment: essay 40%, seminar presentation 30%, case study 30%.

This subject will require students to engage in a critical review of a range of explanations of human learning and their application to children with special needs. Learning will be examined from psychological, sociological and sociolinguistic perspectives. Topics to be considered will include: behaviourist learning theories and their educational applications; the impact of Piaget on educational practice and critiques of his theory; socio-cultural accounts of learning and their implications for teaching practice; information processing perspectives including the development of metacognition and self-regulation; the relationship between language, learning and thought; and issues in the assessment of intelligence.

Textbooks: to be advised.

Co-ordinator: Dr W Vialle.

EDGA937 Approaches to Reading Difficulties

Autumn or Spring; 8 credit points.

Assessment: essay 30%, exam 20% case study 40%, reading response 10%.

Pre- or co-requisite: EDGA936 for students specialising in the Special Education Program.

This subject examines the relevant research literature and empirical evidence regarding the acquisition of reading skills. Individual differences in reading development will be explored from both theoretical and practical frameworks in order to identify the most relevant assessment and remediation strategies.

Textbook:

Adams, M, *Beginning to Read: Thinking and Learning about Print*, MIT, Bradford Press, 1990.

Co-ordinator: Ms D Konza.

EDGA938 Teaching Students with Learning Difficulties

Autumn or Spring session; 8 credit points (3 hrs per wk).

Assessment: seminar presentation and paper 30%, major study 40%, examination 30%.

Pre- or co-requisite: EDGA936 for students specialising in the Special Education Program.

This subject aims to develop an understanding of how the teacher and the teacher's beliefs about learning affect classroom practice. Students will examine a range of teaching strategies derived from the behaviourist and cognitive models, social learning theories and other interventions used in the education of students with particular learning needs. Both critical reviewing of the literature and practical application of the theories will be included in the structure of the subject.

Textbooks:

Cole, P & Chan, L, *Methods and Strategies for Special Education*, Sydney, Prentice-Hall, 1990.

Co-ordinator: Ms D Konza.

EDGA939 Approaches to Behaviour Management

Autumn or Spring sessions; 8 credit points.

Assessment: minor assignment 15%, transcript analysis 15%, major assignment 40%, examination 30%.

Pre- or co-requisite: EDGA936 for students specialising in the Special Education Program.

This subject examines a range of approaches to behaviour management and the theoretical principles upon which they are based. (e.g. Rogers' microskills approach, Canter and Canter's Assertive Discipline, Dreikurs and Adlerian approaches, Compliance Training, Glasser's Reality Therapy among others). The problems associated with non school attendance, oppositional disorders, attention deficit disorders and other commonly occurring behaviour disorders are critically examined within the context of increasing academic engaged time and developing social and conflict resolution skills.

Textbook:

Rogers, W, *You Know the Fair Rule*, Melbourne, ACER, 1990.

A number of other texts are also required reading.

Co-ordinator: Ms D Konza.

EDGA946 Teaching Gifted Children

Autumn or Spring session, 8 credit points (1 hr lecture, 2 hrs seminar per wk).

Pre-requisite: EDGA936 for students wishing to specialise in Special Education.

Assessment: literature review 10%, seminar paper 20%, essay 30%, research paper 40%.

This subject will identify and critically examine the current issues related to the education of gifted & talented students. It will also prepare teachers to meet effectively the needs of such students through curriculum modification and application of special educational strategies. Topics will include: definition and identification issues; instructional models; educational strategies; creativity and thinking skills; counselling needs; special populations; and the implications of policy on educational practice. The subject will also provide opportunity for individualised study of a topic of special interest within the subject guidelines.

Textbook:

Colangelo, N and Davis, G, *Handbook of Gifted Education*. Boston, Allyn and Bacon, 1991.

Co-ordinator: Dr W Vialle.

EDGA947 Giftedness in Special Populations

Spring session; 8 credit points (3 hrs per wk lecture/seminar).

Assessment: literature review 10%, seminar paper 20%, essay 30%, case study 40%.

Pre-Requisite: EDGA936 Learning Theories & Exceptionality for students wishing to specialise in Special Education.

This subject will critically examine the needs of special populations of students who are generally under-represented in programs for gifted and talented children. It offers a philosophical approach to gifted education that emphasises inclusiveness in student identification and programming as opposed to more traditional approaches which focus on exclusiveness. The subject will also prepare teachers to meet the needs of these children through analysing and evaluating alternative forms of assessment and developing appropriate strategies for curriculum design and delivery. Possible focus groups will include: Aboriginal children, ethnic minority children, low SES, girls, underachievers, preschoolers, prodigies, and students with physical and learning disabilities.

Textbook:

Jenkins-Friedman, Richert & Feldhusen (ed) *Special Populations of Gifted Learners*, Melbourne, Hawker Brownlow, 1991.

Co-ordinator: Dr W Vialle.

EDGA950 Information Technology, Education and Training

Autumn session; 8 credit points (1 hr lecture, 2 hrs seminar/workshop).

Co-requisite: EDGA958 Instructional Strategies and Authoring or equivalent.

Assessment: 1 computer based project 40%, 1 essay 40%, 1 seminar presentation 20%.

Topics will include: Survey of the policy, curriculum, pedagogical, and practical issues of using IT in teaching and learning. Develop an understanding of the range of possible IT applications. Human-computer interaction as a basis for instructional

software. Overview of instructional systems design and evaluation for educational software.

Textbooks:

No set text, reference lists to current journals and monographs will be provided.
Co-ordinator: Associate Professor J Hedberg.

EDGA951 Information Systems and Educational Management

Spring session; 8 credit points (2 hrs lecture, 1 hr seminar/workshop).

Assessment: 1 computer based project 40%, 1 essay 40%, 1 seminar presentation 20%.

Topics will include: Information systems and their impact on educational management, development of information analysis techniques, writing specifications for systems, linking information systems with management processes and organisational structures, issues for educational management, course delivery, logistics, records management, databases, and curriculum organisation.

Textbooks:

No set text, reference lists to current journals and monographs will be provided.
Co-ordinator: Associate Professor J Hedberg.

EDGA952 Designing Instructional Software

Autumn or Spring session; 8 credit points (1 hr lecture, 2 hrs seminar/workshop).

Pre-requisite: EDGA950.

Assessment: 1 computer based project 40%, 1 essay 40%, 1 seminar presentation 20%.

This subject will examine the underlying cognitive implications of advanced information technology for independent learning systems. The focus is on supportive learning environments emphasising interactivity and individual learning with particular reference to hypertext. It will include research into learning strategies using alternative structures of knowledge.

Textbooks:

No set text, reference lists to current journals and monographs will be provided.
Co-ordinator: Associate Professor J Hedberg.

EDGA954 Interactive Multimedia in Education

Spring session; 8 credit points (2 hr lecture, 1 hr seminar/workshop).

Pre-requisite: EDGA950.

Assessment: 1 computer based project 40%, 1 essay 40%, 1 seminar presentation 20%.

This subject will develop the skills for designing integrated learning environments which are to be delivered or experienced through computer-based systems. It will employ the research into learning from such systems, impact on educational organisation and delivery, design, instructional and evaluation strategies for these programs.

Textbooks:

No set text, reference lists to current journals and monographs will be provided.
Co-ordinator: Associate Professor J Hedberg.

EDGA955 Information Technology and Cognitive Processes

Autumn session; 8 credit points (1 hr lecture, 2 hrs seminar/workshop).

Assessment: 1 computer based project 40%, 1 essay 40%, 1 seminar presentation 20%.

This subject provides the opportunity to study information technology in the context

of learning processes, especially as it relates to cognitive science and artificial intelligence. It will include research into the use of LOGO and other "programming" environments, artificial intelligence and cognition, development and implementation of intelligent tutoring systems, use of expert systems, embedded training and performance support systems.

Textbooks:

No set text, reference lists to current journals and monographs will be provided.

Co-ordinator: Mr N Hall.

EDGA956 Advanced Studies in Interactive Learning

Spring session; 8 credit points (1 hr lecture, 2 hrs seminar/workshop).

Pre-requisite: at least 24 credit points (three subjects) chosen from the subjects listed for the Information Technology Program in the Master of Education Schedule.

Assessment: 1 computer based project 40%, 1 essay 40%, 1 seminar presentation 20%.

Advanced study on a specific topic which reflects the current state of research knowledge in the field of information technology in teaching and learning. Development of the skills for designing integrated learning environments which are to be delivered or experienced through computer-based systems. Research into learning from such systems, impact on educational organisation and delivery, design, instructional and evaluation strategies for these programs

Textbooks:

No set text, reference lists to current journals and monographs will be provided.

Co-ordinator: Associate Professor J Hedberg.

EDGA957 Implementation and Evaluation of Technology-Based Learning

Spring or Autumn session, 8 credit points, (2 hrs lecture/1 hr seminar per wk).

Pre-requisite: EDGA950.

Assessment: completion of two essays each 30% and one essay 40%.

This subject allows students to investigate the links between educational theory and teaching and learning practice with information technologies. Research into the implementation of information technology in education and training contexts, and the assessment of effective project implementation for technology-based learning. Evaluation of interactive instructional software, especially interactive multimedia software, and the cognitive aspects for interfaces. The subject will also address evaluation and implementation of curriculum innovations and classroom-based learning strategies using information technologies.

Textbook:

Reeves, T, *Evaluation of Interactive Multimedia*, Athens, University of Georgia, 1993.

Co-ordinator: Associate Professor J Hedberg.

EDGA958 Instructional Strategies and Authoring

Summer or Spring or Autumn session, 8 credit points. (2 hours lecture/1 hour laboratory per week).

Pre- or co-requisite: EDGA950.

Assessment: programming assignments 60%, examination 40%.

This subject will enable the students to develop sophisticated concepts of using authoring tools to present their ideas for computer based learning. The subject will focus on the use of object oriented programming tools such as HyperCard and how different instructional strategies can be implemented with such tools. Comparisons will also be made with standard authoring packages available for cross platform delivery of instructional software.

Textbooks:

Culp, G and Watkins, G, *The Educator's Guide to HyperCard and HyperTalk* Botton, Allyn and Bacon, 1993.

Winkler, D, Kamins, S & Devoto, J, *HyperTalk 2.2: The Book*, New York, Random House Inc, 1995.

Co-ordinator: Dr W Cheung.

EDGA960 Foundation of Policy Studies

Autumn or Spring session; 8 credit points (3 hrs per wk seminar alternating fortnightly with 3 hrs per wk workshop).

Assessment: 4 minor assignments totalling 20%, 1 major assignment 30%, 1 examination 30%, policy simulation 20%.

Concepts dealing with common usage and common definitions of policy, formal models and real events in policy development, key elements in real life policy processes. Elements of policy theories. Critical examination of rationalist models, incrementalist models, models of power and location of influence, implementation theory. Cost/benefit approaches to policy making.

Textbooks:

Ham, C and Hill, M, *The Policy Process in the Modern Capitalist State*, Weatsheaf, 1983.

Hogwood, B and Gunn, L, *Policy Analysis in the Real World*, Weatsheaf, 1984.

Co-ordinator: Professor C Fasano.

EDGA961 Policy Research and Policy Analysis

Autumn or Spring session; 8 credit points (3 hrs per wk seminar alternating fortnightly with 3 hrs per wk workshop).

Pre-requisite: EDGA960.

Assessment: 4 minor assignments totalling 20%, 1 major assignment 30%, 1 examination 30%, policy simulation 20%.

Policy analysts and researchers construct the information base out of which analysis can be carried out and efficient decisions can be made along the way from policy formulation to implementation and evaluation of policy programs. Knowledge of discipline-oriented policy enquiry methodologies - the tools of the trade of policy analysts and researchers - is indispensable in understanding how and why Australian educational policies take on their specific outlook.

Textbooks:

Majchrzak, *Methods of Policy Research*, Sage Publications, 1984.

Hogwood, B and Gunn, L, *Policy Analysis for the Real World*, Weatsheaf, 1984.

Co-ordinator: Professor C Fasano.

EDGA963 Education Policy in Australia

Autumn or Spring session; 8 credit points (3 hrs per wk seminar alternating fortnightly with 3 hrs per wk workshop).

Pre-requisite: EDGA960.

Assessment: 4 minor assignments totalling 20%, 1 major assignment 30%, 1 examination 30%, policy simulation 20%.

Many of the issues and debates in educational policy at any given point in time rest on situations emerged and decisions taken at various points in the past. This subject focuses on the evolution of educational policy in Australia as it has been shaped by political, social, economical, institutional and pedagogical factors. Current policy debates such as those on public and private education, federal and state roles in education, participation, special programs, representation and financing will be analysed from an historical perspective on the basis of relevant policy and other documents as well as through the direct contribution from key protagonists in the Australian policy arena.

Textbooks: no set text.

Co-ordinator: Professor R King.

EDGA964 Educational Management and Administration

Autumn or Spring session; 8 credit points (2 hrs lectures and 1 hr seminar per wk).

Pre-requisite: EDGA960

Assessment: 3 seminar papers 15% each, final examination 55%.

This subject examines some of the ways in which improved management and administration can contribute to more effective planning and policy implementation in education. Topics covered include devolution/centralised control and the accountability of management, and the role of program budgeting in the management of resources. Case studies are drawn from Australia and overseas.

Textbook:

Thomas, H and Simkin, T, (eds) *Economics and the Management of Education: Emerging Themes*, Falmer Press, Lewes, 1987.

Co-ordinator: Professor K Gannicott.

EDGA965 Resource Allocation in Education

Autumn or Spring session; 8 credit points (2 hr lecture and 1 hr seminar per wk).

Pre-requisite: EDGA960.

Assessment: 3 seminar papers 15% each and final examination 55%.

This subject examines the allocation of economic and financial resources to education in Australia and overseas. The extensive literature on the economic benefits from education is explored, with particular reference to the implications for educational policy and planning at both state and national level in Australia. The pattern and sources of educational expenditure are analysed and a study is made of cost concepts and their measurement in education. Particular attention is paid to the role of output budgeting in education, and the introduction of school-based budgeting in NSW and elsewhere.

Textbooks:

Psacharopoulos, G, *Economics of Education: Research and Studies*, Pergamon, Oxford 1987.

Psacharopoulos, G and Woodhall, M, *Education for Development: An Analysis of Investment Choices*, OUP, New York, 1985.

Co-ordinator: Professor K Gannicott.

EDGA966 Leadership and School Management

Autumn session; 8 credit points (1 hr lecture, 2 hrs tutorials/workshops per wk).

Assessment: paper 10%, paper 20%, critique of policy document 20%, project report 40%, seminar 10%.

This subject is designed to provide educational leaders with the knowledge and skills needed to facilitate the effective management of human resources in the implementation of policies and programs in educational settings. The content will include a critical examination of planning strategies, analysis of professional development models and current practices as applied to working with people in professional organisations. The subject will require a critical examination of the relationship between relevant theories, organisational structures and current professional development programs. Students will demonstrate competence in the design, implementation and evaluation of pertinent aspects of professional development.

Textbooks: to be advised.

Co-ordinator: Associate Professor M Harris.

EDGA970 Language and Literacy Development

Autumn session; 8 credit points (1 hr lecture, 2 hr tutorial per wk).

Assessment: major assignment 50%, two minor assignments 25% each.

This subject focuses on the way language develops over the lifespan of the individual. It examines early development where oral language, interactions with caregivers and emergent literacy are studied, as well as the transition from home to school. Later phases include the early school period, the transition to secondary school, later schooling and the transition to adulthood in both tertiary education and the workplace. This developmental perspective highlights theories of language learning, models of language, socio-cultural variation and the implications of theory for the role of the teacher. There will be a study of the language demands placed on the learner during the various developmental phases and of the ways in which the learner and the teacher, within the various phases, respond to these demands. This subject is also offered through the PAGE Consortium as a subject in the full-fee program Graduate Certificate in Literacy.

Textbooks: to be advised.

Co-ordinator: Dr P Harris.

EDGA971 Assessment and Evaluation of Language & Literacy

Autumn or Spring session; 8 credit points (3 hrs per wk of workshops and tutorials).

Pre- or co-requisite: EDGA970 for students specialising in the Language and Literacy Program.

Assessment: two projects 40% each and a log book 20%.

This subject will require students to examine the relationship between the axioms and assumptions underlying different paradigms of evaluation in literacy education. In particular the subject examines both past and current issues and theoretical underpinnings of evaluating student learning. It will critically examine these issues in terms of contemporary

theories of language and literacy learning. It will draw on recent research and theory related to the areas of psychometrics, qualitative evaluation, and linguistics. Students will also be required to trial and evaluate a range of assessment and evaluation instruments and procedures

Textbooks:

No set text. Students will be advised of appropriate readings and papers.

Co-ordinator: Associate Professor B Cambourne.

EDGA972 Literacy: Theory into Practice

Autumn session; 8 credit points (3 hrs per wk).

Pre- or co-requisite: EDGA970 for students specialising in the Language and Literacy Program.

Assessment: reflective journal 30%, two assignments 30% each, seminar 10%.

In this subject students will examine the nexus between literacy theories and classroom practices. The emphasis in this subject will be on literacy process and pedagogy rather than analysis of language. It will examine the processes which underpin effective and ineffective literacy behaviours and instructional practice. Students will critically analyse a range of past and current instructional strategies and identify their theoretical underpinnings. Finally students will examine the methodology for integrating literacy within Key Learning Areas.

Textbooks: Readings and papers to be selected.

Co-ordinator: Dr J Turbill.

EDGA973 Language, Ideology and Culture

Autumn or Spring session; 8 credit points (3hr lecture/seminar per week).

Pre- or co-requisite: EDGA970 for students specialising in the Language and Literacy Program.

Assessment: seminar 25%, text analysis 30%, project 45%.

This subject will draw on current writing in sociology, cultural studies, semiotics and linguistics to study the relationship between language, ideology and culture. Students will examine the contribution of language to the (re)production of cultural values and social meanings through an analysis of written and spoken texts such as curriculum documents, journal articles, school text books and other resource materials, teacher/student talk and interaction in other educational settings. It has particular relevance to those teaching in literacy and/or literature contexts but with a more general relevance to those examining policy or curriculum documents and other written and spoken texts. Topics to be covered include: theories of ideology; the relationship between discourse(s) and ideology, subjectivity and language; power and language; the operation of ideology through texts and developing a critical reading position.

Textbook:

Kress, G, *Linguistic Processes in Sociocultural Practice*, Geelong, Deakin University, 1985.

Co-ordinator: Dr J Wright.

EDGA975 Educational Linguistics

Autumn or Spring session; 8 credit points (1 hr lecture, 2 hr tutorial per wk).

Pre- or co-requisite: EDGA976 for all students, and EDGA970 for students specialising in the Language and Literacy Program.

Assessment: assignments 50%, text analyses 50%.

This subject will extend the understandings about language introduced in EDGA976 Text and Context through a more detailed study of language and how it works. It will draw principally on a functional model of language which focuses on the effective use of language in order to understand the world and to interact socially. This knowledge will be applied to classroom contexts and deal with issues such as programming with a language focus, assessing students' language and evaluating teaching materials. It will also be applied to research, particularly with a view to developing analytic techniques which can be used in studies where texts and language are the data base.

Textbooks: no set text.

Co-ordinator: Dr B Winser.

EDGA976 Text and Context

Autumn session; 8 credit points (1 hr lecture, 2 hr tutorial per wk).

Pre- or co-requisite: EDGA970 for students specialising in the Language and Literacy Program.

Assessment: assignments 60%, field report 40%.

This subject explores the relationship between texts and their contexts, focussing on the nature of language and its role in the learning process. It draws on a functional model of language in order to examine the way in which language is used for various purposes, both in the community and in education. Through an analysis of texts students will explore issues such as relationship between culture and language; similarities and differences between spoken and written language; the language of different subject areas; the ways in which interpersonal relationships influence language and the language of classroom interaction.

This subject is also offered through the PAGE Consortium as a subject in the full-fee programs of Graduate Certificate in Literacy and Master of Education.

Textbooks:

No set text. Students will be advised of appropriate readings.

Co-ordinator: Ms B Derewianka.

EDGA977 Communication and Learning

Spring Session, 8 credit points, (3 hrs lecture/seminar per wk).

Pre-requisite: EDGA970 for students specialising in the Language and Literacy Program.

Assessment: essay (30%), seminar presentation (30%) and text analysis (40%).

This subject is designed to make students familiar with the work of those developmental psychologists and educational researchers who have attempted to explain the relationship which exists between communication, comprehension and learning. The ways in which children use social knowledge both to communicate effectively and to solve problems will be of special interest. Research into the characteristics of effective

communication and instruction, and the nature of classroom discourse will be critically analysed and its significance for teaching practice will be considered. Problem solving in peer groups, and adult-child instruction will also be examined. The subject will conclude with a consideration of the ways in which collaborative talk might contribute to the learning of literacy.

Textbooks:

Wells, G and Chang-Wells, G, *Constructing Knowledge Together: Classrooms as Centres of Inquiry and Literacy*, Heinemann, Portsmouth, North Hampshire, 1992.

Co-ordinator: Mr P Geekie.

EDGA978 Literacy Practices for Diverse Needs

Spring session; 8 credit points (42 hrs - this subject will ONLY be offered off campus through the PAGE consortium).

Pre-requisites: EDGA970.

Assessment: examination 50%; assignments 50%.

The subject is intended to introduce students to mainstream classroom practices with regard to literacy development, but will look in particular at how mainstream teachers might cater for the literacy needs of students from various 'minority' backgrounds (eg NESB students, students with reading difficulties, gifted and talented). It will examine programming and classroom management for diverse groups, the specific ways in which mainstream programs can be adapted to meet particular literacy needs, the ways in which mainstream teachers can work with specialist teachers, the diagnosis and assessment of students' literacy proficiency, and evaluation of literacy programs. The subject will also consider instances when there is a convergence of special needs (e.g. students who are both NESB and hearing impaired, students who are gifted but have reading difficulties).

Textbooks:

No set text. Course notes provide basic readings.

Co-ordinator: Ms B Derewianka.

EDGA981 Second Language Literacy

Spring session; 8 credit points (1 hr lecture, 2 hr seminar per wk).

Pre- or co-requisite: EDGA976 for students specialising in the TESOL program.

Assessment: three written assignments of equal weighting.

This subject will explore the social, cultural and ideological nature of literacy through a consideration of what it means to be literate (and illiterate) within Australia and other cultures. It will consider the role of literacy within a range of social, educational and vocational contexts. As well it will cover the following: a critical analysis of theories of reading and writing and their relevance for second language literacy development; an analysis of approaches to teaching literacy, with a consideration of their relationship to approaches to TESOL; the relationship between spoken and written language; their similarities and differences and the different roles they play in learning; implications of this relationship for developing effective literacy programs for second/foreign language learners; principles for developing effective literacy

programs; strategies for supporting the learning of literacy for ESL/EFL learners at beginner through to advanced levels.

Textbooks:

No set text. Students will be advised of appropriate readings.

Co-ordinator: Ms B Derewianka.

EDGA983 Assessment in TESOL

Spring session; 8 credit points (1 hr lecture and 2 hr seminar per wk).

Pre- or co-requisite: EDGA976 for students specialising in the TESOL program.

Assessment: assignment 50%, essay 50%.

This subject will examine various approaches to language assessment, from informal observation and self-assessment through to formal testing. In order to develop appropriate programs, TESOL teachers must be able to identify the needs of their students. This requires a solid grounding in the assessment of learners' oral language, reading and writing. In addition, they need to be able to critically analyse and evaluate formal assessment procedures and if necessary, learn how to design assessment tasks and prepare their students to sit for external tests. Students will take into account the interests of various stakeholders and will review various reporting practices.

Textbooks:

No set text. Students will be required to buy a set of subject readings.

Co-ordinator: Ms B Derewianka.

EDGA984 Language and Learning in TESOL

Replaces EDGA980 Foundations of TESOL. A student may not include both EDGA980 and EDGA984 in their course of study.

Autumn session; 8 credit points (1 hr lecture, 2 hr seminar per wk).

Pre- or co-requisite: none.

Assessment: two assignments 30% and 40%, one examination 30%.

This subject aims to familiarise students with the TESOL field, including current issues and areas of research. In particular, it will introduce students to various theoretical discourses in the field, comparing and contrasting relevant models of language and examining research and theory in the area of second language learning. Links will be made to classroom practice and materials as appropriate.

Textbooks:

Students will be required to buy a set of prepared course notes and readings.

Co-ordinator: Dr W Winsler.

EDGA985 English in Specific Contexts

Spring session; 8 credit points (1 hr lecture, 2 hr seminar per wk).

Pre-requisite: none.

Assessment: two assignments 30% and 40%, one examination 30%.

The aim of this subject is to prepare students to design and teach English programs which address the needs of a specific clientele (e.g. English for Business Communication, English for the Workplace, English for Science and Technology). The subject will examine how language varies across contexts. Students will develop methods for analysing the language relating to different contexts (academic, vocational, social, personal) and will use these analyses in the development of teaching programs

and materials.

Textbooks:

McDonough, J, *ESP in Perspective: A Practical Guide*, London, Collins, 1984.

Co-ordinator: Ms B Derewianka.

EDGA991 Instructional Design

Autumn session; 8 credit points (2 hrs lecture/1 hr seminar per wk).

Assessment: completion of three short essays 20% each, one essay 40%.

This subject is designed to provide students with necessary information, modelling and practice in applying principles of instructional design to training or other adult education settings. The topics include an introduction to needs assessment, task analysis, writing objectives and focussing on performance outcomes, analysis of learners and their styles of learning, implications of learning theories for instructional design, instructional strategies, media decisions and evaluation planning. Ultimately the capabilities developed through this process should transfer to the individual workplaces and complement or supplement existing skills and capabilities.

Textbook:

Seels, B and Glasgow, Z, *Exercises in Instructional Design*, Columbus, OH, Merrill, 1992.

Co-ordinator: Dr M Gillett.

EDGA992 Psychology of Adult Learning

Autumn session, 8 credit points (2 hours lecture/1 hour seminar per week).

Assessment: two seminar papers 20% each; essay 30%; examination 30%.

This subject is designed for professionals engaged in adult education and training. Through their participation in the direct and related activities of the subject they will develop an understanding of the dynamics, theories, principles and styles commonly identified with adult learning environments. They will link theory to practice in the process of developing, implementing and evaluating teaching practices and strategies appropriate to adult learners. Theories considered will be drawn from the learning, motivation and personality areas. The subject will include a review of assessment procedures and the relationship between these and the metacognitive strategies employed by learners.

Textbook:

Merriam, S B and Caffarella, R S, *Learning in Adulthood*, San Francisco, Jossey-Bass, 1991.

Co-ordinator: Professor R King.

EDGA993 Evaluation and Assessment

Spring session, 8 credit points, (2 hrs lecture/1 hr seminar per wk).

Pre-requisite: EDGA991 Instructional Design. Assessment: completion of two essays 30% each; one essay 40%.

This subject is designed to develop in the student the essential knowledge, skills, understandings and attitudes which will ensure the sound assessment and evaluation of learners' performance. It also is directed towards the establishment and consolidation of logical links between evaluation and instructional design. Students will design instruments for needs

assessment, the assessment of trainee/student learning and facilitator performance in an instructional setting. They will apply these instruments to collect data about a training/instructional intervention, and be able to argue their approach within the framework of an appropriate evaluation methodology.

Textbooks:

Owen, JM, *Program Evaluation: Forms and Approaches*, Sydney, Docupro, 1993.
 Gronlund, NE, *Measurement & Evaluation in Teaching*, New York, McMillan, 1990.
 Co-ordinators: Associate Professor J Hedberg/Dr M Gillett.

EDGA994 Learning Strategies and Communication

Spring session; 8 credit points (2 hrs lecture/1 hr seminar per wk).

Pre-requisite: EDGA991 Instructional Design.

Assessment: completion of two essays 40% each; one essay 20%.

This subject is designed to develop the capabilities of students to (a) select and implement appropriate training/instructional strategies for stated training objectives and (b) design and produce high quality support materials for effective learning in a range of educational contexts. The subject should build upon the student's prior studies in psychology and instructional design and contribute to their insight into the implementation stage of the design process. It comprises practical workshops in the development of instructional plans and strategies for learning. It considers the development of a climate conducive to learning and the design of appropriate learning sequences. It also requires the student to understand group process and reflect upon and refine personal practice as a facilitator of learning.

Textbooks:

Davis, BG, *Tools for Teaching*, San Francisco, Jossey-Bass, 1991.
 Hedberg, JG, *The Desktop Teacher*, Campbelltown, HERDSA, 1990.
 Co-ordinator: Dr M Gillett.

EDGA995 Management and Organisational Context of Learning

Autumn session; 8 credit points (2 hrs lecture/1 hr seminar per wk).

Assessment: completion of one essay 50%; one seminar presentation and paper 50%.

This subject will focus on the organisational and management aspects of adult education and training. It will also focus on the political context in which the adult educator or trainer must operate. From each of the spheres in which adult educators work the subject will identify the common and disparate elements through which they achieve their course and performance outcomes. The subject will focus on the role of training and adult learning within the human resource function of organisations, and examine concepts such as the learning organisation. It will cover current issues in the training context such as: The Competency Debate; Government reports - Mayer, Finn, Carmichael, etc; general issues in performance improvement and change management

Textbook: none.

Co-ordinator: Associate Professor J Hedberg.

EDGA996: Issues in Adult Education and Training

Spring session: 8 credit points (3 hours: 2 lectures and 1 tutorial/seminar).

Pre-requisite: at least two subjects in the Adult Education and Training Program.

Assessment: two essays each worth 40%, seminar presentation 20%.

This subject is designed to provide students with an examination of current issues facing professionals in the field. Attention will be given to current international issues in adult teaching and learning such as problem-based learning, access to technology, distance education of adults, implementation of government policy in adult development, working with third age learners, equity and renewal of the workforce, and literacy in the workplace. In examining these issues students will be encouraged to consider the psychological bases for adult teaching and learning, different workplace and other learning contexts and the management of adult teaching and learning. They will undertake a review of literature in one chosen area, present the outcomes of this research in a seminar.

Through their involvement in the planned activities of this subject students will be able to evaluate current issues in adult teaching and learning within a range of contexts; synthesise the literature relevant to a particular issue; report the results of their research of the literature with specific reference to workplace or contextual applications.

Textbooks:

Tennant, M (ed) *Adult and Continuing Education in Australia-Issues and Practices*, London, Routledge, 1991.

Co-ordinator: Dr M Gillett.

EDGA997 Introduction to Tertiary Teaching

Formerly EDGA807 Introduction to Tertiary Teaching.

Spring session/Autumn session; 8 credit points (1 hr lecture, 2 hr workshop).

Assessment: direct observation of performance 50%, assessment of prepared materials 20%, reflective diary 30%.

This subject will be presented in cooperation with the Centre for Staff Development. It is only available to staff employed at the University of Wollongong and forms the introductory subject for the Graduate Certificate in Higher Education. It will introduce staff to a range of basic skills of tertiary teaching: planning, questioning managing, communicating and evaluating. It will deal with a range of teaching methods relevant to particular faculties and consider appropriate ways of assessing student performance. The principles and practices of subject and course design will be introduced and attention will be directed towards the counselling and feedback roles which are crucial to the teaching-learning process at the tertiary level. Ultimately this subject should lead staff to an awareness of avenues for continuing professional development and a desire to continue the refinement of their teaching capabilities. Intending students must consult with the course co-ordinator before enrolling in this subject.

Textbook:

Newble D & Cannon R, *Handbook for*

Teaching in Universities and Colleges - A Guide to Improving Teaching Methods, Berwick, Martins, 1989.

Co-ordinator: Dr M Gillett.

GRADUATE DIPLOMA IN EDUCATION

The subjects EDUC800 - EDUC892 form the Graduate Diploma in Education program. This is an integrated course of study leading to a professional teaching qualification. Some areas of the program are classroom-based, others relate to the theoretical components of teaching. Full details of the course requirements and assessment are available in the Course Handbook and Subject Outlines distributed at enrolment.

EDUC800 Professional Studies A

Double session (A); 8 credit points.

Assessment: school practice teaching reports.

This is the practice teaching component of the course. Students will be required to complete successfully nine weeks of practice teaching. In addition, students will be required to attend field experience days during which they will undertake a wide variety of activities in preparation for the periods of full-time practice teaching. Students are advised that they will be expected to carry out their practice teaching experience in the Wollongong area.

Co-ordinator: Dr M Wilson.

EDUC801 Learners with Special Needs

Double session (A); 4 credit points (2 lectures, 1 tutorial).

Assessment: tutorial presentation 30%, major assignment 30%, minor assignment 10%, examination 30%.

This subject aims at developing an understanding of those learners in regular classrooms who do not succeed at the same rate as their peers, either through behaviour disorders or through some learning difficulty. The main focus of the subject is the development of teaching strategies and behaviour management skills which will enable teachers to increase the effectiveness of their teaching and facilitate the learning of all students.

Textbook:

Ashman, A and Elkins, J, *Educating Children with Special Needs*, Prentice-Hall, 1990.

Co-ordinator: Ms D Konza.

EDUC815 Perspectives in Education A

Double session (A); 4 credit points (4 hrs lectures, 4hrs tutorial per wk for 10 wks).

Assessment: 2 essays 30% each, exam 40%.

The subject aims to introduce students to basic concepts in Philosophy, Psychology, Sociology and the History of Australian Education in relation to the contribution each can make to an understanding of the process of education in the classroom and beyond. Lectures in each of the four areas will be supported by tutorials which examine the relationships between the four areas and their educational implications. The subject forms a foundation for studies in more depth offered as electives in EDUC819 and EDUC820.

Textbooks: to be advised.

Co-ordinator: Ms N Southall.

EDUC816 Professional Studies B

Double session (A); 8 credit points (2hrs per week).

Assessment: attendance, exercises, essays.

The aim of the subject is to assist students in a number of aspects of their professional development as a teacher. This subject includes components in Physical Education, Health and Communication Skills required by the New South Wales Department of School Education to fulfil professional requirements. Teaching techniques and classroom dynamics will be emphasised and current policy documents as they affect the lives of pupils, teachers and the community will be discussed. A further component covers a variety of professional issues related to the beginning of a career in teaching.

Co-ordinator: Dr M Wilson.

EDUC817 Curriculum Studies

Double session (A); 8 credit points (2hrs per week).

Assessment: major essay 30%, two minor essays 40%, weekly exercises 30%.

This subject aims to develop student understanding of the processes of curriculum construction, implementation, and evaluation. The intention is to assist beginning teachers to build a range of strategies which may be employed in developing classroom teaching programs. This subject will underpin work carried out in the Methods subjects and draw together work from other components of the program. Content will include the following: aims and objectives; principles of assessment and evaluation; state, national and international curriculum perspectives including those relating to issues of gender and ethnicity.

Textbooks:

Smith, DL and Lovat, TJ, *Curriculum Action on Reflection, (Revised Edition)*, Wentworth Falls, NSW, Social Science Press, 1991.

Co-ordinator: Dr M Wilson.

EDUC819 Perspectives in Education B

Double session (A); 8 credit points (2 hrs per wk).

Assessment: varies between electives.

Secondary students enrol in this subject.

Co-ordinator: Dr M Wilson.

EDUC820 Perspectives in Education C

Double session (A); 4 credit points (1 hr per wk).

Assessment: varies between electives.

Primary students enrol in this subject.

Co-ordinator: Dr M Wilson.

Perspectives in Education B and C offer a number of electives which are designed provide an element of students choice in pursuing an in-depth study in area(s) building on EDUC815. Secondary students will choose two elective topics and Primary students one. It is strongly recommended that students choose topics outside the core areas of their undergraduate degrees.

METHOD SUBJECTS

These subjects relate the student's subject discipline(s) (from undergraduate studies)

to professional classroom practice. No student will be permitted to enrol in a Method subject for which they have an inadequate formal academic background. The student will apply the knowledge, strategies and skills established in other strands of the course, to the study of specific school curricula and the implementation of these curricula in the schools. The topics studied will include: school curricula and the educational perspectives relevant to teaching and learning; the investigation of appropriate learning environments; teaching and learning styles; strategies and skills as they apply to the presentation of the lessons, unit planning and programming; student assessment, evaluation of learning programs and teacher performance in relation to the presentation of the curriculum; classroom management; the range and evaluation of contemporary resources.

EDUC821 Social Science I Method²

Double session (A); 4 credit points.

Co-ordinator: Dr M Wilson.

EDUC822 Social Science II Method²

Double session (A); 4 credit points.

Students who wish to teach Social Science at the secondary school level will need to complete EDUC821 and EDUC822 successfully.

Co-ordinator: Dr M Wilson.

EDUC831 English Method¹

Double session (A); 4 credit points.

Co-ordinator: Dr M Wilson.

EDUC832 History Method¹

Double session (A); 4 credit points.

Co-ordinator: Dr M Wilson.

EDUC841 English as a Second Language Method¹

Double session (A); 4 credit points.

Co-ordinator: Dr M Wilson.

EDUC842 French Method¹

Double session (A); 4 credit points.

Co-ordinator: Dr M Wilson.

EDUC844 Italian Method¹

Double session (A); 4 credit points.

Co-ordinator: Dr M Wilson.

EDUC845 Japanese Method¹

Double session (A); 4 credit points.

Co-ordinator: Dr M Wilson.

EDUC851 Mathematics I Method²

Double session (A); 4 credit points.

Co-ordinator: Dr M Wilson.

EDUC852 Mathematics II Method²

Double session (A); 4 credit points.

Students who wish to teach mathematics at the secondary school level will need to complete EDUC851 and EDUC852 successfully.

Co-ordinator: Dr M Wilson.

EDUC861 Primary I Method²

Double session (A); 6 credit points.

Co-ordinator: Dr M Wilson.

EDUC862 Primary II Method²

Double session (A); 6 credit points.

Students who wish to teach at the primary school level will need to complete EDUC861 and EDUC862 successfully.

Co-ordinator: Dr M Wilson.

EDUC871 Science I Method²

Double session (A); 4 credit points.

Co-ordinator: Dr M Wilson.

EDUC872 Science II Method²

Double session (A); 4 credit points.

Students who wish to teach science at the secondary school level will need to complete EDUC871 and EDUC872 successfully.

Co-ordinator: Dr M Wilson.

EDUC881 Art I Method²

Double session (A); 4 credit points.

Co-ordinator: Dr M Wilson.

EDUC882 Art II Method²

Double session (A); 4 credit points.

Students who wish to teach art at the secondary school level will need to complete EDUC881 and EDUC882 successfully.

Co-ordinator: Dr M Wilson.

EDUC891 Music I Method²

Double session (A); 4 credit points.

Co-ordinator: Dr M Wilson.

EDUC892 Music II Method²

Double session (A); 4 credit points.

Students who wish to teach music at the secondary school level will need to complete EDUC891 and EDUC892 successfully.

Co-ordinator: Dr M Wilson.

ENVI920 The Scientific Basis of Environmental Management

Spring session; 8 credit points (28 hrs lectures, 28 hrs seminar, up to four days fieldwork).

Assessment: final examination, 2 essays, 1 research report.

This course covers topics designed to give students a comprehensive overview of the scientific basis of environmental management. The course will adopt a multi-disciplinary approach to the scientific understanding of how major ecosystems work and show how an appreciation of such knowledge leads to the development of appropriate management strategies for these systems. While there will be some emphasis on the Australian situation, much of the material is applicable in any country. The systems to be covered include estuaries, reefs, coastal wetlands, forests (tropical and

¹ EDUC831, 832, 841, 842, 844 and 845 are single Methods subjects and students will need to complete two of these

² Mathematics, Primary, Science, Social Science, Art and Music are double Methods areas. Students must complete one pair of double Methods subjects successfully to qualify in these areas, eg EDUC851 Mathematics Method I and EDUC852 Mathematics Method II.

temperate), large and small catchment areas, semi-arid areas. In addition the science of the management of hazardous wastes (including radioactive materials) will be discussed. Case studies from Australia, South East Asia and the Pacific Islands will be included. As part of the course, students will complete a project carried out in teams to facilitate the development of interdisciplinary skills and an appreciation of the benefits of teamwork in addressing environmental management issues.

Co-ordinator: Professor J Morrison.

HIST934 The Re-making of Australian History

Autumn session: 12 credit points (3 contact hrs).

Pre-requisite: bachelor degree, with a sub-major or more in History.

Assessment: essay 60%, tutorial papers 30%, tutorial participation 10%.

The subject will examine the re-writing of the following themes in Australian history: Nationalism and Racism; Aboriginal pre-history and white relations; the role of women in society; the influence of literature, art and mass communications; and local and family history. It will also discuss the social and technical sources of these changes.

Textbooks:

Osborne, G and Mandle, WF (eds) *New History: Studying Australia Today*, Sydney, George Allen & Unwin, 1982.

Reynolds, H (ed) *With the White People*, Ringwood, Victoria, Penguin, 1990.

Saunders, K and Evans, R (eds) *Gender Relations in Australia: Domination and Negotiation*, Sydney, Harcourt Brace Joanovich, 1992.

Co-ordinator: Professor J S Hagan.

FACULTY OF
ENGINEERING

FACULTY OF ENGINEERING

FACULTY OFFICE

Interim Dean: Professor L C Schmidt

Sub Dean: Dr G John Montagner

Faculty Officer: Ms Julie Romanowski

Administrative Assistant: Ms Leonie McIntyre

(042) 21 4171

(042) 21 3491

MEMBERSHIP

The Faculty of Engineering is made up of the following Units:

Civil and Mining Engineering

Materials Engineering

Mechanical Engineering

For Electrical and Computer Engineering – Refer to Faculty of Informatics

RESEARCH COURSES AVAILABLE

The Faculty offers Honours Master of Engineering and Doctor of Philosophy degrees by research.

POSTGRADUATE PROGRAMS

Postgraduate programs are available in the Faculty in the following areas:

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For Electrical, Computer and Telecommunications Engineering, refer to Faculty of Informatics.

FULL TIME STAFF

Interim Dean

Lewis C Schmidt, BCE MEng Sc PhD *Melb*,
MA *Camb*, MA SCE, CPEng, FIE Aust

Sub-Dean

Dr G John Montagner, BE *UNSW*, PhD,
CPEng, MIEAust, AACs, FAIEA,
MIEEE

Faculty Officer

Julie Romanowski, MCom

Administrative Assistant

Leonie McIntyre

BHP STEEL INSTITUTE FOR STEEL PROCESSING AND PRODUCTS

Honorary Professor

Keith Enever, BSc(Eng) PhD *Lond*, FIEAust,
CPEng, CEng, MICE

Administrative Assistant

Lorelle Pollard

DEPARTMENT OF CIVIL AND MINING ENGINEERING

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Robin N Chowdhury, BSc(Eng) *Ban*, PGDip
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MASTM

Professor of Civil Engineering

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Professor of Mining Engineering

Raghu N Singh, BSc *Banaras*, MEng *Sheff*,
PhD *Cardiff*, DSc *Nott*, CEng, CPEng,
FIMinE, FIMM, FIEAust, FAImm, FIE
India.

Associate Professors

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UNSW, CPEng, MIEAust

Maxwell J Lowrey, BE *ME UNSW*, PhD,
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Muttucumaru Sivakumar, BSc (Eng) *Ceylon*,
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MAWWA, MIAWQ

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CEng, MASCE, MIE, MAusImm

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MIABSE, MSEM, MASTM, MASCE

Ian Porter, BSc PhD *Strath*, AMIME,
MAusImm

Lecturers

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Man UK

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MAWWA, CPEng

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PhD *New Mex*

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MIEAust

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Ms Elaine Rhodes

DEPARTMENT OF MATERIALS ENGINEERING

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CPEng, C Eng

Professor for Superconducting and Electronic Materials

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MMRS, MTMS, MIMMA, MACeS

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MCCS

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MIEAust

Masoud Samandi, BSc *Shiraz*, MSc PhD
Birm, MAVS

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PhD *Melb*

Zhixin Chen, BTech *China*, PhD *Birm*

Michael H Ferry, BEng, PhD *UNSW*

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Honorary Professors

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MAusImm, FIEAust, MIMechE

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MIEAust, ASM, SAE, CPEng

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Nicholas Standish, MSc *UNSW*, PhD *Otago*,
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Northwest Uni, PhD (cer) *U of Wash*

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Tech

Administrative Assistants

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Ms Michelle Harrison

DEPARTMENT OF MECHANICAL ENGINEERING

Departmental Head & Professor of Mechanical Engineering

Michael P West, BSc MSc PhD *MIT*, CPEng,
FIEAust

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Wee-King Soh, BSc *BE Syd*, MEngSc PhD
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Friso De Boer, Dr Ir *Delft*, PEng, Grad IEAust
Oliver C Kennedy, BE UNSW
Devi P Saini, BE *Jodh*, ME *Pilani*, PhD WA,
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MIEAust, MASME

Administrative Assistants

Mrs Roma Hamlet
Mrs Barbara Butler

**FACULTY VISITING
COMMITTEE**

Councillor Kerrie Christian, Materials
Engineer, BHP Slab & Plate Products
Division and Councillor Wollongong
City Council
Mr Peter Fitch, Chief Executive, ANI
Manufacturing Group
Mr Greg Klamus, Group General Manager,
Sydney Water
Mr Michael Muston, General Manager,
Wingecarribee Council
Mr Warwick Powis, Manager Maintenance
Services, BHP Steel SPPD
Professor Alek Samarin, Chairman
Mr E J Whitehead, Director Education and
Training, Institution of Engineers
Australia
Mr Peter Wolfe, Retired, RTA

CIVIL ENGINEERING

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Engineering by Coursework or Research
3. Graduate Diploma in Engineering

POSTGRADUATE PROGRAMS

Structural and Transportation Engineering
Water & Geotechnical Engineering

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master of Engineering degree by research and the Doctor of Philosophy degree:

Geotechnical engineering
Slope stability
Reinforced earth
Steel and concrete structures
Cementitious materials for construction
Finite element and finite strip methods
Bridge engineering
Structural dynamics
Flood studies
Hydraulics and hydrology
Water quality engineering
Waste management
Road construction materials
Roads engineering
Traffic engineering
Microcomputer applications in analysis and design
Computer-aided design and drafting

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN STRUCTURAL & TRANSPORTATION ENGINEERING

leading to the Honours Master of Engineering.

Number	Subject	Credit Points
<i>Core</i>		
CIVL951	Dissertation	24
<i>Electives</i>		
CIVL904	Highway Materials	6
CIVL905	Transportation Engineering	6
CIVL914	Analysis and Design of Bridge Structures	6
CIVL918	Steel Structures	6
CIVL923	Advanced Reinforced Concrete	6
CIVL924	Advanced Studies in Computer Aided Design and Draughting	6
CIVL975	Environmental Planning	6

For further details, see *Course Requirements* below.

POSTGRADUATE PROGRAM IN WATER & GEOTECHNICAL ENGINEERING

leading to the Honours Master of Engineering.

Number	Subject	Credit Points
<i>Core</i>		
CIVL951	Dissertation	24
<i>Electives</i>		
CIVL902	Reliability in Geotechnical Engineering	6
CIVL908	Advanced Soil Mechanics	6
CIVL909	Advanced Foundation Engineering	6
CIVL912	Engineering Hydrology	6
CIVL917	Environmental Engineering	6
CIVL919	Earth Structures	6
CIVL920	Civil Engineering Hydraulics	6

For further details, see *Course Requirements* below.

OTHER POSTGRADUATE SUBJECTS

Number	Subject	Credit Points
CIVL899	Advanced Topics in Engineering	48
CIVL901	Project	6
CIVL903	Concrete Technology	6
CIVL906	Traffic Engineering	6
CIVL907	Civil Engineering Computations	6
CIVL910	Vibration of Structures	6
CIVL911	Finite Element Methods	6
CIVL913	Estuary and Coastal Engineering	6
CIVL915	Numerical Methods in Civil Engineering	6
CIVL916	Research Topics in Civil Engineering	6
CIVL921	Wastewater Engineering	6
CIVL922	Water Supply Engineering	6
CIVL925	Conservation of Structures	6
CIVL950	Dissertation	12
CIVL955	ME Major Thesis	48
CIVL957	PhD Major Thesis	48

COURSE REQUIREMENTS

1. DOCTOR OF PHILOSOPHY

Candidates for the degree enrol in the subject CIVL957.

2. HONOURS MASTER OF ENGINEERING

The Department of Civil and Mining Engineering offers the following opportunities for graduates to conduct research or pursue an advanced course of study:

(a) The Honours Master of Engineering Degree by Research Thesis

The Honours Master of Engineering Degree by research thesis is intended for those engineers qualified and interested in specific problems.

(b) The Honours Master of Engineering Degree by Combinations of Coursework and Research Thesis

This is the normal course for the younger Civil Engineer, which provides him or her with training in research and also allows greater depth of understanding in specialist postgraduate areas.

Aims

The programs of study allow the student to combine specialist postgraduate subjects according to his or her undergraduate background, with project work. It is intended to strengthen professional training in a context of problems and policies which reach beyond the conventionally recognised boundaries of single disciplines. Elective postgraduate subjects and introductions to disciplines in which the student has no experience, are available.

The program for the Honours Master of Engineering Degree offered by the Department of Civil and Mining Engineering has two explicit aims:

- (i) **Specialist Training.** Postgraduate training is provided for students with appropriate backgrounds, to enable professional development in their particular discipline. This is achieved

by providing access to existing postgraduate courses already offered by Civil Engineering.

- (ii) **Interdisciplinary Training.** An interdisciplinary framework is provided, within which postgraduate training in Civil Engineering may be integrated with other disciplines. This is achieved by the provision of limited access to concentrated study in other disciplines.

A candidate who has a Bachelor of Engineering with Honours at Class III or higher from this University, or an approved equivalent qualification, will enrol in subjects listed in the Postgraduate Schedule and with a value of not less than 48 credit points. Programs approved by the Department of Civil and Mining Engineering comprise:

- (i) the subject CIVL955 ME Major Thesis; or
 (ii) the subject CIVL951 Dissertation plus four subjects from the list CIVL901 through CIVL925; or
 (iii) the subject CIVL950 Dissertation plus six subjects from the list CIVL901 through CIVL925.

* It should be noted that among the listed subjects from CIVL901 through 925, only some are offered in any one year.

3. GRADUATE DIPLOMA IN ENGINEERING

A candidate who has completed a degree of Bachelor of Engineering and:

- (a) who has not qualified for any class of Honours; or
 (b) who wishes to qualify for the Graduate Diploma in Engineering; will enrol in the 48 credit point subject CIVL899.

Upon satisfactory completion of the subject CIVL899, the candidate is eligible for award of the Graduate Diploma in Engineering. A person who is awarded the Graduate Diploma in Engineering and who subsequently satisfies the requirements for award of the degree of Honours Master of Engineering is required by Course Rule 504(2) to surrender the testamur and associated rights for the Graduate Diploma prior to receiving the Honours Master degree.

SUBJECT DESCRIPTIONS

CIVL899 Advanced Topics in Engineering

Double session (A); 48 credit points.

Students will normally take a selection of topics at advanced level from the following: computer aided analysis and design; computer methods; concrete design; civil engineering materials; finite element techniques; hydrology; hydraulics; numerical techniques; reliability; rock mechanics, soil mechanics; simulation; structural analysis and design; structural topology; town planning; traffic planning; traffic engineering; transportation; highway engineering; urban investigations; structural dynamics; continuum mechanics.

Co-ordinator: Professor LC Schmidt.

CIVL901 Project

Autumn or Spring session; 6 credit points.

First stage of a comprehensive study concerning a specific topic; formulation of problem and literature study, critical examination of current work; planning of solution methods; discussion of results of initial work. With the approval of the Head of Department this subject may be taken by students who intend to enrol in a 12 credit point thesis. It will not be available to those students who enrol in a 24 credit point thesis.

Co-ordinator: to be advised.

CIVIL 902 Reliability in Geotechnical Engineering

Autumn or Spring session; 6 credit points.

Conventional safety factor and its limitations in representing safety or reliability; geotechnical predictions and associated degree of confidence; variability of soil and rock deposits; uncertainties in material parameters, geotechnical models and failure mechanisms; statistical data and probabilistic approaches; failure probabilistic approaches compared; reliability of geotechnical systems; recent developments in probability of failure propagation and initiation, most probable extent of embankment or slope failure.

Co-ordinator: Associate Professor RN Chowdhury.

CIVL903 Concrete Technology*Autumn or Spring session; 6 credit points.*

Mix design theories; design of high strength and lightweight concrete, elastic behaviour; strength, creep, shrinkage; significance of tests and properties of constituent materials; analysis of results; non-destructive tests; special concrete applications.

Co-ordinator: Associate Professor DG Montgomery.

CIVL904 Highway Materials*Autumn or Spring session; 6 credit points.*

Soil and roadmaking aggregate surveys; compaction of soil; road construction with soil and low-grade aggregates; mechanical, cement, bituminous, and resinous stabilisation; constructional methods in soil stabilisation. The origin, preparation, constitution and rheology of bituminous binders; mechanical and physical properties of bituminous materials. Close and open textured materials. Surface dressing. Plant. Sampling and testing. Maintenance. Concrete construction. Materials; mixing; laying; sampling and testing. Maintenance. Pavement design and evaluation - a review of current Australian, European and North American Practice.

Co-ordinator: to be advised.

CIVL905 Transportation Engineering*Autumn or Spring session; 6 credit points.*

Transport problems; urban travel demands; the transport planning process; travel-demand forecasting; trip generation analysis; model split analysis; trip distribution analysis; route assignment analysis; economic analysis; employment and population forecasts; evaluation of transport plans; airport engineering; classification, design standards, layout and development, terminal facilities, city-airport transport systems; urban transportation; railroad engineering; light rail rapid transit; pipeline transportation; belt conveyors - freight and passengers.

Co-ordinator: to be advised.

CIVL906 Traffic Engineering*Autumn or Spring session; 6 credit points.*

Characteristics of vehicles, drivers and pedestrians; vehicle speeds, volumes, journey times; accident studies; traffic management; parking; traffic prediction; economic analysis.

Co-ordinator: to be advised.

CIVL907 Civil Engineering Computations*Autumn or Spring session; 6 credit points.*

This subject will concentrate on software packages which are designed for application to a wide range of structural types, both two and three dimensional, including trusses, frames, plates and shells. Any combination of these components may be used with a variety of analysis and design procedures including linear elastic analysis, nonlinear geometric analysis, dynamic analysis, frame optimization, steel frame member design, and design and checking of reinforced concrete building frames including beams, columns, slabs, steel quantity and location, material take-off etc.

Co-ordinator: Professor LC Schmidt.

CIVL908 Advanced Soil Mechanics*Autumn or Spring session; 6 credit points.*

The principle of effective stress and its implications; stress paths in soil mechanics; problems of shear strength and failure; peak, residual and softened shear strengths for soil; pore pressure parameters A and B; the use of pore pressure parameters in practice; selected problems of stability and settlement; the analysis and performance of slopes; the factor of safety concept; stress analysis approaches; introduction to soil dynamics.

Co-ordinator: Associate Professor RN Chowdhury.

CIVL909 Advanced Foundation Engineering*Autumn or Spring session; 6 credit points.*

General principles concerning selection of foundation type on different types of soil; difficult ground conditions including collapsing and swelling soils; performance observations in geotechnical engineering; preventative and remedial measures against ground movement and slope failure; buoyancy rafts and basements; selected problems of foundation analysis and design; dam foundations; stress distribution and stress analysis; soil sampling and exploration; soil stabilisation including drainage.

Co-ordinator: Dr B Indraratna.

CIVL910 Vibrations of Structures*Autumn or Spring session; 6 credit points.*

Static and dynamic stabilities of continuous systems. Analyses of lumped mass systems with various degrees of freedom. Vibration of beams and other continuous structures. Modal analysis of discrete and continuous systems. Vibrations of buildings and bridges. Earthquake, blast and wind loadings.

Co-ordinator: Dr R Kohoutek.

CIVL911 Finite Elements Methods*Autumn or Spring session; 6 credit points.*

Variational principles; element shape functions, "displacement" and "stress" formulations, curved and isoparametric elements; computer programming techniques; the finite strip procedure; analysis of plates, shells and axisymmetric structures; analysis of slab- and box-type bridge superstructures.

Co-ordinator: Professor LC Schmidt.

CIVL912 Engineering Hydrology*Autumn or Spring session; 6 credit points.*

Storm models, storm maximisation, extreme precipitation estimates, intensity-frequency duration analysis, design storms; rainfall losses, infiltration models, design losses; advanced unit - hydrograph theory, synthetic unit hydrographs; hydrograph synthesis by runoff - routing; design floods for rural and urban catchments.

Co-ordinator: Associate Professor MJ Boyd.

CIVL913 Estuary and Coastal Engineering*Autumn or Spring session; 6 credit points.*

Theory of deep and shallow water waves, wave generation and decay, wave breaking, wave forces on structures; harbour resonance and seiche action, wave refraction and diffraction; breakwater design; shoreline processes, beach protection; tidal theory, propagation of tides

into estuaries; sediment transport; fixed and loose bed hydraulic models; inspection of hydraulic model.

Co-ordinator: Associate Professor MJ Boyd.

CIVL914 Analysis and Design of Bridge Structures*Autumn or Spring session; 6 credit points.*

Types of bridges; similarities between bridges and some plate- and shell-type building structures; loadings; analytical methods: load distribution technique, orthotropic plate theory, grillage and space frame methods, finite strip procedure, finite element method and finite difference approach; computer program suites; design codes; design of super-structures; design of foundations.

Co-ordinator: Associate Professor YC Loo.

CIVL915 Numerical Methods in Civil Engineering*Autumn or Spring session; 6 credit points.*

Application of digital and analogue computers to Civil Engineering problems, bounds of computation errors. Optimization techniques. Network techniques. Finite difference methods. Conveyance of numerical calculation processes.

Co-ordinator: Associate Professor MJ Lowrey.

CIVL916 Research Topics in Civil Engineering*Autumn or Spring session; 6 credit points.*

Topics will be selected from those areas of Civil Engineering in which staff members or visiting staff members to the department, are engaged in active research.

Co-ordinator: to be advised.

CIVL917 Environmental Engineering*Autumn or Spring session; 6 credit points.*

Collection and treatment of waste water; physical, chemical and biological treatment processes; measurement of pollutants; industrial and solid waste disposal; air pollution; noise pollution; environmental impact statements.

Co-ordinator: Dr M Sivakumar.

CIVL918 Steel Structures*Autumn or Spring session; 6 credit points.*

Steel behaviour. Hot rolled and cold-formed sections. Behaviour of hollow sections. Plastic design. Local and lateral buckling. Elastic and inelastic buckling of elements and frames.

Co-ordinator: Professor LC Schmidt.

CIVL919 Earth Structures*Autumn or Spring session; 6 credit points.*

Location of earth structures such as embankments and earth dams; basic design considerations; analytical procedures including limit equilibrium methods and stress analysis; soft ground tunnelling; problems associated with earth structures including settlement cracking and subsidence; prevention and control of sub-surface erosion and piping; risk studies; maintenance and improvement of earth structures.

Co-ordinator: Associate Professor RN Chowdhury.

CIVL920 Civil Engineering Hydraulics

Autumn or Spring session; 6 credit points.

Uniform flow in rivers and flood plains; open channel roughness and flow resistance; non-uniform open channel flow; backwater curve computation; unsteady open channel flow. Flood wave routing; hydraulics of spillways; hydraulics of bridges and culverts; retarding basin hydraulics; urban stormwater drainage design; sediment transport in open channel flow.

Co-ordinator: Associate Professor MJ Boyd.

CIVL921 Wastewater Engineering

Autumn or Spring session; 6 credit points.

Wastewater collection; sewer and storm drainage design; chemistry and microbiology of wastewater; effect on environment; physical, chemical and biological treatment processes and design facilities; sludge treatment and disposal; wastewater reuse; advanced wastewater treatment; treatment plant design.

Co-ordinator: Dr M Sivakumar.

CIVL922 Water Supply Engineering

Autumn or Spring session; 6 credit points.

Water quality; water supply sources and demand; chemistry and microbiology of water; aeration and oxygen transfer; theory of coagulation, flocculation, sedimentation and filtration; disinfection; water softening, desalination; design of mains and service pipes; distribution of water.

Co-ordinator: Dr M Sivakumar.

CIVL923 Advanced Reinforced Concrete

Autumn or Spring session; 6 credit points.

Strength and behaviour of reinforced concrete members in flexure, shear, torsion and compression; bond and anchorage; non-rectangular sections; numerical and semi-graphical methods. Short and long-term deflections of beams; effect of repeated loading and impact. Analysis and design of deep beams. Yield line method for slabs. Design code provisions.

Co-ordinator: Associate Professor YC Loo.

CIVL924 Advanced Studies in Computer Aided Design and Draughting

Autumn or Spring session; 6 credit points.

Fundamentals of CADD; the workstation; hardware and software for CADD configurations; operation and facilities of CADD systems; AutoCAD, MeggaCAD, Prodesign II and other Micro-CAD systems; LISP language; programming with AutoLISP; customising AutoCAD, creating new commands, screen menus and tablet menus; CADD data-base, bill of materials; structural detailing; CADD management.

Co-ordinator: Dr YW Wong.

CIVL925 Conservation of Structures

Autumn or Spring session; 6 credit points.

Introduction to Principles of Conservation: the Burra Charter, the NSW Heritage Act. Understanding traditional construction methods. Structural forms of historical buildings and bridges.

Conservation of foundations; conservation of masonry walls; conservation of roof structures; conservation of bridges and

industrial structures; local case studies; international case studies.

Co-ordinator: Dr YW Wong.

CIVL950 Dissertation

Double session (A); 12 credit points.

CIVL951 Dissertation

Double session (A); 24 credit points.

CIVL955 ME Major Thesis

Double session (A); 48 credit points.

CIVL957 PhD Major Thesis

Double session (A); 48 credit points.

ENVIRONMENTAL ENGINEERING

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy by Research
2. Honours Master of Engineering by Coursework* or Research
3. Graduate Diploma in Engineering*

* available in 1996 subject to approval by Vice-Chancellor

POSTGRADUATE PROGRAMS

Environmental Engineering

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master of Engineering degree by research and the Doctor of Philosophy degree:

Water quality engineering
 Sludge management
 Computational hydraulics
 Environmental hydraulics and unit processes
 Pollution control engineering
 Water quality and quantity modelling of catchments, rivers and lakes
 Reuse of industrial solid wastes
 Soil erosion and sediment transport
 Environmental pollution modelling
 Recycling and waste management
 Environmental geotechnology
 Solid-liquid separation processes
 Transport and the environment

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN ENVIRONMENTAL ENGINEERING

leading to the Honours Master of Engineering.

Number	Subject	Credit Points
<i>Core</i>		
EENG901	Project	6
EENG916	Research Topics in Environmental Engineering	6
EENG950	Dissertation	12
EENG951	Dissertation	24
EENG955	ME Major Thesis	48
ENVI920	The Scientific Basis of Environmental Management	6
ENVI921	Environmental Planning	6
CIVL905	Transportation Engineering	6
CIVL908	Advanced Soil Mechanics	6
CIVL912	Engineering Hydrology	6
CIVL917	Environmental Engineering	6
CIVL921	Wastewater Engineering	6
CIVL922	Water Supply Engineering	6
CIVL925	Conservation of Structures	6

Note: not all subjects will be offered in any one year.

For further details, see *Course Requirements* below.

OTHER POSTGRADUATE SUBJECTS

Number	Subject	Credit Points
EENG899	Advanced Topics in Environmental Engineering	48

COURSE REQUIREMENTS

1. DOCTOR OF PHILOSOPHY

Candidates for the degree enrol in the subject EENG957.

2. HONOURS MASTER OF ENGINEERING

The Department of Civil and Mining Engineering offers the following

opportunity for graduates to conduct research or pursue an advanced course of study:

(a) **The Honours Master of Engineering Degree by Research Thesis**

Candidates enrol in the subject EENG955 ME Major Thesis.

(b) **The Honours Master of Engineering Degree by combination of Coursework and Research Thesis.**

A candidate who has a Bachelor of Engineering with Honours at Class III or higher from this University, or an approved equivalent qualification, will enrol in subjects listed in the Postgraduate Schedule and with a value of not less than 48 credit points.

Candidates enrol in either:

(i) the subject EENG951 (24cp) plus four subjects from the Honours Master of Engineering program; or

- (ii) the subject EENG950 (12cp) plus six subjects from the Honours Master of Engineering program.

A candidate who has completed a degree of Bachelor of Engineering and who has not qualified for any class of Honours, or a candidate who has completed other than a Bachelor of Engineering degree, will enrol in a 96 credit point program, consisting of the subjects EENG899, plus either program (a) or program (b).

3. GRADUATE DIPLOMA IN ENGINEERING

A candidate who has completed a degree of Bachelor of Engineering and:

- (a) who has not qualified for any class of Honours
or
(b) who wishes to qualify for the Graduate Diploma in Engineering;

will enrol in the 48 credit point subject EENG899.

Upon satisfactory completion of the subject EENG899, the candidate is eligible for the award of the Graduate Diploma in Engineering. A person who is awarded the Graduate Diploma in Engineering and who subsequently satisfies the requirements for award of the degree of Honours Master of Engineering is required by Course Rule 504(2) to surrender the testamur and associated rights for the graduate Diploma prior to receiving the Honours Master degree.

SUBJECT DESCRIPTIONS

EENG899 Advanced Topics in Environmental Engineering

Double session; 48 credit points.

One or more advanced topics taken from the following: computer aided analysis and design; computer methods; environmental hydraulics; pollution control; erosion and land rehabilitation; waste management; environmental impact assessment; legislation; environmental modelling processes; environmental geotechnology; transport and the environmental ground and mine-water.

Co-ordinator: Associate Professor D Montgomery.

EENG901 Project

Autumn or Spring; 6 credit points.

First stage of a study on a selected topic, including formulation of the problem, literature study, development of study plan, and discussion of results. With the approval of the Head of Department, this subject may be taken by students who intend to enrol in a 12 credit point dissertation. It is not available to students who enrol in a 24 credit point dissertation.

EENG916 Research Topics in Environmental Engineering

Double session; 12 credit points.

Topics will be selected from the areas of environmental engineering in which staff members are engaged in research.

EENG950 Dissertation

Double session; 12 credit points.

EENG951 Dissertation

Double session; 24 credit points.

Co-ordinator: Associate Professor M Boyd.

EENG955 ME Major Thesis

Double session (A); 48 credit points.

Candidate carries out research under the general direction of supervisor (s) on an approved specialised topic within the area of Environmental Engineering.

EENG957 PhD Major Thesis

Double session (A); 48 credit points.

Candidate carries out research under the general direction of the appointed supervisor(s) in an approved specialised topic within the area of environmental engineering.

MATERIALS ENGINEERING

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Engineering by Coursework or Research
3. Master of Engineering Practice in Materials Engineering
4. Master of Engineering Practice in Materials Welding and Joining
5. Master of Engineering Practice in Steel Processing and Products
6. Graduate Diploma in Engineering
7. Graduate Diploma in Materials Welding and Joining
8. Graduate Certificate in Steel Processing and Products

POSTGRADUATE PROGRAMS

Advanced Engineering Materials
 Materials Processing
 Metallurgy
 Materials Engineering
 Materials Welding and Joining
 Steel Processing and Products

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master of Engineering degree by research and the Doctor of Philosophy degree:

Deformation and fracture of multiphase materials at elevated temperatures
 Hot deformation of high strength low alloy steels
 High temperature behaviour of engineering materials
 Development of structural steels
 Electron metallography of precipitates in ferrous alloys
 Development of structures in metals by recrystallization
 Crystallographic and metallographic properties of shape memory alloys
 Development of metallographic methods for shape memory alloys
 Development of galvanising alloys
 Structures and properties of welded metals
 Adhesive Bonding
 Brazing and diffusion bonding
 Spot welding of coated steels
 Microwave joining of metals and ceramics
 Surface engineering of materials
 Wear and surface property testing
 Ceramic coatings
 Physical vapour deposition processing of metals
 Ion implantation
 Microwave processing of materials
 Solidification
 Magnetic properties of rapidly solidified materials
 Structure and properties of metallic glasses
 Structure and properties of ceramic materials
 Structure and properties of composite materials
 High temperature superconductors
 Battery and fuel cell materials
 Molecular structure and properties of polymeric materials and polymer-metal interphases
 Bath smelting technology
 Slag cleaning
 Treatment of steelworks dust
 Treatment of arsenic fumes
 Erosion/corrosion of smelter refractories
 Characterisation of welding fumes

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN ADVANCED ENGINEERING MATERIALS

leading to the Honours Master of Engineering.

Number	Subject	Credit Points
<i>Core</i>		
MATL992	Dissertation	24
<i>Electives</i>		
MATL901	Special Topic in Materials A	6
MATL903	Recent Developments in Materials	6
MATL905	Metallic Materials	6
MATL906	Ceramic Materials	6
MATL907	Polymeric Materials	6
MATL972	Materials Design	6

For further details, see *Course Requirements* below.

POSTGRADUATE PROGRAM IN MATERIALS PROCESSING

leading to the Honours Master of Engineering.

Number	Subject	Credit Points
<i>Core</i>		
MATL992	Dissertation	24
<i>Electives</i>		
MATL901	Special Topic in Materials A	6
MATL902	Special Topic in Materials B	6
MATL903	Recent Developments in Materials	6
MATL921	Formability of Sheet Material	6
MATL932	Surface Engineering of Materials	6
MATL937	Process Metallurgy	6

For further details, see *Course Requirements* below.**POSTGRADUATE PROGRAM IN METALLURGY**

leading to the Honours Master of Engineering.

Number	Subject	Credit Points
<i>Core</i>		
MATL992	Dissertation	24
<i>Electives</i>		
MATL901	Special Topic in Materials A	6
MATL903	Recent Developments in Materials	6
MATL905	Metallic Materials	6
MATL911	Mechanical Behaviour of Materials	6
MATL951	Performance of Materials A	6
MATL952	Performance of Materials B	6
MATL971	Prescription and Selection of Materials	6

For further details, see *Course Requirements* below.**POSTGRADUATE PROGRAM IN MATERIALS ENGINEERING**

leading to the Master of Engineering Practice.

Number	Subject	Credit Points
MATL987	Metallurgical Processing 1	6
MATL988	Metallurgical Processing 2	6
MATL989	Metallurgical Processing 3	6
MATL974	Engineering Materials 1	6
MATL975	Engineering Materials 2	6
MATL976	Refractories	6
MATL977	Corrosion and Degradation	6
MATL978	Mechanical Behaviour	6
MATL981	Special Topic A	6
MATL982	Special Topic B	6
MATL983	Special Topic C	6
MATL985	Dissertation A	6
MATL986	Dissertation B	6

For further details, see *Course Requirements* below.**POSTGRADUATE PROGRAM IN MATERIALS ENGINEERING**

leading to the Master of Engineering Practice in Materials Welding and Joining.

Number	Subject	Credit Points
ENGG899	Advanced Topics in Materials Welding and Joining	48
ENGG901	Introduction to Welding and Joining Processes	2
ENGG902	Arc Welding Processes	2
ENGG903	Non-arc Joining Processes	2
ENGG904	Welding, Cutting and Surfacing	2
ENGG905	Behaviour of Metals during Welding - Part 1	2
ENGG906	Behaviour of Metals during Welding - Part 2	2
ENGG907	Joining of Non-metallic and Dissimilar Materials	2
ENGG908	Construction and Design - Part 1	2
ENGG909	Construction and Design - Part 2	2
ENGG910	Fabrication/Applications Engineering - Part 1	2
ENGG911	Fabrication/Applications Engineering - Part 2	2
ENGG912	Welding Practical - Part 1	2
ENGG913	Welding Practical - Part 2	2
ENGG914	NDT/Metallographic Analysis	2

POSTGRADUATE PROGRAM IN MATERIALS ENGINEERING (cont'd)

leading to the Master of Engineering Practice in Materials Welding and Joining.

Number	Subject	Credit Points
ENGG915	Mechanical Testing	2
ENGG916	Case Studies	2
ENGG917	Special Topics in Joining - A	2
ENGG918	Special Topics in Joining - B	2
ENGG919	Dissertation	12

For further details, see *Course Requirements* below.**POSTGRADUATE PROGRAM IN STEEL PROCESSING AND PRODUCTS**

leading to Graduate Certificate in Steel Processing and Products and Master of Engineering Practice in Steel Processing and Products.

Number	Subject	Credit Points
Graduate Certificate in Steel Processing and Products		
ENGG930	Preliminary Topics in Steel Processing and Products	6
TQM911	Introduction to Quality Concepts	6
ENGG931	Steel Products and their Production plus one elective	6
Master of Engineering Practice in Steel Processing and Products		
Graduate Certificate subjects, plus		
MGMT933	Management of Process Innovation 1	6
MECH970	Maintenance Management plus two electives	6
		12
Electives:		
ENGG932	Rolling Technology	6
ENGG933	Coating Technology	6
ENGG934	Steelmaking	6
ENGG935	Casting	6
MATL976	Refractories	6
ENGG936	Control of Steel Processing	6
MGMT915	Management of Change	6
MGMT934	Management of Process Innovation 2	6

For further details, see *Course Requirements* below.**OTHER POSTGRADUATE SUBJECTS**

Number	Subject	Credit Points
MATL899	Advanced Topics in Materials	48
MATL955	ME Major Thesis	48
MATL957	PhD Major Thesis	48

COURSE REQUIREMENTS**1. DOCTOR OF PHILOSOPHY**

Candidates for this degree enrol in MATL957.

2. HONOURS MASTERS OF ENGINEERING

A candidate who has a degree of Bachelor of Engineering with Honours at Class III or higher from this University, or an approved equivalent qualification, will enrol in subjects listed in the Postgraduate Schedule and with a value of not less than 48 credit points. Programs approved by the Department of Materials Engineering comprise:

- (i) the subject MATL955 Major Thesis; or
- (ii) a dissertation MATL992 plus four subjects, each with a value of 6 credit points.

For any particular year the availability of subjects offered will be determined by student numbers and demand.

3. MASTER OF ENGINEERING PRACTICE

A candidate who has completed a relevant major study, or approved equivalent work, either as part of, or in addition to, a bachelor degree will enrol in subjects having a value of not less than 48 credit points, and listed in the Postgraduate Schedule. A candidate who has not completed such a major study, or the equivalent, will enrol in subjects having a value of not less than 72 credit points.

Two Master of Engineering Studies Programs are currently offered: one in Materials Engineering and the other in Materials Welding and Joining.

Each subject in the Program in Materials Engineering:

- (a) will normally be offered over one session,
- (b) has a value of 6 credit points, and
- (c) will be assessed by a combination of quizzes, assignments, practical work and examination.

The Master of Engineering Studies Program in Materials Welding and Joining is outlined in Section 4 and in the Faculty of Engineering Entry.

4. MASTER OF ENGINEERING PRACTICE IN MATERIALS WELDING AND JOINING

This course is offered on a one year full-time basis, with the normal entry requirement being a Bachelor of Engineering or Bachelor of Science degree.

The subjects taken in the course are listed in the Table above. The course consists of a set of 18 modules (ENGG 901-918) with a total of 36 credit points, together with a specialisation (ENGG 919) of 12 credit points. The 2 credit point modules are presented as intensive one week (30 hour) subjects which:

- (a) are offered over two sessions;
- (b) are assessed by quizzes, assignments, reports on practical work and examination, as relevant to the

particular module.

Approval of the Dean of the Faculty will be required for the subject matter of ENGG 919 - Dissertation.

5. MASTER OF ENGINEERING PRACTICE IN STEEL PROCESSING AND PRODUCTS

Candidates would normally be expected to have a Bachelor Degree in Materials or Mechanical Engineering, but a bachelor degree in another appropriate field of engineering or science together with appropriate professional experience would also be accepted.

The course will be offered on a module basis, consisting of the 4 modules from the Graduate Certificate in Steel Processing and Products, plus an additional 4 modules from the above schedule.

6. GRADUATE DIPLOMA IN ENGINEERING

A candidate who has completed a degree of Bachelor of Engineering and

(a) who has not qualified for any class of Honours,

or

(b) who wishes to qualify for the Graduate Diploma in Engineering, will enrol in the 48 credit point subject MATL899.

Upon satisfactory completion of the subject MATL899 the candidate is eligible for award of the Graduate Diploma in Engineering in Materials Engineering. A person who is awarded the Graduate Diploma in Engineering and subsequently satisfies requirements for award of the degree of Honours Master of Engineering is required by Course Rule 504(2) to surrender the testamur and associated rights for the Graduate Diploma prior to receiving the Honours Master of Engineering degree.

7. GRADUATE DIPLOMA IN MATERIALS WELDING AND JOINING

This course is one year full-time in duration, or may be taken part-time on a module by module basis. The normal entry requirement is a Bachelor of Engineering degree or a Bachelor of Science or an Associate Diploma plus appropriate industrial experience.

There are 16 modules each of 30 hours duration (480 hours total). These modules are delivered within the global subject ENGG 899, Advanced Topics in Materials Welding and Joining (48 credit points), and comprise 11 taught modules and 5 practical modules.

8. GRADUATE CERTIFICATE IN STEEL PROCESSING AND PRODUCTS

A Candidate will be awarded a Graduate Certificate in Steel Processing and Products on the successful completion of 24 credit points outlined in the above schedule. The course will be offered on a module basis

Entry Requirements:

See Master of Engineering Practice in Steel Processing and Products

SUBJECT DESCRIPTIONS

900-level subjects offered by other departments may be included in a coursework program subject to the approval by the Head of Department.

While the subject co-ordinator has been given for each subject, it should be noted that the co-ordinator may change and any such changes will be notified to students enrolled in the subject.

ENGG899 Advanced Topics in Materials Welding and Joining

Autumn or Spring session; 48 credit points.

Components of ENGG 899 will be delivered as 16 modules.

4 modules: Welding and joining processes (arc physics, TIG, MIG, SAW, FCA, ESW, robotic welding, brazing and soldering, adhesive bonding, diffusion bonding, EB, laser, friction, flash butt, ERW)

2 modules: Behaviour of metals during welding

1 module: Materials behaviour during joining of non-metallic and dissimilar materials

2 modules: Construction and Design

2 modules: Fabrication/Applications Engineering

2 modules: Welding practical

1 module: NDT/metallographic analysis

1 module: Mechanical testing

1 module: Case studies

Co-ordinator: Professor D Dunne.

ENGG901 Introduction to Welding and Joining Processes

Autumn or Spring session; 2 credit points.

Introduction to welding technology; definitions and terminology; classification of welding processes. Oxy-gas welding; processes and principles; applications; typical problems; health and safety issues. Review of electrotechnics; basics of electricity and electronics; Ohm's Law; direct and alternating current; magnetism; electrical and electronic devices; arc physics; arc characteristics and control; temperature distribution in the arc; effect of magnetic fields; limits of application. Arc power sources; power source characteristics; AC sources, DC sources; control of current and voltage.

Co-ordinator: Professor J Norrish.

ENGG902 Arc Welding Processes

Autumn or Spring session; 2 credit points.

Introduction to gas shielded welding; process principles of TIG, MIG and MAG welding; shielding gases; effect of gases on arc characteristics; filler metals; standards; typical problems; health and safety issues. Tungsten inert gas (TIG) welding; power sources; process factors; joint design; specifications; applications and typical problems; health and safety factors.

Metal inert gas (MIG) welding; metal active gas (MAG) welding; power sources; process factors; special techniques; joint design; specifications; applications and typical problems; health and safety factors. Manual metal arc (MMA) welding; power sources; process factors; electrode coatings; joint design; specifications; applications and typical problems; health and safety factors. Submerged arc welding (SAW); power sources; process factors; joint design; specifications; applications and typical problems; health and safety factors.

Co-ordinator: Professor J Norrish.

ENGG903 Non-Arc Welding Processes

Autumn or Spring session; 2 credit points.

Principles and processes associated with: resistance welding; laser and electron beam welding; brazing and soldering; weld-bonding; adhesive bonding; friction welding; diffusion bonding; transient liquid brazing.

Co-ordinator: Professor J Norrish.

ENGG904 Welding, Cutting and Surfacing

Autumn or Spring session; 2 credit points.

Fully mechanised welding processes and robotics; on-line and off-line programming of robots; flexible manufacturing systems, CAD/CAM systems; seam tracking; arc sensing; vision systems; health and safety. Electroslag welding; process factors; applications and limitations. Cutting and other edge preparation processes; arc cutting; plasma cutting; flame cutting; electron beam and laser cutting; water-jet cutting. Cladding; thermal spraying; plasma-MIG surfacing; equipment, applications and special problems.

Co-ordinator: Professor J Norrish.

ENGG905 Behaviour of Metals During Welding - Part 1

Autumn or Spring session; 2 credit points.

Structures and properties of metals; alloys and phase diagrams; iron-carbon alloys; heat-treatment of steels; microstructures of welded joints; embrittlement and cracking in steels.

Commercial structural steels; fine grained steels; thermomechanically processed steels; low temperature steels; high temperature creep resistant steels; high alloy stainless steels; cast irons.

Co-ordinator: Professor D Dunne.

ENGG906 Behaviour of Metals During Welding - Part 2

Autumn or Spring session; 2 credit points.

Introduction to corrosion and wear; surface engineering of steels: cladding, thermal spraying, carburising, nitriding, electroplating, galvanizing, tin coating, other treatments; problems in welding and joining of coated steels. Copper and copper alloys; aluminium and its alloys; nickel alloys; other metals and alloys; welding and joining of non-ferrous alloys.

Co-ordinator: Professor D Dunne.

ENGG907 Joining of Non-Metallic and Dissimilar Materials

Autumn or Spring session; 2 credit points.

Structures and properties of non-metallic materials and composites; joining of polymers; joining of polymers to metals; joining of ceramics; ceramic-metal joints; methods used for joining of composites and composites to other materials.

Co-ordinator: Professor D Dunne.

ENGG908 Construction and Design - Part 1

Autumn or Spring session; 2 credit points.

Fundamentals of the strength of materials; basics of weld design; design principles of welded structures; joint design; fracture mechanics.

Co-ordinator: Professor J Norrish.

ENGG909 Construction and Design - Part 2*Autumn or Spring session; 2 credit points.*

Behaviour of welded structures under different forms of loading; design of welded structures for static loading; effects of dynamic loading; thermodynamically loaded welded structures; design of welded aluminium alloy structures; reinforced steel welded joints.

Co-ordinator: Professor J Norrish.

ENGG910 Fabrication/Applications Engineering - Part 1*Autumn or Spring session; 2 credit points.*

Quality assurance in welded structures; quality control during manufacture, total quality management. Welding stresses and distortion; control of welding restraint, stress relieving of weldments. Plant facilities, welding jigs and fixtures; measurement, control and recording in welding. Fume and radiation hazards from welding, health and safety issues.

Co-ordinator: Professor J Norrish.

ENGG911 Fabrication/Applications Engineering - Part 2*Autumn or Spring session; 2 credit points.*

Non-destructive testing methods: ultrasonics and radiography; repair welding; fitness for purpose considerations; economic aspects of weld fabrication; economic considerations of high productivity welding, automatic and robotic welding.

Co-ordinator: Professor J Norrish.

ENGG912 Welding Practical- Part 1*Autumn or Spring session; 2 credit points.*

Training in oxy-acetylene welding, MMA, TIG and MIG welding techniques; training in oxy-gas cutting of steel.

Co-ordinator: Professor J Norrish.

ENGG913 Welding Practical- Part 2*Autumn or Spring session; 2 credit points.*

Demonstrations of brazing, soldering and adhesive bonding techniques. Demonstrations of plasma welding and cutting, submerged arc welding, resistance spot and seam welding, robotic and laser welding.

Co-ordinator: Professor J Norrish.

ENGG914 NDT/Metallographic Analysis*Autumn or Spring session; 2 credit points.*

Practical exercises in weld defect testing using ultrasonics and radiography. Metallographic examination of commercially important metals and alloys, and the microstructures of steel and aluminium weldments.

Co-ordinator: Professor D Dunne.

ENGG915 Mechanical Testing*Autumn or Spring session; 2 credit points.*

Practical exercises in mechanical testing of metallic and non-metallic materials: hardness testing, Charpy testing, determination of yield and tensile strengths, tensile elongation. Demonstration of fracture toughness (COD) testing. Application of mechanical testing to weldments.

Co-ordinator: Professor D Dunne.

ENGG916 Case Studies*Autumn or Spring session; 2 credit points.*

Case studies of welding procedures applied to the fabrication of boilers and pressure vessels, pipelines, ships and naval vessels, offshore structures, transportation equipment, cranes, bridges, steel framed buildings, etc.

Co-ordinator: Professor D Dunne.

ENGG917 Special Topics in Joining - A*Autumn or Spring session; 2 credit points.*

Lectures on special topics in materials welding and joining, especially current research directions and leading edge technology.

Co-ordinator: Professor D Dunne.

ENGG918 Special Topics in Joining - B*Autumn or Spring session; 2 credit points.*

Lectures on special topics in materials welding and joining, especially current research directions and leading edge technology.

Co-ordinator: Professor D Dunne.

ENGG919 Dissertation*Annual; 12 credit points.*

A thesis is required based on project work and/or an interpretative literature review on a topic in materials welding and joining. The thesis can be oriented towards a mechanical, materials, civil or mining engineering.

Co-ordinator: Professor T Rozgonyi.

ENGG930 Preliminary Topics in Steel Processing and Products*Autumn or Spring Session; 6 credit points.*

A program, approved by the Dean of Engineering, of project work and studies of advanced topics necessary for the understanding of steel processing and the production of steel plate and strip. Topics will be selected from the fields of physical and mechanical behaviour of materials; microstructure; fluid mechanics, heat transfer; manufacturing as a process and observational methods.

Co-ordinator: to be advised.

ENGG931 Steel Products and Their Production*Autumn or Spring Session; 6 credit points.*

An overview of steel products and the processes used to produce them in a modern steelworks. This will include electric arc furnace steelmaking; casting; rolling; annealing; metallic coating and polymer coating.

Co-ordinator: to be advised.

ENGG932 Rolling Technology*Autumn or Spring Session; 6 credit points.*

A detailed study of hot and cold rolling and thermal treatment; methods of modelling these processes and the properties and uses of steels produced by these processes. A study of batch and continuous annealing of rolled products and the resulting modifications to properties.

Co-ordinator: to be advised.

ENGG933 Coating Technology*Autumn or Spring Session; 6 credit points.*

A detailed study of the processes of

applying metallic and polymer coatings to steel strip; mathematical modelling of the processes; the chemistry of the coatings applied and the properties and uses of the coated products produced by these processes.

Co-ordinator: to be advised.

ENGG934 Steelmaking*Autumn or Spring Session; 6 credit points.*

An introduction to methods used to produce iron for steelmaking. A survey of methods of steelmaking and a discussion of the factors which might lead to the use of electric arc furnaces. A detailed study of electric arc furnace steelmaking. Types of steel and their uses.

Co-ordinator: to be advised.

ENGG935 Casting*Autumn or Spring Session; 6 credit points.*

A detailed study of the continuous casting of steel including fluid flow; heat transfer; chemical interactions and solidification; modelling of the casting process; mould design and factors influencing the quality of the cast product.

Co-ordinator: to be advised.

ENGG936 Control of Steel Processing*Autumn or Spring Session; 6 credit points.*

Review of measurement and control methods; treating the manufacturing process as a system, specific applications of measurement and control methods to steel processing from steelmaking through to casting.

Co-ordinator: to be advised.

MATL899 Advanced Topics in Materials*48 credit points.*

A program, approved by the Head of Department, of project work and studies of advanced topics in materials selected from the fields of processing, physical and mechanical behaviour, microstructure and observational methods.

Co-ordinator: Professor D Dunne.

MATL901/MATL902 Special Topic in Materials A/B

There are no set syllabi for these subjects. It is intended that they will be offered on a specialised materials engineering topic by members of the Department, or visitors to the Department.

Co-ordinator: Dr G Brooks.

MATL903 Recent Developments in Materials

Considerations of the structures, properties, technology and applications of advanced materials with emphasis on materials important to the Australian economy.

Co-ordinator: Mrs S Nightingale.

MATL905 Metallic Materials

Commercial metals and alloys. Relationships between structure and industrially significant properties. Control of structure by processing. Thermal and mechanical treatment. Recovery and recrystallization. Metal-matrix composites.

Co-ordinator: Professor D P Dunne.

MATL906 Ceramic Materials

Ceramics - traditional and advanced. Microstructure-property relationships.

Processing, solid state and liquid phase sintering. Applications. Ceramic matrix composites.

Co-ordinator: Mrs S Nightingale.

MATL907 Polymeric Materials

Polymers, formation and classification. Effects of structure and additives on properties. Composite materials with polymeric matrices.

Co-ordinator: Dr G Spinks.

MATL908 Phase Transformations

Analysis and theories of solid state phase transformations, nucleation phenomena, diffusional and diffusionless growth; application to precipitation, eutectoid, proeutectoid, martensitic and other processes.

Co-ordinator: to be advised.

MATL911 Mechanical Behaviour of Materials

Behaviour of ceramics, metals and polymers under stress, stress-strain relationships, time and temperature dependent phenomena.

Co-ordinator: Associate Professor T Chandra.

MATL921 Formability of Sheet Material

Flow behaviour of sheet materials under uniaxial and biaxial stress; analyses of industrial forming processes.

Co-ordinator: Dr M Samandi.

MATL932 Surface Engineering of Materials

Surface coating processes, coating of materials with ceramics, metals and polymers; quality and performance of the product; surface heat treatment processes.

Co-ordinator: Dr M Samandi.

MATL937 Process Metallurgy

Ironmaking. Sintering and pelletising; time-temperature effects; phase composition; strength-reducibility relationships; mix selection; cokemaking; fundamental relations; coke strength and reactivity; blast furnace process; Rist and Reichert diagrams; burden design and distribution; stack, bosh and hearth processes; DRI.

Steelmaking. Hot metal pretreatment - thermodynamic and kinetic aspects; BOF steelmaking; top and bottom blowing; thermodynamics and kinetics of refining; vacuum methods; alloy recovery; deoxidation; continuous casting; solidification.

Co-ordinator: Dr G Brooks.

MATL951 Performance of Materials A

Mechanical behaviour. Elastic, plastic, anelastic and viscoelastic responses. Fracture-brittle and ductile. Fracture toughness and crack growth. Effects of temperature, strain rate and geometry. Griffith equation and fracture mechanics. Creep and stress relaxation. Fatigue.

Co-ordinator: Associate Professor T Chandra.

MATL952 Performance of Materials B

Environmental behaviour. Thermodynamic aspects. Oxidation, processes and kinetics. Oxidation resistance. Aqueous

corrosion, types of reaction, avoidance and restraint. Degradation of polymers and ceramics. Wear and abrasion. Stress corrosion and corrosion fatigue.

Co-ordinator: to be advised.

MATL955 ME Major Thesis

48 credit points.

Co-ordinator: to be advised.

MATL957 PhD Major Thesis

48 credit points.

Co-ordinator: to be advised.

MATL961 Materials Analysis A

Advanced techniques. Theory and practice of X-ray, neutron and electron diffraction. Compositional analysis by X-ray fluorescence at macro and micro levels. Image contrast in electron microscopy. Field ion microscopy. Auger and Mossbauer spectroscopy.

Co-ordinator: Professor D Dunne.

MATL971 Prescription and Selection of Materials

General classifications and properties of materials. Standards, codes and specifications. Property requirements for specific applications. Bases for choice of materials, testing and evaluation. Constraints imposed by environmental, manufacturing and economic considerations. Use of computers and data banks. Case studies.

Co-ordinator: Professor D Dunne.

MATL972 Design of Materials

Relationship between composition, structure, properties and behavioural characteristics of industrially significant materials control of structure; developments in design of advanced materials for engineering applications.

Co-ordinator: Professor D Dunne.

MATL974 Engineering Materials 1

Principles of materials engineering: raw materials, materials preparation and processing, materials utilisation. Engineering materials: behavioural characteristics, property requirement, structure dependence. Materials classification: ceramics, metals and alloys, polymers, composites.

Co-ordinator: Professor D Dunne.

MATL975 Engineering Materials 2

Phase structure of materials, dependence upon composition and temperature, heat treatment. Microscopy and microstructure: proportion, distribution and dispersion. Relationship between microstructure and properties of engineering materials. Principles of design of materials. Selection of materials for engineering applications.

Co-ordinator: Dr M Samandi.

MATL976 Refractories

Chemical composition and properties of oxide and non-oxide ceramics commonly used in refractory applications, bonding of refractories, monolithic refractories and installation techniques, refractory cements, degradation examples of applications in the iron and steel industry, methods for testing refractory properties.

Co-ordinator: Mrs S Nightingale.

MATL977 Corrosion and Degradation

Corrosion of metallic materials: emf principles, galvanic currents, ionic potential, stress corrosion. Corrosion prevention: selection of materials, anodic and cathodic processes, E-pH diagrams. Degradation of non-metallic materials: UV effects, chain rupture and scission in polymers, FTIR analysis. Wear and abrasion of metallic and non-metallic materials. High temperature corrosion and oxidation of metals and ceramics. Industrial applications.

Co-ordinator: Dr G Spinks.

MATL978 Mechanical Behaviour

Mechanical properties of materials: strength, hardness, strain hardening, creep, rupture, impact, dislocation and grain boundary effects. Mechanical forming operations: rolling, extrusion, forging and wire drawing, flow stress determination. Thermomechanical processing: time and temperature dependent behaviour, die design, high temperature materials problems, defects in mechanical processing. Industrial applications.

Co-ordinator: Associate Professor T Chandra.

MATL981 Special Topic A

Specialist topic in materials engineering offered by members of staff, industrial experts or visitors to the Department.

Co-ordinator: Associate Professor T Chandra.

MATL982 Special Topic B

Specialist topic in materials engineering offered by members of staff, industrial experts or visitors to the Department.

Co-ordinator: Associate Professor T Chandra.

MATL983 Special Topic C

Specialist topic in materials engineering offered by members of staff, industrial experts or visitors to the Department.

Co-ordinator: Associate Professor T Chandra.

MATL985 Dissertation A

Extensive literature survey and analysis of some topic relevant to materials engineering and approved by the Head of the Department.

Co-ordinator: Associate Professor T Chandra.

MATL986 Dissertation B

Extensive literature survey and analysis of some topic relevant to materials engineering and approved by the Head of the Department.

Co-ordinator: Associate Professor T Chandra.

MATL987 Metallurgical Processing 1

Properties of process materials: solids, liquids, gases, powders, slurries. Unit operations: communication, screening, separation, drying. Unit processes in the production of ferrous and non-ferrous metals, ceramic materials and polymeric materials.

Co-ordinator: Dr G Brooks.

MATL988 Metallurgical Processing 2

Thermodynamics and kinetics of metallurgical systems: Gibbs free energy, Ellingham diagrams, slag-metal equilibria, reaction order, rate constants, temperature and pressure effects. Transport phenomena: momentum, heat and mass transfer. Metallurgical reaction engineering: batch and flow reactors, design principles.
Co-ordinator: Dr G Brooks.

MATL989 Metallurgical Processing 3

Ironmaking: raw materials selection and preparation, sintering and agglomeration, the blast furnace process, DRI processes, Corex and Hismelt. Steelmaking: pneumatic and EAF melting, refining ladle and vacuum treatment. Casting: batch and continuous. Quality assurance and testing.
Co-ordinator: Dr G Brooks.

MATL992 Dissertation

24 credit points.

This subject may comprise a minor research project, an extensive literature survey and analysis, or the development of improved modelling methods of materials processes.
Co-ordinator: to be advised.

MECHANICAL ENGINEERING

COURSES OFFERED

The following courses are available:

1. Doctor of Philosophy
2. Honours Master of Engineering (Mechanical Engineering)
3. Honours Master of Engineering (Maintenance Management)
4. Honours Master of Engineering (Systems Engineering)
5. Master of Engineering Practice (Bulk Solids and Particulate Technologies)
6. Graduate Diploma in Engineering (Mechanical Engineering)
7. Graduate Diploma in Engineering (Maintenance Management)
8. Graduate Diploma in Engineering (Systems Engineering)

POSTGRADUATE PROGRAMS

Advanced Manufacturing
Applied Mechanics
Bulk Solids and Particulate Technologies
Maintenance Management
Materials Handling
Systems Engineering
(Total Quality Management is available as a cross Faculty program)

CURRENT RESEARCH AREAS

The following research areas are available to candidates undertaking the Honours Master of Engineering degree by research and the Doctor of Philosophy degree.

Applied Mechanics and Heat Transfer:

Bio-mechanics
Cavitation
Computational fluid mechanics
Finite element analysis
Heat transfer in two phase flow
Mechanical engineering design
Monitoring/diagnosis of manufacturing processes and machinery conditions
New algorithms in robotics
Non-destructive testing
Microwave applications
Mine water flows in longwall operation
Ozone transfer into water for disinfection
Recreation engineering
Rolling mill technology
Solar thermal system analysis and design
Solid mechanics of elastic and magneto-elastic bodies
System identification and control
Tribology - bearings, friction and wear

Manufacturing Technology and Management:

Automated QC and reliability engineering
Automated statistical process control
Automated warehousing systems
Automated welding and joining
Chip control in automated manufacture
Cost-effective quality management
Cybernetic quality system
Expert/knowledge system in automated machining
Fuzzy set and fuzzy logic control
Intelligent manufacturing systems
Japanese quality and manufacturing techniques
Knowledge-based computer simulation of machining process
Maintenance management
Total quality management

Materials Handling:

Bulk solids handling and prediction of bin wall loads and flowrates
Energy technology
Pneumatic and hydraulic conveying

SCHEDULE OF PROGRAMS**POSTGRADUATE PROGRAM IN ADVANCED MANUFACTURING**

leading to the Honours Master of Engineering.

Number	Subject	Credit Points
<i>Core</i>		
MECH951	Dissertation	24
<i>Electives</i>		
MECH908	Computer Aided Design	6
MECH919	Advanced Topics in Mechanical Engineering 1	6
MECH929	Advanced Topics in Mechanical Engineering 2	6
MECH932	Reliability Systems Management	6
MECH934	Advanced Manufacturing Processes	6
MECH935	Integrated Manufacturing Systems	6
MECH939	Advanced Topics in Mechanical Engineering 3	6
MECH942	Expert Systems in Manufacturing	6
MECH949	Advanced Computer Control of Machines and Processes	6
MECH950	Advanced Robotics	6
MECH960	Industrial Quality Management	6
MECH961	Quality Improvement Systems and Implementation	6
MECH963	Industrial Quality Technology	6
MECH965	Quality in Engineering Design	6
MECH967	International Quality Techniques	6

For further details, see *Course Requirements* below.**POSTGRADUATE PROGRAM IN APPLIED MECHANICS**

leading to the Honours Master of Engineering.

Number	Subject	Credit Points
<i>Core</i>		
MECH951	Dissertation	24
<i>Plus at least three (3) from:</i>		
MECH903	Biomechanical Engineering	6
MECH906	Experimental and Analytical Modelling	6
MECH908	Computer Aided Design	6
MECH917	Air Conditioning and Refrigeration	6
MECH919	Advanced Topics in Mechanical Engineering 1	6
MECH920	Numerical Methods in Mechanical Engineering	6
MECH921	Hydrodynamics	6
MECH924	Continuum Mechanics	6
MECH925	Advanced Fluid Power	6
MECH926	Applied Fluid Mechanics	6
MECH928	Finite Element Techniques in Mechanical Engineering	6
MECH929	Advanced Topics in Mechanical Engineering 2	6
MECH930	Mechanical Vibration and Condition Monitoring	6
MECH931	Friction Lubrication and Wear	6
MECH933	Solar Energy	6
MECH939	Advanced Topics in Mechanical Engineering 3	6
MECH944	Heat Transfer 2	6

For further details, see *Course Requirements* below.**POSTGRADUATE PROGRAM BULK SOLIDS AND PARTICULATE TECHNOLOGIES**

leading to Master of Engineering Practice.

Number	Subject	Credit Points
MECH913	Pneumatic Transport of Bulk Solids	6
MECH914	Hydraulic Transport of Bulk Solids	6
MECH927	Physical Processing of Bulk Solids	6
MECH982	Bulk Solids Characterisation & Particulate Mechanics	6
MECH983	Storage and Flow of Bulk Solids	6
MECH984	Belt Conveying	6
MECH985	Dust and Fume Systems	6
MECH986	Instrumentation and Control Systems for Bulk Solids	6
MECH987	Advanced Topics in Bulk Solids & Particulate Technologies 1	6
MECH988	Advanced Topics in Bulk Solids & Particulate Technologies 2	6
MECH989	Advanced Topics in Bulk Solids & Particulate Technologies 3	6
<i>plus</i>		
MECH990	Project in Bulk Solids and Particulate Technologies	12

For further details, see *Course Requirements* below.

POSTGRADUATE PROGRAM IN MAINTENANCE MANAGEMENT

leading to the Graduate Diploma in Engineering (Mtce Mgt) and the Honours Master of Engineering (Mtce Mgt).

Number	Subject	Credit Points
Graduate Diploma in Engineering (Mtce Mgt)*		
<i>Core</i>		
MATH949	Statistical Thinking	6
<i>or</i>		
ENGG921	Engineering Data Reduction and Error Analysis	6
MECH970	Maintenance Management	6
MECH973	Systems Engineering and Life Cycle Management	6
MGMT911	Organisational Behaviour	6
<i>Plus 4 electives to be selected from the list below.</i>		
Honours Master of Engineering (Mtce Mgt)*		
<i>Core</i>		
MECH951	Dissertation	24
MECH972	Condition Based Maintenance	6
MECH974	Information Systems in Maintenance Management	6
<i>Plus 2 electives to be selected from the list below.</i>		
<i>Electives</i>		
ACCY901	Accounting for Managers	6
LAW960	Legal Studies for Professionals	6
MECH940	Rotational Drives and Transmissions	6
MECH971	Systems Analysis for Maintenance	6
MECH975	Maintenance in Manufacturing Industry	6
MECH976	Industrial Engineering Techniques in Maintenance Management	6
MECH977	Advanced Topics in Maintenance 1	6
MECH978	Advanced Topics in Maintenance 2	6
MGMT912	Organisation Structure and Control	6
MGMT953	Human Resource Management	6
MGMT976	Competitive Strategy and Analysis	6

For further details, see *Course Requirements* below.**POSTGRADUATE PROGRAM IN MATERIALS HANDLING SYSTEMS**

leading to the Honours Master of Engineering.

Number	Subject	Credit Points
<i>Core</i>		
MECH951	Dissertation	24
MECH911	Bulk Solids Handling Systems 1	6
MECH912	Bulk Solids Handling Systems 2	6
MECH913	Pneumatic Transport of Bulk Solids	6
<i>Electives</i>		
MECH906	Experimental and Analytical Modelling	6
MECH914	Hydraulic Transport of Bulk Solids	6
MECH919	Advanced Topics in Mechanical Engineering 1	6
MECH922	Energy Technology	6
MECH927	Physical Processing of Bulk Solids	6
MECH929	Advanced Topics in Mechanical Engineering 2	6
MECH931	Friction, Lubrication and Wear	6
MECH940	Rotational Drives and Transmissions	6
MECH939	Advanced Topics in Mechanical Engineering 3	6
MECH945	Bulk Solids Handling Systems 3	6
MECH960	Industrial Quality Management	6

For further details, see *Course Requirements* below.**POSTGRADUATE PROGRAM IN SYSTEMS ENGINEERING**

leading to the Graduate Diploma in Engineering (Systems Engineering) and the Honours Master of Engineering (Systems Engineering).

Number	Subject	Credit Points
Graduate Diploma in Engineering (Systems Engineering)		
<i>Core</i>		
MECH973	Systems Eng. and Life Cycle Management	6
MECH980	Functional Analysis and Risk Management	6
MECH981	Concurrent Design Management	6
ENGG921	Eng. Data Reduction & Error Analysis	6
MGMT911	Organisational Behaviour	6
MGMT979	Financial Decision Making	6
<i>Plus 2 electives to be selected from the list below.</i>		

* This is considered to be the normal progression. Candidates entering the Masters course directly may be required to take one or more of the core subjects listed under Graduate Diploma.

POSTGRADUATE PROGRAM IN SYSTEMS ENGINEERING (cont'd).

leading to the Graduate Diploma in Engineering (Systems Engineering) and the Honours Master of Engineering (Systems Engineering).

Number	Subject	Credit Points
Honours Master of Engineering (Systems Engineering)		
<i>Core</i>		
MECH971	Maintenance Engineering	6
MECH974	Information Systems in Maintenance Management	6
MECH951	Dissertation	24
<i>plus 2 electives to be selected from the list below.</i>		
<i>Electives</i>		
MGMT921	Managerial Finance	6
MECH940	Rotational Drives and Transmissions	6
MECH960	Industrial Quality Management	6
MECH974	Information Systems in Maintenance Management	6
MECH971	Maintenance Engineering	6
MECH976	Industrial Engineering Techniques in Maintenance Mgmt	6
LAW960	Law for Managers	6
MGMT953	Human Resource Management	6
ACCY901	Accounting for Managers	6
MGMT912	Organisation Structure and Control	6
MGMT976	Competitive Strategy and Analysis	6
MECH965	Quality in Engineering Design	6
ENGG922	Statistical Process Control in Manufacturing and Service Industries	6

For further details, see *Course Requirements* below.**OTHER POSTGRADUATE SUBJECTS**

Number	Subject	Credit Points
MECH899	Advanced Topics in Engineering	48
MECH955	ME Major Thesis	48
MECH957	PhD Major Thesis	48

COURSE REQUIREMENTS**1. DOCTOR OF PHILOSOPHY**

Candidates for this degree enrol in MECH957 PhD Major Thesis (48 credit points).

2. HONOURS MASTER OF ENGINEERING (Mechanical)

A candidate who has a Bachelor of Engineering with Honours Class III or higher from this University, or an approved equivalent qualification, will enrol in subjects listed in the Postgraduate Schedule and with a minimum value of 48 credit points. Approved programs comprise:

- (i) the subject MECH955 ME Major Thesis, for full-time and part-time candidates, or
- (ii) the subject MECH951 Dissertation plus 24 credit points of coursework according to one of the 3 approved programs: Advanced Manufacturing; Applied Mechanics; Materials Handling Systems.

3. HONOURS MASTER OF ENGINEERING (Maintenance Management)

Direct entry to the Honours Master of Engineering (Mtce Mgt) course will require a tertiary degree of approved standard from a recognised institute, eg a BE (Hons) degree or equivalent.

Maintenance engineers having completed their Graduate Diploma degree (Maintenance Management/Engineering) will be given appropriate credits for the course they already have completed. Credits may

also be approved for other qualifications or experience for suitable applicants.

In order to then obtain an Honours Masters of Engineering (Mtce Mgt), the candidate must have a Graduate Diploma in Engineering (Mtce Mgt) or equivalent and have completed successfully a further 48 credit points. These must consist of four subjects selected from 2 core and 2 elective subjects and a 24 credit point research project leading to a dissertation. Note that prior to the conferring of the master degree, the candidate is required according to Course Rule 504(2) to surrender the testamur and associated rights for the diploma.

The research project required for the honours master degree will run in parallel with the formal coursework throughout the anticipated last year of a candidate's study. Students will be able to choose a suitable investigation from the current research activities at any of the Departments involved.

4. HONOURS MASTER OF ENGINEERING (Systems Engineering)

Direct entry to the Honours Master of Engineering (Systems Engineering) course will require a tertiary degree of approved standard from a recognised institute, eg. a BE (Hons) degree or equivalent. Engineers having completed their Graduate Diploma degree (Maintenance Management/ Engineering) will be given appropriate credits for the course they already have completed. Credits may also be approved for other qualifications or experience for suitable applicants.

To obtain an Honours Master of Engineering (Systems Engineering), the candidate must have a Graduate Diploma in Engineering (Systems Engineering) or equivalent, and have completed successfully a further 48 credit points. These must consist of 4 subjects selected from 2 core and 2 elective subjects and a 24 credit point research project leading to a dissertation.

The research project required for the Honours Master degree will run in parallel with the formal coursework throughout the anticipated last year of candidate's study.

5. MASTER OF ENGINEERING PRACTICE (Bulk Solids and Particulate Technologies)

The normal entry requirement is a Bachelor of Engineering degree, or a Bachelor of Science degree, or an Associate Diploma in a relevant field, plus appropriate industrial experience

A candidate will be awarded a Master of Engineering Practice (Bulk Solids and Particulate Technologies) on successful completion of 48 credit points. The 12 credit point project (MECH990) is compulsory, the remaining 36 credit points will be made up of 6 subjects from the electives listed in the schedule.

This program is offered on a modular basis.

6. GRADUATE DIPLOMA IN ENGINEERING (Mechanical Engineering)

A candidate who has completed a degree of Bachelor of Engineering; and

- (a) who has not qualified for any class of Honours;

or

(b) who wishes to qualify for the Graduate Diploma in Engineering, will enrol in the 48 credit point subject MECH899.

Upon satisfactory completion of the subject MECH899, the candidate is eligible for award of the Graduate Diploma in Engineering (Mechanical).

A person who is awarded the Graduate Diploma in Engineering and subsequently satisfies requirements for award of the degree of Honours Master of Engineering is required by Course Rule 504(2) to surrender the testamur and associated rights for the graduate diploma prior to receiving the honours masters degree.

7. GRADUATE DIPLOMA IN ENGINEERING (Maintenance Management)

Entry to this Diploma normally will require an approved Bachelor degree from this University or an approved equivalent qualification. However, maintenance managers/engineers without tertiary qualifications in engineering but with significant industrial experience, will also be considered for admission to a limited number of places.

A candidate will be awarded a Graduate Diploma in Engineering (Mtce Mgt) on successful completion of 48 credit points. 24 credit points of the core is compulsory, made up of four 6 credit point course work subjects - one subject from each of the Departments of Management and Mathematics, and two from Mechanical Engineering. The other 24 credit points will come from four 6 credit point electives.

Students completing the Graduate Diploma in Engineering (Mtce Mgt) at the University of Wollongong will have the option to enter into the Honours Master of Engineering (Mtce Mgt).

8. GRADUATE DIPLOMA OF ENGINEERING (Systems Engineering)

Direct entry to the Graduate Diploma of Engineering (Systems Engineering) course will require a tertiary degree of approved standard from a recognised institute, eg. a BE degree or equivalent. Credits may be granted for other qualifications or experience of suitable applicants.

Senior managers/engineers without tertiary qualifications in engineering but with significant industrial experience, will also be considered for admission to a limited number of places.

A candidate will be awarded a Graduate Diploma in Engineering (Systems Engineering) on successful completion of 48 credit points. Thirty-six credit points of the core is compulsory, made up of six credit point coursework subjects. The other 12 credit points will come from two 6 credit point electives, selected from the list above.

SUBJECT DESCRIPTIONS

Each of the subjects described below, with the exception of MECH899, MECH951, MECH955 and MECH957, has 3 contact

hours per week for one session.

Subjects offered by other Departments will be acceptable for the Masters degree course in Mechanical Engineering subject to the approval by the Head of the Department.

ENGG921 Engineering Data Reduction and Error Analysis

Autumn or Spring session; 6 credit points (3 hrs per wk).

Assessment: final examination and compulsory assignments during session.

Probability distributions; normal, binomial, Weibull. Testing of hypothesis. error analysis, sampling techniques. experimental design, correlation and auto-correlation, introduction to maintenance analysis data, and control charts.

Co-ordinator: Professor TG Rozgonyi.

ENGG922 Statistical Process Control in Manufacturing and Service Industries

Autumn or Spring session; 6 credit points (3 hrs per wk).

Assessment: final examination and compulsory assignments.

Process capability and indices, process stability. Specification and control limits. The seven statistical tools, X-bar charts, charts, p-charts, pn-charts, u-charts, c-charts, s-charts, CUSUM charts. Exponentially weighted moving average. Human behaviour requirements in SPC. Leadership requirements. Small group activities. Decision making for process improvement. Acceptance sampling. SPC case studies.

Co-ordinator: Professor TG Rozgonyi.

MECH899 Advanced Topics in Engineering

Double session; 48 credit points.

Students will normally take a selection of topics at advanced level. The selection of the topics will be subject to the approval of the Head of the Department in which the student wishes to enrol and subsequently specialise.

Co-ordinator: Dr WK Soh.

MECH903 Biomechanical Engineering

Autumn or Spring session; 6 credit points (2 hrs lecture/2 hrs laboratory/tutorial per wk).

Assessment: mid-session examination 20%, final examination 50%, project/lab report/tutorial 30%.

This subject introduces a selection of advanced quantitative methods used in biomechanical assessment of human movements. Topics include three-dimensional dynamics, modelling techniques (including finite element, simulation and optimisation).

Objectives: On successfully completing this subject, students will be able to assess the mechanics of musculoskeletal system, including design equipment. Clinical application of these methods will include gait analysis, mechanics of rehabilitation and occupational tasks.

Co-ordinator: Dr A Basu.

MECH906 Experimental and Analytical Modelling

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination, and compulsory assignments during session.

Stochastic processes; Random signal analysis; Correlation function; Probability functions and spectral density functions; System identification; Correlation analysis; Spectral analysis. Modelling of continuous systems using analytical methods; Lumped parameter systems; Linearisation. Solution of equations. Parameter estimation. Review of classical control techniques; Multi-input multi-output systems; Transfer functions; State space analysis; Stability analysis; Interaction and inverse Nyquist array; Optimal control.

Co-ordinator: Dr GJ Montagner.

MECH908 Computer Aided Design

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

Application of boundary element method; computer simulation of engineering systems; optimization techniques; computer graphics, visualisations and animations.

Co-ordinator: to be advised.

MECH911 Bulk Solids Handling Systems 1

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

Flow patterns of bulk solids constrained by bins and hoppers; theory of flow; determination of flow properties; hopper design; bin loads; design of feeders.

Co-ordinator: Professor PC Arnold.

MECH912 Bulk Solids Handling Systems 2

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

Further consideration concerning bin design; failure criteria for bulk solids; flow promotion; two-phase flow; effects of interstitial gas on flow of fine powders; mixing and segregation of bulk solids; design of trough belt conveyors and bucket elevators.

Co-ordinator: Professor PC Arnold.

MECH913 Pneumatic Transport of Bulk Solids

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination, mid-session examination and compulsory assignments during session.

Classification and selection of transport systems; flow patterns; pressure drop, minimum transport velocities; design parameters and examples; feeding and disengaging methods.

Co-ordinator: Dr PW Wypych.

MECH914 Hydraulic Transport of Bulk Solids

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials/lab).

Assessment: 2 hr final examination. Other short examinations, tutorials/assignments may be incorporated in the final assessment.

Properties of slurries, slurry classification; flow behaviour, flow predictions, friction losses; system equipment, system design & operation; economics; wear of equipment & material degradation.

Co-ordinator: Dr AG McLean.

MECH917 Air Conditioning and Refrigeration

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

Air conditioning of buildings; design heat load calculation; plant sizing and design; refrigeration plant components; thermodynamic analysis and design.

Co-ordinator: Dr P Cooper.

MECH919 Advanced Topics in Mechanical Engineering 1

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

There is no set syllabus for this subject. It is intended that it normally be offered on a specialised mechanical engineering topic given by members of the Department, visiting academic staff or engineering consultants.

Co-ordinator: Dr WK Soh.

MECH920 Numerical Methods in Mechanical Engineering

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

Studies using finite difference and boundary element techniques. Topics are selected from the following areas of Mechanical Engineering: Aerodynamics, boundary layer flow, elasticity, gas dynamics, heat transfer, hydraulics and hydrodynamics.

Co-ordinator: Professor MP West.

MECH921 Hydrodynamics

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

Applications of complex potential; unsteady fluid flows; foil theory and applications; cavitations and discontinuous flows; body hydrodynamics.

Co-ordinator: Dr WK Soh.

MECH922 Energy Technology

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

Evaluation of alternate fuels and energy sources, energy management and audits, conventional and advanced energy systems, alternate and renewable energy source evaluation, remote area power supplies, energy generation and utilisation environmental considerations.

Co-ordinator: Dr AG McLean.

MECH924 Continuum Mechanics

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

An introduction to tensor analysis, classical theory of elasticity, fluid mechanics, thermodynamics of solids, thermoelasticity, viscoelasticity, plasticity, finite deformation theory.

Co-ordinator: Associate Professor A Basu.

MECH925 Advanced Fluid Power

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

Fluid power components; circuit design: analysis of transmission, valve-controlled and feedback systems; electronic controls; vibration and transient response.

Co-ordinators: Associate Professor AK Tieu.

MECH926 Applied Fluid Mechanics

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

A study of applied fluid mechanics which will include the analysis, design and control of a selection of fluid flow systems in industry.

Co-ordinator: Dr WK Soh.

MECH927 Physical Processing of Bulk Solids

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials/lab).

Assessment: 2 hr final examination. Other short examinations, tutorials/assignments may be incorporated in the final assessment.

Bulk solids description and characterisation; crushing, grinding, thickening, separation, precipitation, filtration, blending, tableting, briquetting and agglomeration, sizing and classification; introduction to beneficiation; drying; intermediate processing and handling; control and instrumentation; dust generation and abatement.

Co-ordinator: Dr AG McLean.

MECH928 Finite Element Techniques in Mechanical Engineering

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

Introduction to finite element method. Application of finite element technique to stress analysis, fluid mechanics, heat transfer, vibration. Computer packages.

Co-ordinator: Professor MP West.

MECH929 Advanced Topics in Mechanical Engineering 2

As for MECH919.

MECH930 Mechanical Vibration and Condition Monitoring

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

Balancing of machinery. Vibrations, Energy Method and Rayleigh Principle. Two degrees of freedom system, free vibration, transient response, steady state response, damping. Multimass system, free vibration, forced vibration, damping. Vibration of beams. Torsional vibration in rotating machinery. Conditions monitoring of machinery; vibration measurement and analysis.

Co-ordinator: Associate Professor AK Tieu.

MECH931 Friction, Lubrication and Wear

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

Navier-Stokes and Energy equation of viscous fluid flow and their application to hydrodynamic journal and thrust bearings. Characteristics of hydrodynamic and hydrostatic bearings. Bearings selection and design. Rolling bearings and Elasto-hydrodynamic lubrication. Friction and wear processes. Boundary lubrication. Properties of lubricants and bearing materials and their interaction. Application in industry.

Co-ordinator: Associate Professor AK Tieu.

MECH932 Reliability Systems Management

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination. Other examinations, tutorials and assignments may be incorporated in the final assessment.

Failure modes and rates, reliability testing, redundancy, maintenance systems, design for reliability, failure interactions, systems safety analysis, reliability management.

Co-ordinator: to be advised.

MECH933 Solar Energy

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

Principles and techniques applicable to the analysis and design of solar thermal energy systems. Solar radiation; transmission and absorption by collectors; analysis and design of collectors; energy storage; system thermal calculations; solar process economics.

Co-ordinator: Dr GJ Montagner.

MECH934 Advanced Manufacturing Processes

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

Modelling of advanced manufacturing processes; manufacturing cost analysis; productivity and quality methods and measurements in manufacture; group technology; computer-assisted process planning; manufacturing optimisation; trends in advanced manufacturing processes.

Co-ordinator: Professor G Arndt.

MECH935 Integrated Manufacturing Systems

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

CIM concepts and applications; FMS; computer-process interfacing, monitoring and control; computer-aided quality control; component handling systems; human interface in the manufacturing system; future trends.

Co-ordinator: Professor G Arndt.

MECH936 Systems Modelling and Simulation in Manufacturing

Autumn or Spring session; 6 credit points (3 hrs lecture/lab per wk).

Assessment: final examination and compulsory assignments during session.

Modelling concepts; simulation concepts; basic simulation modelling; complex

simulation modelling; random number generator; probabilistic input distribution; output data analysis; model validation; shop floor operation simulation; production planning simulation.

Co-ordinator: Dr GJ Montagner.

MECH938 Economic Optimisation in Engineering*

Autumn or Spring session; 6 credit points (28 hrs lectures; 14 hrs tutorials)

Assessment: final examination and compulsory assignments during session.

Cost analysis and control, time value of money operations, measuring the work of investments, comparison of alternatives, depreciation and income tax, economic analysis of projects, forecasting, productivity, appraisal, break-even sensitivity and risk analysis, inventory and queuing problems, project management and operations research, contractual bidding and legal considerations.

Co-ordinator: Professor M West.

MECH940 Rotational Drives and Transmissions

Autumn or Spring session; 6 credit points (28hrs lecture 14hr tutorials/lab).

Assessment: 2hr final examination. Other short examinations and assignments will be incorporated in the final assessment.

Mechanical drive system load matching; prime mover and load characteristics, drive and transmission component characteristics, constant and variable speed drives; harmonics and resonance; control and instrumentation; prime mover and load audits; system life cycle costs; system design; load sharing; system noise and heat generation.

Co-ordinator: Dr A McLean.

MECH939 Advanced Topics in Mechanical Engineering 3

As for MECH919.

MECH942 Expert Systems in Manufacturing

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials/lab).

Assessment: final examination and compulsory assignments during session.

Design knowledge-based systems; knowledge representations; shell development; decision support systems; dealing with uncertainty; mechanical reasoning; consulting systems; intelligent process automation and management; future trends.

Co-ordinator: to be advised.

MECH944 Heat Transfer 2

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials/lab)

Assessment: final examination and compulsory assignments during session.

Conduction: review of one-dimensional heat conduction and fin theory; analysis of two-dimensional and transient heat conduction using analytical and numerical methods. Convection: review of fundamentals of laminar and turbulent heat transfer; free convection; flow over tube banks; design and selection of heat exchangers. Two-phase heat transfer: nucleate and film boiling; pool boiling and boiling in

tubes; film and dropwise condensation.

Note: not on offer in 1996.

Co-ordinator: Dr P Cooper.

MECH945 Bulk Solids Handling Systems 3

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination and compulsory assignments during session.

Two phase solids flow; control and instrumentation of solids flow; feeding of fine bulk solids; mechanical conveyors and feeders, materials handling plant project management; materials handling plant design; maintenance and operation; flow of very cohesive, wet and fibrous bulk solids; container wall loads.

Note: not on offer in 1996.

Co-ordinator: Dr AG McLean.

MECH949 Advanced Computer Control of Machines and Processes

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorial).

Assessment: final examination and compulsory assignments during session.

Applications of advanced computer control techniques, such as intelligent control, optimal control, fuzzy logic control, expert system-based control.

Co-ordinator: to be advised.

MECH950 Advanced Robotics

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorial).

Assessment: final examination and compulsory assignments during session.

Design of advanced robot structures and control systems, modelling of sensor-based robot systems, application of artificial intelligence in robot control.

Co-ordinator: to be advised.

MECH951 Dissertation

24 credit points.

Co-ordinator: to be advised.

MECH955 ME Major Thesis

Double session; 48 credit points.

Co-ordinator: to be advised.

MECH957 PhD Major Thesis

Double session; 48 credit points.

Co-ordinator: to be advised.

MECH960 Industrial Quality Management

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination, other examinations, projects, tutorials and assignments may be incorporated in the final assessment.

Topics to be covered include: process capability; statistical process control and capability case-studies; JIT (Just In Time) & Quality; team working and worker involvement (SGIA); improvement management; education and training for quality; introduction to quality of design, reliability, safety and product liability; Total Productive Maintenance v TQC; activity based costing and TQM; quality information systems and key performance indicators.

Co-ordinator: Associate Professor V Stewart.

MECH961 Quality Improvement Systems and Implementation

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination, other examinations, projects, tutorials and assignments may be incorporated in the final assessment.

Basic quality philosophy as per Feigenbaum, Juran, Deming and Crosby – emphasis on system, cost and people improvement; the economics of quality; ISO9000 Quality Systems - their role in TQM; introduction to Practical Industrial Quality Systems (PIQS) (Kaizen, Ishikawa, Improvement Methodology and tools); quality function deployment; measurement of conformance and prevention of non-conformance; team approaches to problem solving – the roles of management; suppliers and customers; implementation examples through case-studies of prominent organizations; audit procedures for TQM.

Co-ordinator: Associate Professor V Stewart.

MECH963 Industrial Quality Technology

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination. Other examinations, projects, tutorials and assignments may be incorporated in the final assessment.

Appraisal systems: Vision, CNC measuring machines, in-process, in-cycle, and post process gauging, integrated quality in automated manufacturing processes, quality information systems; Measurement of geometry, size and surface texture; Calibration systems; The use of integrated SPC and expert systems.

Co-ordinator: Associate Professor V Stewart.

MECH965 Quality in Engineering Design

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination, other examinations, projects, tutorials and assignments may be incorporated in the final assessment.

Design as the source of quality; The Concurrent Engineering Approach; Value engineering; failure mode and effects analysis; organisation for design quality; design case studies in Taguchi methods and quality function deployment; design standards, testing, reliability, safety maintainability, product liability, product certification; configuration management; contract and design reviews.

Co-ordinator: Associate Professor V Stewart.

MECH967 International Quality Techniques

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination, projects and assignments may be incorporated in the final assessment.

An international perspective on quality, with a comparison of the quality techniques employed in the major regions of the world. The historical evolution, development, application methodology and integration of these techniques within the cultural, political and industrial environment of various regions/countries are addressed, in the context of achieving World's Best Practice. Areas of commonality and

* Not on offer in 1996

difference; techniques of emerging importance in both the manufacturing and service fields, such as self-diagnosis, benchmarking, business process reengineering, concurrent engineering, quality function deployment, and software quality management. The quality award system in use in each region will be studied and compared.

Co-ordinator: Associate Professor V Stewart.

MECH970 Maintenance Management

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination. Other short examinations, assignments and laboratory reports may be incorporated in the final assessment.

Overall perspective for maintenance in business context; Maintenance philosophies; Evolution of the need for maintenance management; Cost & profit drivers in maintenance; Maintenance organisation department structure (Resource and administration); Maintenance documentation & computer control; Quality assurance in maintenance; Implementation of maintenance planning; Human factors & motivation skills in maintenance environment; TQM Aspects: improvement methodology (Plan-Do-Check-Act).

Co-ordinator: Mr R Dwight.

MECH971 Systems Analysis for Maintenance

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination. Other short examinations, assignments and laboratory reports may be incorporated in the final assessment.

Maintenance Concept Design Methodology, Reliability Theory, Data Recordings and Analysis, Identification and Analysis of Failure Modes, Maintenance Rule Selection, Preventative Replacement Policies, Optimisation of Inspection Frequencies, Clustering of Tasks, Opportunity Maintenance, Specification of Resource Requirements.

Co-ordinator: Mr R Dwight.

MECH972 Condition Based Maintenance

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination. Other short examinations, assignments and laboratory reports may be incorporated in the final assessment.

Overview of fault diagnosis techniques (electrical-mechanical-computer); Identification of critical plant, failure types-modes. Diagnosis documentation, tables, and algorithms; Maintenance history documentation costs; Maintenance strategies; Target areas for successful applications; Sensor technology overview; Condition monitoring strategy, techniques and organisation; Automation aspects in condition monitoring; Expert-AI systems; Costs & problems associated with condition monitoring; Decisions on the periodicity of condition monitoring; Case studies.

Co-ordinator: Associate Professor AK Tieu.

MECH973 Systems Engineering and Life Cycle Management

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination. Other short examinations, assignments and laboratory reports may be incorporated in the final assessment.

Phases of the Life Cycle of Products and Industrial Equipment, Life Cycle Costing (and Profitability) Economics and Models, Cost Estimation Techniques, Requirements Analysis, Functional Analysis, Design Analysis Techniques, Logistic Support Analysis, Design for Reliability, Maintainability, Availability, Interface Control, System Integration, Testing and Performance Evaluation, Installation and Commissioning Procedures and their Influence on Maintenance and Life Cycle Costs. Asset Management, Disposal, Asset Purchase/Replacement Policies and Decision-making.

Co-ordinator: Professor MP West.

MECH974 Information Systems in Maintenance Management

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination. Other short examinations, assignments and laboratory reports may be incorporated in the final assessment.

Analysis of maintenance information needs, data collection, types, and uses; Human factors in information systems; Computer information systems - a summary with a view to maintenance; Computer system selection for maintenance organisation, networking, economics; Distributed versus centralised computing; Computerisation of maintenance functions; Maintenance planning, appropriate costing and budget systems, control; Maintenance history records, condition monitoring equipment, spare parts inventory and control; Creation of user application software for various aspects of maintenance management; Survey and critical assessment of standard available maintenance related software packages.

Co-ordinator: Professor MP West.

MECH975 Maintenance in Manufacturing Industry

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination. Other short examinations, assignments and laboratory reports may be incorporated in the final assessment.

Overview of manufacturing environment, industries and processes; Historical development and role of maintenance; Specific technologies, e.g. transportation and material handling equipment; Storage and retrieval equipment; Problems associated with the production-maintenance interface; Selection of maintenance strategy for particular manufacturing environments (e.g. job, batch and mass production, process industries); Fault diagnosis in computerised manufacturing machinery: Total productive maintenance; Historical and international perspective; Japanese input: "Kaizen" in maintenance; TQM and TPM; Human considerations; TPM methodology; Implementation of TPM; Developmental strategy, stages and steps; Importance of

issues such as cleaning, losses, overall equipment effectiveness; Economic and organisational issues; Case studies, Australian application.

Note: not on offer in 1996.

Co-ordinator: to be advised.

MECH976 Industrial Engineering Techniques in Maintenance Management

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination. Other short examinations, assignments and laboratory reports may be incorporated in the final assessment.

Human Aspects of Maintenance and Reliability; Ergonomics; Work Measurement, Methods Engineering and Activity Sampling Applied to Maintenance Activities; Estimation of Maintenance Times; Maintenance Facilities Layout. Planning for Shutdowns and Overhauls; Inventory Control for Maintenance, Inventory Control Systems, Configuration Management, Warehouse Control, Evaluation of Maintenance Performance, Improving Maintenance Performance, TPM.

Co-ordinator: Mr R Dwight.

MECH977 Advanced Topics in Maintenance 1

Autumn or Spring session; 6 credit points.

Assessment: to be advised.

There is no set syllabus for this subject. It is intended that it normally be offered on a specialised maintenance topic given by members of the Department, visiting academic staff or engineering consultants.

Co-ordinator: to be advised.

MECH978 Advanced Topics in Maintenance 2

Autumn or Spring session; 6 credit points.

Assessment: to be advised.

There is no set syllabus for this subject. It is intended that it normally be offered on a specialised maintenance topic given by members of the Department, visiting academic staff or engineering consultants.

Co-ordinator: to be advised.

MECH980 Functional Analysis and Risk Management

Autumn or Spring session; 6 credit points (3 hrs per wk).

Assessment: final examination and compulsory assignments during session.

Requirement analysis of systems and components: functional requirements and constraints analysis. Functional analysis and allocation. Parametric analysis and decision trees. Sensitivity analysis and control. Risk trade-offs.

Co-ordinator: Mr R Dwight.

MECH981 Concurrent Design

Autumn or Spring session; 6 credit points (3 hrs per wk).

Assessment: final examination and compulsory assignments during session.

System integration from the functional to the physical stage. Project planning. Risk management. Management of configuration, interface. Human engineering: task, operational sequencing, personnel requirements, error and safety analysis.

Co-ordinator: Associate Professor V Stewart.

MECH982 Bulk Solids Characterisation & Particulate Mechanics

*Autumn or Spring session; 6 credit points.
Assessment: Assessable task will be required at the completion of the module.*

Concepts of particle mechanics (failure criteria, models to represent such criteria as particle size and distributions, particle shape, compressibility, permeability, internal friction, cohesion, adhesion, wall friction); concepts of flow properties of bulk solids for equipment design; flow property measurement techniques; use of computer software to analyse and present experimental data for use in design.

Co-ordinator: Professor P Arnold.

MECH983 Storage and Flow of Bulk Solids

*Autumn or Spring session; 6 credit points.
Assessment: Assessable task will be required at the completion of the module.*

Basic concepts of storage; flow and feeding of bulk solids; use of flow properties to determine hopper geometrics; bin wall loads; feeding and discharge systems, feeder loads; chute design; flowrate prediction; segregation and blending; dust suppression systems; stock pile systems; case studies.

Co-ordinator: Professor P Arnold.

MECH984 Belt Conveying

*Autumn or Spring session; 6 credit points (modular basis over 5 days).
Assessment: Assessable task will be required at the completion of the module.*

Belt conveying systems; properties of conveyor belting; tension analyses (static and dynamic); drive systems; loading and unloading belts; trajectory prediction; transfer chute design novel belt systems; economic analyses.

Co-ordinator: Professor P Arnold.

MECH985 Dust and Fume Systems

*Autumn or Spring session; 6 credit points.
Assessment: Assessable task will be required at the completion of the module.*

Basic concepts; terminology and problems; dust characterisation; fan performance characteristics; capture velocities and minimum transport velocities; hood and enclosure design; duct design; dust generation and its minimisation; filtration systems; design of dust handling and disposal systems; occupational health and safety; environmental legislation; case studies.

Co-ordinator: Professor P Arnold.

MECH986 Instrumentation and Control Systems for Bulk Solids

*Autumn or Spring session; 6 credit points.
Assessment: Assessable task will be required at the completion of the module.*

Transducer types and their specification and applications; dynamic response of systems; speed measurement and control; mass flow rate measurement; belt weighing; weigh belt feeders; continuous and batch weighing systems; bin weighing systems and structural implications; system accuracies; interfacing with PLC's and computers; case studies.

Co-ordinator: Professor P Arnold.

MECH987 Advanced Topics in Bulk Solids & Particulate Technologies 1

*Autumn or Spring session; 6 credit points.
Assessment: Assessable task will be required at the completion of the module.*

There is no set syllabus for this subject. It is intended that it normally be offered on a specialised topic relating to some aspect of modern technologies relating to bulk solids and/or particulate technologies by staff members/visiting specialists and/or engineering practitioners.

Co-ordinator: Professor P Arnold.

MECH988 Advanced Topics in Bulk Solids & Particulate Technologies 2

*Autumn or Spring session; 6 credit points.
Assessment: Assessable task will be required at the completion of the module.*

There is no set syllabus for this subject. It is intended that it normally be offered on a specialised topic relating to some aspect of modern technologies relating to bulk solids and/or particulate technologies by staff members/visiting specialists and/or engineering practitioners.

Co-ordinator: Professor P Arnold.

MECH989 Advanced Topics in Bulk Solids & Particulate Technologies 3

*Autumn or Spring session; 6 credit points.
Assessment: Assessable task will be required at the completion of the module.*

There is no set syllabus for this subject. It is intended that it normally be offered on a specialised topic relating to some aspect of modern technologies relating to bulk solids and/or particulate technologies by staff members/visiting specialists and/or engineering practitioners.

Co-ordinator: Professor P Arnold.

MECH990 Project in Bulk Solids and Particulate Technologies

*Autumn or Spring Session; 12 credit points.
Prepare a thesis on an approved topic related to bulk solids and/or particulate technologies. Normally the thesis will cover work performed in the workplace.*

Co-ordinator: Professor P Arnold.

MINING ENGINEERING

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Engineering by Coursework or Research
3. Master of Mining Management
4. Graduate Diploma in Mining Management
5. Graduate Diploma in Engineering

POSTGRADUATE PROGRAMS

Mining Engineering
Mining Management

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master of Engineering degree by research and the Doctor of Philosophy degree:

Roof bolting studies
Longwall mining
Rock mechanics
Surface mining
Mine simulation, planning and design
Mine safety
Geostatistics
Computer applications in mining engineering

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAMS IN MINING MANAGEMENT

leading to the Graduate Diploma of Mining Management or the Master of Mining Management.

Number	Subject	Credit Points
Business Management		
MINE941	Environmental Management for the Mining Industry	6
MINE945	Mine Management Project	6
MINE956	Mineral Law	6
MINE962	Management Perspectives	6
MINE963	Economic Decision Making	6
MINE964	Management of Innovation	6
MINE965	Strategic Planning	6
MINE971	Financial Management	6
MINE972	Export Marketing for the Mining Industry	6
MINE973	Mine Evaluation and Project Assessment	6
MINE974	Mine Management	6
MINE975	Evaluation in the Coal Mining Industry	6
Science and Engineering		
MINE942	Safety in the Mining Industry	6
MINE943	Drilling and Blasting	6
MINE944	Application of Computers in the Mineral Industry	6
MINE946	Placer Technology	6
MINE947	Introductory Computing and Statistics for Geologists and Mining Engineers	6
MINE948	Mine Ventilation and Environment	6
MINE952	Geostatistics and Mine Planning	6
MINE953	Mine Water - Origin, Inflow Predictions and Control	6
MINE954	Strata Control - from First Principles to Practice	6
MINE958	Environmental Impact of Mining and Mineral Operations	6
MINE 976	Environmental Assessments (Audits)	6
MINE977	Mineral Exploration Management	6
MINE978	Coal Preparation	6
MINE979	Soil and Rock Construction Materials	6
MINE980	Slope Stability for Surface Mining	6
GEOL921	Environmental Geology	6

For further details, see *Course Requirements* below.

POSTGRADUATE PROGRAMS IN MINING ENGINEERING

leading to the Honours Master of Engineering.

Number	Subject	Credit Points
<i>Core</i>		
MINE951	Dissertation	24
<i>Elective</i>		
MINE902	Advanced Studies in Mining Engineering	6
MINE903	Simulation of Underground Mining Operations and Problems	6
MINE904	Rock Mechanics	6
MINE905	Environmental Control in Mines	6
MINE906	Mining Engineering Techniques	6
MINE911	Mine Service Engineering	6
MINE953	Mine Water - Origin, Inflow Predictions and Control	6

For further details, see *Course Requirements* below.**OTHER POSTGRADUATE SUBJECTS**

Number	Subject	Credit Points
MINE899	Advanced Topics in Engineering	48
MINE901	Transportation of Minerals and Personnel	6
MINE907	Gases in Mines	6
MINE908	Mine Fires and Explosions	6
MINE909	Mine Subsidence	6
MINE950	Dissertation	12
MINE955	ME Major Thesis	48
MINE957	PhD Major Thesis	48

COURSE REQUIREMENTS**1. DOCTOR OF PHILOSOPHY**

Candidates for this degree enrol in MINE957.

2. HONOURS MASTER OF ENGINEERING

The Department of Civil and Mining Engineering offers graduates the following opportunities to conduct research or pursue an advanced course of study in Mining Engineering:

(a) The Honours Master of Engineering Degree by Research Thesis

The Honours Master of Engineering Degree by research thesis is intended for those engineers qualified and interested in specific problems.

(b) The Honours Master of Engineering Degree by Combination of Coursework and Research Thesis

This is the normal course for the younger mining Engineer, which provides him or her training in research and also allows greater depth of understanding in specialist postgraduate areas.

Aims

The programs of study allow the student to combine specialist postgraduate subjects according to his or her undergraduate background, with project work. It is intended to strengthen professional training in a context of problems and policies which reach beyond the conventionally recognised boundaries of single disciplines. Elective postgraduate subjects and introduction to disciplines in

which the student has no experience, are available.

The program for the Honours Master of Engineering Degree has two explicit aims:

- (i) **Specialist Training.** Postgraduate training is provided for students with appropriate backgrounds, to enable professional development in their particular discipline. This is achieved by providing access to existing postgraduate courses already offered;
- (ii) **Interdisciplinary Training.** An interdisciplinary framework is provided, within which postgraduate training in Mining Engineering may be integrated with other disciplines. This is achieved by the provisions of limited access to concentrated study in other disciplines.

Entry Requirements

A candidate who has a Bachelor of Engineering with Honours at Class III or higher from this University, or an approved equivalent qualification, will enrol in subjects listed in the Postgraduate Schedule and with a value of not less than 48 credit points. Programs approved by the Department of Civil and Mining Engineering comprise:

- (i) the subject MINE955 Major Thesis;
or
- (ii) the subject MINE951 Dissertation plus four subjects from the list MINE901 through MINE911;
or
- (iii) the subject MINE950 Dissertation plus six subjects from the list MINE901 through MINE911.

3. & 4. MINING MANAGEMENT PROGRAM

The Graduate Diploma in Mining Management and the Master in Mining Management are intended for mining industry personnel who wish to improve their employment opportunities. It is anticipated that the majority will have backgrounds in either engineering or science, and will take the opportunity to develop their knowledge of management through a course of study orientated towards a career in the mining industry.

Particular emphasis is to be placed on making the courses available to candidates in remote locations, and it is intended that the courses be offered in a modular form comprising one week of intensive formal coursework supplemented by pre-coursework and post-coursework assignments.

As many potential candidates are located in remote regions they will welcome the unique opportunity offered by an external postgraduate course. The courses will be offered in conjunction with the Key Centre for Mines, a joint initiative of the Departments of Civil and Mining Engineering and Geology at the University of Wollongong and the School of Mines at the University of New South Wales.

Aims

The courses aim to satisfy the continuing education needs of those minerals sector personnel wishing to upgrade and expand their credentials by presenting them with the opportunity to further their technical understanding of practices within the minerals industry whilst gaining valuable skills in Mining Management, Industrial Relations, Marketing and Financial Control. The management skills acquired from the

courses will be a sound foundation for future executive positions.

Graduate Diploma in Mining Management

Candidates will be required to complete a total of 54 credit points: of which 24 credit points may be from 300/400 level subjects and 30 credit points from 900 level subjects. Advanced standing of up to 24 credit points of 300/400 level work may be granted on the basis of previous qualifications. A maximum of 18 credit points will be in Business Management or Science and Engineering with each candidate's course content being approved by an academic advisor.

Entry Requirements

Entry into the Graduate Diploma in Mining Management requires a three year degree or diploma in the fields of science and technology or commerce and economics with the qualifications of candidates applying for entrance to be assessed by the Head of the Department of Civil and Mining Engineering and the Head of the Department of Geology.

Master in Mining Management

This course will be offered on a part-time basis and will require a minimum study period of two years with full advanced standing. Candidates will be required to complete 96 credit points of work, a maximum of 24 credit points from 300/400 level subjects and a minimum of 24 credit points by research. Advanced standing of up to 24 credit points of 300/400 level subjects may be granted on the basis of 24 credit points of 300/400 level subjects may be granted on the basis of previous qualifications.

Candidates with a technical background will be advised to undertake at least 50% of the formal coursework from Business Management whilst those with a business management background will be encouraged to undertake at least 50% of the postgraduate level coursework from Science and Engineering. The research project will be industry-based and tailored to the candidate's work-place requirements.

Entry Requirements

Entry into the Master of Mining Management requires a four year degree of appropriate standard from a recognized tertiary institution. Following the successful completion of the Graduate Diploma in Mining Management, a candidate will have the option of entering into the Master of Mining Management; where prior to the conferring of the degree of Master in Mining Management upon a candidate, that candidate shall surrender the testamur for the Diploma in Mining Management, and in so doing, shall be deemed to have surrendered all rights pertaining to the diploma. Other qualifications or professional experience may also be approved.

5. GRADUATE DIPLOMA IN ENGINEERING

A candidate who has completed a degree of Bachelor of Engineering and

- (i) who has not qualified for any class of Honours,
- or
- (ii) who wishes to qualify for the Graduate Diploma in Engineering (Mining)

will enrol in the 48 credit point subject MINE899.

Upon satisfactory completion of the subject MINE899 the candidate is eligible for award of the Graduate Diploma in Engineering (Mining). A person who is awarded the Graduate Diploma in Engineering and who subsequently satisfies the requirements for the award of the degree of Honours Master of Engineering is required by Course Rule 504(2) to surrender the testamur and associated rights for the Graduate Diploma prior to receiving the Honours Masters degree.

SUBJECT DESCRIPTIONS

MINE899 Advanced Topics in Mining Engineering

Double session (A); 48 credit points.

Computer aided analysis and design; computer methods; ore reserve estimation finite element techniques; hydrology; hydraulics; numerical techniques; reliability; rock mechanics; simulation; structural analysis and design; structural topology; mine planning.

Co-ordinator: Dr I Porter.

MINE901 Transportation of Minerals and Personnel

Autumn or Spring session; 6 credit points.

Transport of minerals from initial winning to stockpile and to distribution points; safety problems, hygiene, the environment; transport of personnel, equipment, safety, regulations; cost involved; current research.

Co-ordinator: Associate Professor N I Aziz.

MINE902 Advanced Studies in Mining Engineering

Autumn or Spring session; 6 credit points.

Topics will be selected from those areas of Mining Engineering in which staff members or visiting staff members to the Department are engaged in active research.

Co-ordinator: Dr E Y Baafi.

MINE903 Simulation of Underground Mining Operations and Problems

Autumn or Spring session; 6 credit points.

Assessment: assignments and examinations.

Including coal reserves, mining dimensions, surface effects, cost benefit effects of operation and management and economic evaluation and feasibility of a mining enterprise.

Co-ordinator: Dr E Y Baafi.

MINE904 Rock Mechanics

Autumn or Spring session; 6 credit points (42 contact hrs).

Assessment: assignments and examinations.

Fundamentals of strata mechanics together with advanced topics including engineering technology and rock mechanics aspects of coal mining strata control. Design aspects of mine structures, such as

mine pillars, gate roads and longwall mining. Instrumentation in providing for the safe design of the mine opening. Rock and cable bolting techniques and powered support design.

Co-ordinator: Dr B Indraratna.

MINE906 Mining Engineering Techniques

Autumn or Spring session; 6 credit points.

Assessment: assignments and examinations.

A selection of advanced laboratory and field exercises in mine support, temporary and long term; in situ testing, laboratory testing, rock properties and parameters; mine design and plant related to extraction areas.

Co-ordinator: Professor R N Singh.

MINE907 Gases in Mines

Autumn or Spring session; 6 credit points.

Assessment: assignments and examinations.

Natural occurrence and prediction of rockbursts; collection of mine gases; mine atmospheres, gases, dusts; fires, rescue and recover; computer analysis.

Co-ordinator: Associate Professor N I Aziz.

MINE908 Mine Fires and Explosions

Autumn or Spring session; 6 credit points.

Assessment: assignments and examinations.

Formation of coal dust; explosibility of coal dust; initiation of explosions; methane accumulation; development and propagation of explosion wave front; pressure pulse and flame front; prevention and control of coal dust formation; barriers, active and passive; experimental galleries; rescue and recovery of both mine and personnel; resultant fires; computer modelling of resulting crisis situations in ventilation; current research; relevant legislation.

Co-ordinator: Associate Professor N I Aziz.

MINE909 Mine Subsidence

Autumn or Spring session; 6 credit points.

Assessment: assignments and examinations.

Causes of mine subsidence; continuum mechanics theories; determination of trough subsidence; subsidence calculations and prediction; measurement techniques; design of structures in mine subsidence active area; methods of reducing subsidence damage; application of computers for subsidence modelling; relevant legislation.

Co-ordinator: Dr I Porter.

MINE911 Mine Service Engineering

Autumn or Spring session; 6 credit points

(42 contact hrs plus field visits).

Assessment: assignments and examinations.

Advanced studies in power reticulation in mines; economics of power reticulation, maintenance engineering; equipment monitoring and preventive maintenance; quality control and equipment specifications; current research.

Co-ordinator: Professor R N Singh.

MINE941 Environmental Management for the Mining Industry

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

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 licence 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 EPM applications in mining, oil, manufacturing, petrochemical, civil engineering and infrastructure; building and construction; coastal management and other industries; EPM issues and concerns in Asia-Pacific nations and the region as a whole.

Co-ordinator: Associate Professor N I Aziz.

MINE942 Safety in the Mining Industry

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

Safety Management, hazard & Risk analyses; Safety Hazard identification; Management Techniques (MORT STEP); Safety Audits; Statistics; HAZOP - Management & Maintenance of change risk analysis; cost benefit analysis, attitudes to safety in mining, safety & personal problems; effective training; accident and injury; reporting/recovery; ergonomics & safety engineering; prevention traumatic injury; work stress, environmental factors, monitoring & protection, personal protective equipment, safety policies and programs, action plans.

Co-ordinator: Associate Professor N I Aziz.

MINE943 Drilling and Blasting

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

Drilling methods, types of drills; types of bits and other accessories; drilling economics maintenance schedules for drills and accessories; history and theory of explosives; explosive types; new developments and applications; blast design and secondary blasting; controlling ground vibration; airblast and flyrock; blasting economics; controlled blasting; precautions against extraneous electricity; misfires and deteriorated explosives; safety and legislation for storage; transportation and handling of explosives.

Co-ordinator: Associate Professor N I Aziz.

MINE944 Application of Computers in the Mineral Industry

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

Topics will be selected from geostatistical ore reserve estimation on a personal computer; computerised open-pit design and planning; mine system simulation of an expert system for the mineral industry; mine ventilation planning on a personal computer using commercial packages to solve mining problems including rock mechanics.

Co-ordinator: Dr E Y Baafi.

MINE945 Mining Management Project

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

A study of either an administrative or technical nature with relevance to the management of a mining or mineral processing operation. This may be based on simulated or actual situations but projects of relevance to the candidate's employment will be encouraged. As far as is possible, projects will be designed in consultation with the mining industry.

Co-ordinator: Associate Professor N I Aziz.

MINE946 Placer Technology

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

Sources of placer minerals; natural processes producing concentration of placer minerals; nature of placer deposits; trends in placer exploration; placer sampling; reserves calculations; mining methods; processing methods; project evaluation; environmental implications and pollution control technology.

Co-ordinator: Associate Professor N I Aziz.

MINE947 Introductory Computing and Statistics for Geologists and Mining Engineers

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

Computer hardware for geological data processing; peripheral devices; operating systems; VAXVMS, IBM, VM/XA, MS DOS, UNIX; programming in Fortran and C; statistics for geologists and mining engineers; data base packages and macros.

Co-ordinator: Dr E Y Baafi.

MINE948 Mine Ventilation and Environment

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

Ventilation network analysis and simulation; fan selection, role of booster fans; ventilation of long headings; recirculation; gases from diesel engines and their control; methane and its control in underground coal mines; dust in mine air and its control; mine climate and its control; ventilation planning.

Co-ordinator: Associate Professor N I Aziz.

MINE952 Geostatistics and Mine Planning

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

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; indicator and probability kriging. Application examples - coal, copper, gold, blast-hole Kriging for Ore-waste selection, Geotechnics and the environment.

Co-ordinator: Dr E Y Baafi.

MINE953 Mine Water - Origin, Inflow Predictions and Control

Annual; 6 credit points (42 contact hrs).

Assessment: assignments and examinations.

Water problems in surface and underground mining; hydrogeological factors affecting mine water inflow; hydrological considerations in origin of mine water; hydrogeological characterisation of rock mass and pumping tests; pumping test calculations; effects of ground water on surface mining stability; ground water control in surface mining; calculation of mine water inflow to surface mining; water problems in underground mining; underground mine dewatering techniques; pumps and pumping systems; underground pumping stations and pump design; mine inundation; working under the body of water; inflow prediction by chemical analysis method; mine water pollution control; treatment of mine water pollution; biotechnical approach; constructed wetlands and lagoons.

Textbook:

Singh, RN, *Mine Water-origin, Inflow Prediction and Control*, University of Wollongong Press, 1993.

Co-ordinator: Professor R Singh.

MINE954 Strata Control from First Principles to Practice

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

Fundamentals of strata mechanics together with advanced topics including engineering and rock mechanics aspects of coal mining strata control; design aspects of mine structures, such as mine pillars, gate roads and longwall mining; instrumentation in providing for the safe design of the mine opening; rock and cable bolting techniques and powered support design.

Co-ordinator: Associate Professor N I Aziz.

MINE956 Mineral Law

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

Definitions of 'Minerals', Common Law, Ownership, Aboriginal Land Rights, Miners' Rights and Claims, Exploration Titles, Production Titles, Private Land/Crown land, Administrative Processes, Environmental Protection and Royalties, Case histories.

Co-ordinator: Associate Professor N I Aziz.

MINE958 Environmental Impact of Mining and Mineral Operations

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

Aspects of environmental impact of surface and underground mining operations; visual impact assessment, air pollution, including dust, noise and vibration; solid waste management, water pollution and acid mine drainage; restoration, land use, subsidence and the socio-economic effects of mining will also be discussed.

Co-ordinator: Professor R N Singh.

MINE962 Management Perspectives

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

What is Management?, Managing individuals, managing groups, managing organisations, managing information, managing operations, managing decision making.

Co-ordinator: Associate Professor N I Aziz.

MINE963 Economic Decision Making

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

Introduction to Economic Concepts; demand; supply and the market; consumers; firms and market structures; welfare economics and government intervention; international economics; macroeconomics and national income analysis; national economic policy, cost-benefit analysis and expenditure decisions; business finance.

Co-ordinator: Associate Professor N I Aziz.

MINE964 Management of Innovation

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

Innovation and innovators, technology and innovation; opportunity analysis; marketing and innovation; the business plan, management of innovation; innovations in corporations, maintaining innovations.

Co-ordinator: Associate Professor N I Aziz.

MINE965 Strategic Planning

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

The nature and scope of strategic management; the practice of strategic management; the mission of the organisation; analysing organisational resources; formulating strategic objectives; generating strategic alternatives; evaluating strategic implementation; assessing strategic performance.

Co-ordinator: Associate Professor N I Aziz.

MINE971 Financial Management

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

Financial management - an overview; accounting concepts and the accounting process, financial statements; public sector accounting; corporate accounting; the interpretation of financial statements; the recording of costs; management cost information (1); management cost information (2); the budgeting process.

Co-ordinator: Associate Professor N I Aziz.

MINE972 Export Marketing for the Mining Industry

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

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 groupings. 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.

Co-ordinator: Associate Professor N I Aziz.

MINE973 Mine Evaluation and Project Assessment

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

Valuation tools and techniques; valuation reports; preliminary Investigation; Asset Determination; Impact of Financing Options; Published Assessments; Feasibility Studies; Valuation of Exploration Tenements; residual values of property and plant; variations to value.

Co-ordinator: Associate Professor N I Aziz.

MINE974 Mine Management

Annual; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

The general management functions; planning; organisation; control; communication; command; coordination; production functions; marketing; financial aspects; personnel; purchasing; public relations; environmental matter; contracts and stock market requirements and implications.

Co-ordinator: Associate Professor N I Aziz.

MINE975 Evaluation in the Coal Mining Industry

Autumn or Spring session; 6 credit points.

An introduction to the theory and practice of financial modelling of mining projects; financial evaluation and economic decision making; long life and large sustaining capital needs of coal projects and the techniques of evaluating operational alternatives are reviewed and illustrated by industry case histories; evaluation of new mine projects are studied by means of case histories.

Co-ordinator: Associate Professor N I Aziz.

MINE976 Environmental Assessments (Audits)

Annual; 6 credit points (42 modular hours).

Assessment: continuous assessment and examination

This course is an introduction to methods for assessing existing and potential contamination of industrial sites and mining operations. The course includes elements such as the policy and legal framework of environmental assessments, sources of information on a range of chemical contaminants and recommended exposure limits; the role of the assessor (or auditor); selected environmental assessment case studies will be considered.

Co-ordinator: Professor R N Singh.

MINE977 Mineral Exploration Management

Annual; 6 credit points (42 Modular hours).

Assessment: continuous assessment and examination.

Introduction to program design; review of available techniques; remote sensing techniques; airborne geophysical surveys; ground geophysical surveys; data interpretation; reporting and supervision; sequential exploration; definition of drill targets; budgeting and budget management.

Co-ordinator: Associate Professor NAziz.

MINE978 Coal Preparation

Annual; 6 credit points (42 modular hours).

Assessment: continuous assessment and examination.

Coal characterisation; principles of separation; materials handling; sampling - theory; sampling - equipment and practice; screening and communication; cleaning of coarse and small coal, water based separation, dense medium separation; cleaning of fine coal; solid liquid separation, theory, cyclones, vacuum and pressure filtration, centrifuges (product and tailing); clarification/thickening practice; pumping, piping, valving; plant design, layout and upgrading; maintenance; control concepts (basic process control on-stream analysis, overall plant control and optimisation).

Co-ordinator: Dr B Indraratna.

MINE979 Soil and Rock Construction Materials

Annual; 6 credit points (42 modular hours).

Assessment: continuous assessment and examination.

This course provides an introduction to the location, assessment, mining and processing of soil and rock construction materials and to the environmental problems associated with their extraction. The main themes explored include the maximum use of existing quarries, the use of upgraded marginal materials and the reclamation of quarried lands. The materials covered include aggregates, ballast, armourstone and prepared road base, sand, gravel and natural pavement materials, artificial aggregates and stabilised road base, brick clay, limestone and cementitious materials.

Co-ordinator: Associate Professor NAziz.

MINE980 Slope Stability for Surface Mining

Annual; 6 credit points (42 modular hours).

Assessment: continuous assessment and examination.

This comprehensive course will deal with the major topics of: engineering geology and ground water controls, in the form of discontinuities, variable materials and pore pressure; 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. The subject may also involve workshops and field inspections so that students gain hands-on experience of practical cases.

Co-ordinator: Professor R N Singh.

GEOL921 Environmental Geology

Spring or Autumn Session; 6 credit points (42 contact hrs).

Assessment: 4 major assignments.

Refer to Faculty of Science, Geology subjects course description.

MINE950 Dissertation

Double session (A); 12 credit points.

Co-ordinator: Dr I Porter.

MINE951 Dissertation

Double session (A); 24 credit points.

Co-ordinator: Dr E Y Baafi.

MINE955 ME Major Thesis

Double session (A); 48 credit points.

Co-ordinator: Associate Professor N Aziz.

MINE957 PhD Major Thesis
Double Session (A); 48 credit points.
Co-ordinator: Professor R N Singh.

FACULTY OF
HEALTH AND
BEHAVIOURAL
SCIENCES

FACULTY OF HEALTH AND BEHAVIOURAL SCIENCES

FACULTY OFFICE

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Sub Dean: Dr Graham Ward

Executive Officer: Carole Peacock

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Professional Officer: Paddy Fitzgerald-Asher

(042) 21 4060

Administrative Assistant: Bev Moate

(042) 21 3492

MEMBER UNITS

The Faculty of Health and Behavioural Sciences is made up of the following Units:

Biomedical Science
Nursing
Psychology
Public Health and Nutrition
Medical Research Unit

RESEARCH COURSES AVAILABLE

The Faculty offers Honours Master of Science and Doctor of Philosophy degrees by research. In addition, the Honours Master of Arts is offered in the Departments of Biomedical Science and Psychology.

POSTGRADUATE PROGRAMS

Postgraduate programs are available in the Faculty in the following areas:

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FULL TIME STAFF**Dean**

Professor Charles Watson, BScMed(Hons)
Syd, MB BS Syd, MD UNSW, FAFPHM

Sub-Dean

Dr Graham R Ward, TTC NZ, BSc BE(Sc)
MSc(Hons) Mass, PhD McM, ASPE NZ,
MACE,

Executive Officer

Carole Peacock, BHA UNSW, MBA

Professional Officer

Paddy Fitzgerald-Asher, BCom, GradDipBus
Monash

Administrative Assistant

Bev Moate

**DEPARTMENT OF
BIOMEDICAL SCIENCE****Departmental Head and Professor of
Biomedical Science**

Len Storlien, BSc (cum laude) Lethbridge,
MA Br Col, PhD ANU

Senior Lecturers

Stephen H Boucher, MSc Dal, PhD Arizona
J Mark Brown, BSc PhD Q'ld
Paul Else, BSc(Hons) PhD UNSW
Arthur Jenkins, BSc(Hons) Q'ld PhD UNSW
Thomas F Penrose, DipPhysEd STC, MSc
Oregon

Julie Steele, DipT Kuring-gai, BPE(Hons) WA
Nigel Taylor, DipT BHMS(Hons)Qld,, MSc
Lond,, PhD Simon Fraser

Dr Graham R Ward, TTC NZ, BSc BE(Sc)
MSc (Hons) Mass, PhD McM, ASPE NZ,
MACE,

Lecturers

Lee Astheimer, BSc(Hons) Canada MScalif.
PhD Calif

Owen Curtis, DipPhysEd TSTC Melb,
BEd(PE) MEd WA

Xu Feng Huang, MSc Shanghai, MBBS Xu
Zhou Medical College

Teaching Fellows

Guy Bashford, MB BS FACRM
Ian Davidson, MB BS FACRM
Robert Moses, MB BS FRACP
Geoff Speldwinde, MB BS FACRM

Administrative Assistants

Marion Harvey
Nola Hurt

Professional Officers

Mark Andrews, BPE UWA, MStud(Ed)
James Johnson, CertMedTech, SAIT

Technical Officers

Arno Reiners, BEng
Mario Solitro, Cert.Elec. Syd TAFE

Laboratory Technician

Shane Watkins, BTC, Assoc.Dip(BiolTech)
Syd TAFE

DEPARTMENT OF NURSING**Departmental Head and Associate
Professor of Nursing**

Rhonda Griffiths, RN, CM, DipTeach (Nsg)

Armidale, CAE, BEd (Nsg), UNE, MSc
(Hons), FRCNA, FCN (NSW), MACM

Associate Professor

Felix Yuen, RN, BA Lond, MSc Edinb, PhD,
DipManagStud Thames Poly, FCN
(NSW), FCNA

Senior Lecturers

Maree Lynch, RN, BA Macq, DipNed Cumb,
FCN (NSW)

Tracey McDonald, RN, CM, DipNed Cumb
CAE, BHA UNSW, FCN (NSW),
FRCNA, ACHSE, CHE, INA

John Sibbald, SRN, NZDipN, BSc, PhD
Otago

Irene Stein, RN, BA, BAppSc(Nsg) MRIHE,
DipNed Cumb, MA, FCN (NSW), FCNA

Lecturers

Isla Bowen, RN, BA, MAPsS

Jennifer Fares, RN, DipNed Armidale CAE,
BA, FCN (NSW)

Margaret Gerry, RN, BA Syd
Brin Grenyer, BA(Hons), MSc Syd, MAPsS
Marilyn Hales, RN, CM, BA UNE, MA
(Cult St), MCN (NSW)

William Janes, RN, BA Macq, BHA UNSW,
DipNed Cumb, MSc, FCN (NSW)

Suzanne Puntton Butler, RN, BA NE,
DipEd(TechEd), DipNed Coll of Nursing

Allison Shorten, RN, CM, BN, MHSc

Georgina Stamp, RN, GDipSc, MSc Flin

Peter Thomas, RN, BSc Syd,
GradDipEd(Sec) SCAE, MA

Margaret Wallace, RN, BA Macq,
GDipEd(Nsg) SCAE, GDipNsg (Mid)
Curtin, MEd, MCN (NSW)

Administrative Assistants

Heather Todd
Magdalene Heaslip
Tania Harrison

Technical Officer

Annette Hoskins, RN, BoN.

DEPARTMENT OF PSYCHOLOGY**Departmental Head and Professor of
Psychology**

Robert Barry, BSc DSc UNSW, DipEd BA
PhD Syd, MSc Macq, FIOP, MAPsS

Professor

William J Lovegrove, BA PhD Q'd, MAPsS

Associate Professors

Mark H Anshel, BS Ill State, MA McGill,
PhD Flor State, MAPsS

Linda L Viney, BA Tas, MA ANU, PhD Cinc,
FAPsS

Beverly M Walker, BA PhD Syd, MAPsS

Senior Lecturers

Patrick Heaven, BA Stell, MA UOFS, D Litt
et Phil Sth Africa, MAPsS

Rachael M Henry, BA MA AppPsych PhD
Syd MAPsS, MBPs, MACP

Nigel Mackay, BSc, MSc Cape T, DPhil Oxf
Jeff Wragg, BA MA PhD, MAPsS

Lecturers

Darren Burke, BSc PhD Syd

Peter Caputi, BA DipMath

Doug G Cornford, BA MSc N'cle (NSW)

John M de Wet, BA MA PhD CapeT, MAPsS

Allison M Fox, BSc (Hons) PhD Macq

John M Freestone, BA UNSW, DipPsych
Syd, DipEurStud, MAPsS

Stanley Ginsberg, BS MA CCNY, PhD Wat,
MAPsS, MAPsA

Brin Grenyer, BA MSc Syd

William Hayward, BA MA UCant (NZ), PhD
Yale

Nicola Ronan, BA

Steven Roodenrys, BA PhD UNSW

Associate Lecturers

Nadia Crittenden, BA PhD

Beth Marlow, BA

**Conjoint Appointment with I.A.H.S.
Lecturers**

Vida Bliokas, BA

Alison Salmon, BA MPsy UWA

Professional Officer

Karen Scott, BEd, GradCertHghEd.

Administrative Assistants

Priscilla Kendall

Dayna Meades

Kathy Wilson

Technical Staff

Trevor Jones

Russell Noble

Honorary Senior Fellow

Geoffrey Fox, BA MAPsS Syd

Honorary Fellows

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Evian Gordon, BSc MBCh PhD Wits

Sarah McDonald, BA MPsy Syd, MAPsS

Don L Mixon, BA MA San Fran State Coll,
PhD Nevada

Graham Trembath, BA MA DipPsych Syd

NORTHFIELDS CLINIC**Director**

John Freestone, BA UNS, DipPsych Syd,
DipEurStud, MAPsS

Assistant Director

Katarina Drazumeric, BA

**DEPARTMENT OF PUBLIC
HEALTH AND NUTRITION****Departmental Head and Associate****Professor of Public Health**

Ross Harris, BA Adel, STB American, MA PhD
Maryland, FAPsS,

Professor of Public Health

Christine E Ewan, MB BS PhD MA Syd,
FAFPHM

Associate Professor

Paolo Ricci, BS LaSalle, MS PhD Drex, MA
Temple, MPA Harv, LLM Leices

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Bernie Amos, AO, MB BS, FRACP,
FRACMA, FCHSE

Senior Lecturers

Mary Harris, GradDipHealthAdmin SAIT,
MPH Berkeley, FCNA, FCHSE

Lindsey Harrison, MA PhD ANU, MSc Lond

Rohan Jayasuriya, MB BSc Ceyl, MPH Johns
H, MD (Comm Med)

Irene Kreis, MD PhD Leiden, MSc (Epi) Harv

Paul O'Halloran, BA MCLin Psyc Macq,
MAPS

Linda Tapsell, BSc DipNutrDiet Syd,
MHPEd UNSW, ADP

Heather Yeatman, BSc DipEd Adel,
GDipNutrDiet Flin, MPH Syd

Lecturer

Boris Gazibarich, BSc GradDipDiet Deakin,
MCom UNSW

Research Fellows

David Cromwell, BSc Warw, MSc Lanc
Kathleen Eagar, MA Syd, GradDipEdStud
SCAE

Teaching Fellows

Gordon Lambert RN, BHSc, DipCHN
Brian O'Neill, BA, (Hons) MAPsS

Honorary Fellows

Stephen Andersen, MB BS Syd, FRCPA,
FCAP, MASM, BSc, FIAC
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FRANZCP
Keith Bentley, MSc NZ, PhD ANU, ARACI
Richard Boden, MB BS Syd FRACP
Patricia Bradd, BAppSc(Speech Therapy)
Roger Cole, MB BS Lond, FRACP
Christopher Dunn, MB BS, FRACP
John Fardy, MB BS NSW, DRCOG Lond
Vivian Fernandes, MB BS, FRACP
Lee Flora, MPH(HPM)
Richard Gould, BA MHA UNSW
John Hoskins, MB BS, FRANZCP
Garry Lake, BCom NSW, MA Macq, MCom
Cait Lonie, MB MPH
Rodney McMahon, MB BS Syd, D(Obst)
RACOG
Robert Moses, BA, MB BS Syd, FRACP
Michael O'Halloran, MB BS, DipRACOG,
FRANCGP
Dwain Owensby, BSc Yale, PhD ANU, MD
Miami, FRACP
Irwin Pakula, MB BS UNSW, FRANZCP
Neil Phillips, MB BS, FRANZCP
Alan Rosen, MB BS, FRANZCP
Deidre Russell, LACEST, MAASH
Garry Smith, BSc Syd, PhD WA
Gregory Stone, MB BS Syd, MRCP, FRACP,
FACOM
Ian Tague, MB BS NSW, FAFOM
Vaughan Turnbull, MB BS, DipGenPsych,
FRANZCP
David Warner, MB ChB Otago, DDU,
FRACR, MBA
Victoria Westley-Wise, MB BS (Hons) Syd,
MPH Syd, RACP, FAFPHM

Professional Officer

Deanne Condon-Paoloni, BA (Hons) Syd,
MSc (Hons)

Administrative Assistant

Marie Johnson

MEDICAL RESEARCH UNIT

Professor & Head of Unit

Dennis Calvert, BMedSc MBChB MD
Otago, MCB, FRACP, FRCPA, FRCPath,
FACHSE, FAFPHM

Associate Professor

Robyn Holden, RPN, DipAppSc Phillip Inst,
BA LaT, MA PhD Deakin

Lecturer

Barbara Meyer, BSc (Hons) PhD Monash

Administrative Assistant

Elaine Knight

FACULTY VISITING COMMITTEE

Mr Steve Martin, Speaker, House of
Representatives
Mr Richard Gould, Chief Executive Officer,
Illawara Area Health Service
Dr Garry Egger, Health Promotion
Consultant
Dr Gavin Frost, Deputy Chief Health
Officer, NSW Health Department
Ms Paula Blanche, Director of Nursing,
Illawarra Regional Hospital
Dr Aileen Plant, Course Director, Master of
Applied Epidemiology Program,
National Centre for Epidemiology and
Population Health
Professor Barbara Gillam, School of
Psychology, University of New South
Wales
Professor John Sutton, Head, School of
Biomedical Science, University of
Sydney
Ms Iris McCleod, Senior Aboriginal Health
Worker, Community Health Services

BIOMEDICAL SCIENCE

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Science by Coursework and Research
3. Graduate Diploma in Science (Exercise Science)

CURRENT RESEARCH AREAS

The Department's research activities are placed under the general areas of metabolic and cardiorespiratory physiology, pathology, human performance, and movement rehabilitation.

COURSE REQUIREMENTS

1. DOCTOR OF PHILOSOPHY

Candidates for this degree enrol in GHMA999 Major Thesis

2. HONOURS MASTER OF SCIENCE

The primary aim of the Honours Masters program in Human Movement Science is to provide research opportunities and training at the postgraduate level.

Students with a degree at less than Honours Class II, Division 1 level will be required to complete subjects with a value of at least 96 credit points to graduate. The credit points will be divided into 48 credit points of coursework and 48 credit points of research.

Those students with a degree of at least Honours Class II, Division 1 level will be required to complete a program with a value of at least 48 credit points.

3. GRADUATE DIPLOMA IN SCIENCE (EXERCISE SCIENCE)

This one-year Graduate Diploma is designed principally for graduate students to gain a professional orientation in Exercise Science to their undergraduate program.

Students must consult with the postgraduate co-ordinator for approval of entry. The specific combination of subjects will be determined after discussion with the postgraduate co-ordinator and will take into account the previous background and needs of the student and whether the subjects selected are consistent with University's Course Rules for Graduate Diplomas.

SUBJECT DESCRIPTIONS

GHMA900 Applied Cardiovascular Physiology*

Autumn or Spring session; 8 credit points (56 contact hrs).

Pre-requisites: BMS202 or approved subject.

Assessment: project 60%, labs 15%, presentation 5%, mid-term examination 20%.

This subject focuses on the cardiovascular system, describes and provides access to a range of noninvasive indices of cardiovascular function, and examines the relationships between exercise, physical and psychological stressors, chronic disease, and cardiac function. At the finish of the course

students will have had in depth experience with noninvasive measures of cardiac function such as impedance cardiography, beat-by-beat blood pressure, spectral analysis of ECG, and ECG electrophysiology.

Textbooks:

Journal articles and selected book chapters will be used.

Co-ordinator: Dr S Boucher.

GHMA904 Advanced Study in Exercise Physiology*

Autumn or Spring session; 8 credit points (3 hr lecture plus laboratory work each wk).

Assessment: semester paper 30%, seminar presentations 15%, seminar preparation and involvement 10%, and major research project 45%.

The aim of the assessment is to evaluate the understanding of essential core components, which is consistent with both professional training and the quantification of the preparedness of the student to undertake research in exercise physiology.

This subject shall involve seminar-based, detailed study in current topics in exercise physiology as they pertain to research in the broad areas of exercise, health and disease. While certain key topics will be maintained as core components, the subject material and supplementary topics will change regularly to reflect recent trends in research. Subject core topics include: gas exchange kinetics; fatigue mechanisms; acid base regulation; muscle plasticity.

Textbooks:

There is no prescribed text. However, a collection of essential readings (research and review papers), will be held in the reserve section of the library. All students are expected to copy these papers for class use.

Co-ordinator: Dr NAS Taylor.

GHMA906 Research Projects

Autumn or Spring session; 8 credit points (28 hrs workshop per session).

Assessment: substantial report and seminar.

This subject requires the student to research in detail a problem identified in an approved topic in Human Movement Science. Students will conduct their research project in a selected staff member's research laboratory.

Textbooks: none.

Co-ordinator: Dr S Boucher.

GHMA909 Practicum

Autumn or Spring session; 8 credit points (field work plus 28 hrs of university-based

laboratory/workshops).

Pre-requisite: approved subjects in Human Movement Science.

Assessment: Substantial report and seminar.

Students will undertake a period of supervised research with selected staff members and will provide a substantial report on this experience.

Textbooks: none.

Co-ordinator: Dr M Brown.

GHMA911 Advanced Injury

Prevention and Rehabilitation*

Autumn or Spring session; 8 credit points (56 hrs of lectures, seminars and laboratory sessions).

Pre-requisite: Approved subjects in Human Movement Science.

Assessment: assignment work, mid session and final examination.

An extension of BMS351 to provide opportunities to apply the skills of the human movement scientist to the evaluation of movement capability, the identification of movement disorders, and the design of appropriate procedures to restore and enhance individual movement capacities of a variety of movement settings.

Textbooks: to be advised.

Co-ordinator: Mr O Curtis.

GHMA913 Special Topics

Autumn or Spring session; 8 credit points.

Individual directed study with a selected member of staff.

Co-ordinator: Dr G Ward.

GHMA914 Ergonomics

Autumn or Spring session; 8 credit points (56 hrs of lectures, seminars and laboratory sessions).

Assessment: assignment work, laboratory reports and final examination.

This subject will analyse the relationship between the nature of work e environment.

Topics covered will include the design of workstations and jobs and the capacities and limitations of the human body.

Textbooks: to be advised.

Co-ordinator: to be advised.

GHMA999 Major Thesis

Multi-session subject; 48 credit points.

* Not on offer in 1996.

NURSING

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Master of Nursing (Honours)
3. Master of Science (Honours, Midwifery)
4. Master of Science (Midwifery)
5. Master of Nursing
6. Master of Science (Development Disability)
7. The Graduate Certificate, Graduate Diploma and Master of Indigenous Health Studies
8. Graduate Diploma in Science (Developmental Disability)
9. Graduate Diploma in Nursing
10. Graduate Certificate in Nursing

CURRENT RESEARCH AREAS

The major current areas of nursing research use educational, demographic, and ethnographic techniques. Studies using a variety of approaches associated with disciplines such as Psychology, History, Economics, Philosophy and Sociology will be considered.

The following areas of research are available to candidates undertaking the Honours Masters degrees by research and the Doctor of Philosophy degree:

Maternal and child care
 Gerontology
 Medical/surgical nursing
 Special care nursing
 Mental health
 Developmental disability
 Psychiatric nursing
 Health promotion
 Cardiovascular disease prevention
 Health services evaluation
 Migrant health
 Geriatrics and rehabilitation
 Palliative care
 and other areas relevant to nursing

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAMS IN NURSING

leading to the Graduate Certificate in Nursing, Graduate Certificate in Indigenous Health Studies, Graduate Diploma in Nursing, Graduate Diploma in Indigenous Health Studies, Graduate Diploma in Science (Developmental Disability), Master of Science (Developmental Disability), Master of Nursing, Master of Indigenous Health Studies, Master of Science (Midwifery), Master of Science (Honours, Midwifery), Master of Nursing (Honours), Doctor of Philosophy.

Number	Subject	Credit Points
SCHEDULE 1		
Graduate Certificate in Nursing		
24 credit points from the subjects listed below:		
GHMB900	Nursing: The Professional Context	6
GHMB902	Nursing Management	6
GHMB903	Scientific and Quantitative Developments in Critical Care	6
GHMB906	Critical Care Nursing: Reflections on Practice	6
GHMB907	Fundamental Concepts in Developmental Disability	6
GHMB908	Applied Behavioural Science for Developmental Disability Practice	6
GHMB909	Multiple Disability	6
GHMB910	Contemporary Issues in Developmental Disability	6
GHMB923	Legal and Professional Issues	6
GHMB930	Clinical Education	6
GHMB931	Clinical Supervision	6
GHMD902	Communication and Education	6
GHMD906	Health Services Organisation and Management	6
NURS225	Pathophysiology for the Registered Nurse	6

Normally subjects will be selected to form a coherent course of study in a specialised area.

SCHEDULE 2

Graduate Certificate in Indigenous Health Studies (24 credit points) subjects

GHMB904	Modalities of Care: Mental Health	6
GHMD936	Public Health Nutrition	6
GHMB940	Indigenous Family Studies	6
GHMD983	Statistics in Health Research	6

POSTGRADUATE PROGRAMS IN NURSING (cont'd)

leading to the Graduate Certificate in Nursing, Graduate Certificate in Indigenous Health Studies, Graduate Diploma in Nursing, Graduate Diploma in Indigenous Health Studies, Graduate Diploma in Science (Developmental Disability), Master of Science (Developmental Disability), Master of Nursing, Master of Indigenous Health Studies, Master of Science (Midwifery), Master of Science (Honours, Midwifery), Master of Nursing (Honours), Doctor of Philosophy.

Number	Subject	Credit Points
SCHEDULE 3		
Graduate Diploma in Nursing		
Core Subjects		
plus 24 credit points from Schedule 1		
GHMD983	Statistics in Health Research	6
GHMD984	Health Research Methodology	6
GHMB905	Special Topic in Nursing	12
SCHEDULE 4		
Graduate Diploma in Indigenous Health Studies (48 credit points) subjects		
<i>Schedule 2: The Graduate Certificate in Indigenous Health Studies (24 credit points) plus</i>		
GHMD902	Communication and Education	6
GHMD904	Epidemiology	6
GHMD913	Drug Problems and Issues	6
GHMB941	Indigenous Health Patterns	6
SCHEDULE 5a		
Graduate Diploma in Science (Developmental Disability)		
Core and specialisation subjects - compulsory as listed below		
GHMD983	Statistics in Health Research	6
GHMD984	Health Research Methodology	6
GHMB907	Fundamental Concepts in Developmental Disability	6
GHMB908	Applied Behavioural Science for Developmental Disability Practice	6
GHMB909	Multiple Disability	6
GHMB910	Contemporary Issues in Developmental Disability	6
The remaining two (2) subjects (12 credit points) are electives, normally chosen from the following five (5) subjects:		
SOC103	Sociology 1A	6
SOC205	Sociology of the Family	6
EDUF101	Child Growth and Development	6
PSYC233	Development	6
GHMB900	Nursing: The Professional Context	6
SCHEDULE 5b		
Master of Science (Developmental Disability)		
48 credit points from Schedule 5a plus:		
GHMB998	Minor Thesis	24
SCHEDULE 6		
Master of Nursing (48 credit points) subjects		
GHMD983	Statistics in Health Research	6
GHMD984	Health Research Methodology	6
GHMB905	Special Topic in Nursing	12
GHMB998	Minor Thesis	24
SCHEDULE 7		
Master of Indigenous Health (72 credit points) subjects		
<i>Option A - Schedule 4: The Graduate Diploma in Indigenous Health Studies (48 credit points) plus</i>		
GHMB998	Minor Thesis	24
<i>Option B - Schedule 4: The Graduate Diploma in Indigenous Health Studies (48 credit points) plus</i>		
GHMD908	Service Planning and Evaluation	6
GHMD912	Health Promotion - A Practical Approach	6
GHMB942	Special Topic	12
SCHEDULE 8		
Master of Science (Midwifery)		
Specialisation (compulsory)		
GHMB920	Applied Midwifery Studies	12
GHMB921	Reproductive Bioscience	8
GHMB922	Psychosocial Development of the Family	8
GHMB923	Legal and Professional Issues	6
GHMB924	Midwifery Studies	8
GHMD983	Statistics in Health Research	6
or		
NURS224	Research and Design Methods	6

POSTGRADUATE PROGRAMS IN NURSING (cont'd)

leading to the Graduate Certificate in Nursing, Graduate Certificate in Indigenous Health Studies, Graduate Diploma in Nursing, Graduate Diploma in Indigenous Health Studies, Graduate Diploma in Science (Developmental Disability), Master of Science (Developmental Disability), Master of Nursing, Master of Indigenous Health Studies, Master of Science (Midwifery), Master of Science (Honours, Midwifery), Master of Nursing (Honours), Doctor of Philosophy.

Number	Subject	Credit Points
SCHEDULE 9		
Honours Master of Science (Midwifery)		
Master of Science (Midwifery) subjects plus: 48 credit points consisting of		
GHMD984	Health Research Methodology	6
GHMD904	Epidemiology	6
Two (2) optional electives to be selected from:		
GHMC962	Counselling Psychology	6
GHMD912	Health Promotion a Practical Approach	6
GHMD925	Aboriginal Health Issues	6
GHMD939	Health Nutrition in Health and Disease	6
GHMD967	Service Planning and Evaluation	6
GHMD981	Maternal and Child Health in Developing Countries	6
<i>and</i>		
GHMB998	Major Project	24
SCHEDULE 10		
Honours Master of Nursing and Doctor of Philosophy		
(Repeat same enrolment each year of study)		
GHMB999	Major Thesis	48

Subject descriptions for GHMB - Department of Nursing

Subject descriptions for GHMD - Department of Public Health and Nutrition

COURSE REQUIREMENTS**1. DOCTOR OF PHILOSOPHY**

For the Doctor of Philosophy degree candidates enrol in the subject GHMB999 Thesis.

2. HONOURS MASTER OF NURSING (By Research) HONOURS MASTER OF NURSING (By Coursework and Research) AND MASTER OF NURSING

The Honours Master of Nursing by Research is intended to provide candidates with the opportunity to pursue a research program in a specialised field of nursing.

For Master of Nursing and Honours Master of Nursing by Research please refer to the Course Rules and note the following additions:

- i. Applicants must hold a current authority to practise as a Registered Nurse with the NSW Nurses Registration Board or an equivalent authority to practise. Normal entry requirements are as stated in the Course Rules.
 - (a) Candidates who successfully complete the Graduate Diploma in Nursing with an average of credit pass or higher may apply for entry into the Master of Nursing Degree or Master of Nursing (Honours) Degree.
- ii. a candidate will undertake an approved course recommended by the Head of the Department of Nursing;
- iii. a candidate for the Master of Nursing;

Please refer to the Pass Masters Degree Rules and note the following additions:

- (a) a candidate who has completed a degree of Bachelor of Nursing or equivalent shall be eligible for admission into Master of Nursing Program.
- iv. a person wishing to use previous postgraduate studies to qualify for admission to the Master of Nursing (Pass), or Master of Nursing (Honours) degree shall be expected to:
 - (a) Master of Nursing (Pass), Master of Science (Pass):
 - (i) carry 48 credit points advanced standing from the graduate diploma into the Master of Nursing, Master of Science or Master of Indigenous Health Studies;
 - (ii) complete 24 credit point minor thesis.
 - (b) Master of Nursing (Honours)
 - (i) carry 48 credit points advanced standing from the Graduate Diploma into the Master of Nursing (Honours);
 - (ii) carry 48 credit points advanced standing from the Pass Master of Nursing to the Master of Nursing (Honours) with the additional requirement of 48 credit points from thesis work; or
 - (iii) proceed straight into 96 credit points Master of Nursing (Honours) as per Course Rules.

- v. candidates wishing to use previous postgraduate studies obtained from institutions other than the University of Wollongong will be awarded credit consistent with the general regulations of the University of Wollongong;

vi. a candidate for the Honours Master of Nursing will successfully complete subjects with a total value of not less than 96 credit points:

- (a) 24 credit points will comprise the core subjects listed in Schedule 1;
- (b) 24 credit points will be selected from Schedule 3;
- (c) a thesis consisting of the results of an investigation to the value of 48 credit points; or
- (d) a minor thesis consisting of the results of an investigation whose credit point value is 24 together with satisfactory completion of directed study subjects to the value of 24 credit points.

Candidates for this degree enrol in GHMB999.

3. MASTER OF SCIENCE (MIDWIFERY) (HONOURS)

The Master of Science (Honours, Midwifery) is a program that provides an opportunity for candidates to engage in advanced coursework studies in related subjects and to complete a research enquiry culminating in the submission of a minor thesis.

4. MASTER OF SCIENCE (MIDWIFERY)

The Master of Science (Midwifery) is to prepare graduates to function as autonomous practitioners in the professional practice of midwifery. On successful completion of the Master of Science (Midwifery), students who do not hold an authority to practice midwifery and have a current authority to practise as a Registered Nurse (List A) are eligible to apply to the NSW Nurses Registration Board for an authority to practise.

5. MASTER OF NURSING

The Pass Masters degree is designed to prepare nurses for leadership roles in nursing and the health care system.

Candidates select subjects from Schedule 6. Refer to Section 2 above for further details.

6. MASTER OF SCIENCE (DEVELOPMENTAL DISABILITY)

Students enrolled in Master of Science (Developmental Disability) will have already completed the Graduate Diploma in Science (Developmental Disability). They will undertake a minor thesis on an aspect of developmental disability that consolidates earlier studies in developmental disability and research methodology.

7. THE GRADUATE CERTIFICATE, DIPLOMA AND MASTER OF INDIGENOUS HEALTH STUDIES

The Graduate Certificate, Diploma and Master of Indigenous Health Studies prepares graduates to work as autonomous health providers in urban and rural Indigenous communities.

8. GRADUATE DIPLOMA IN SCIENCE (DEVELOPMENTAL DISABILITY)

The Graduate Diploma in Science (Developmental Disability) is a multi-disciplinary course designed for health and education professionals providing direct care to people with developmental disabilities. It aims to provide an appropriate theoretical and conceptual framework for practice and access to contemporary information relating to developmental disability. The course consists of specialist developmental disability subjects and electives. Emphasis is on applying theoretical, research-based knowledge to practice in the developmental disability field.

9. GRADUATE DIPLOMA IN NURSING

(a) (General Stream)

The Graduate Diploma in Nursing is a professional course in nursing which will provide preparation in research design and methodology for nurses wishing to progress into higher degree programs, and preparation for the nurse who seeks an expanded role in the health system, by an individualised program of core subjects selected from Schedule 1.

Candidates complete 48 credit points of core subjects and selected elective subjects from Schedule 1 and 3.

(b)

The Graduate Diploma in Nursing provides nurses with the opportunity to develop skills and knowledge in a major area of nursing. Major areas of study include clinical education, critical care nursing, nursing management and research.

Applicants must hold a current authority to practise as a Registered Nurse with the NSW Nurses Registration Board or an equivalent authority to practise.

Normal entry requirements are as stated in the Course Rules.

10. GRADUATE CERTIFICATE IN NURSING

The Graduate Certificate in Nursing is a short, focused, clinically based course having both academic and industry relevance. It is designed to give students the flexibility to choose subjects that allow professional development to occur in tandem with academic rigour. Candidates may exit following completion of the required subjects having acquired advanced knowledge in their chosen fields and having been prepared for advanced practice. On completion of the Graduate Certificate in Nursing candidates may elect to progress to the Graduate Diploma in Nursing.

SUBJECT DESCRIPTIONS

GHMB900 Nursing: The Professional Context

Autumn session; 6 credit points (3 hrs per wk). Assessment: one seminar presentation 20%, written assignment 60%, a critical annotated bibliography 20%.

Students will be encouraged to explore nursing topics currently creating controversy and debate within the professional milieu of the nursing profession. Issues which impact on nursing education and management will be examined. Topics will include the career structure for the nursing profession and the role of the nurse within this context. Because of the degree of change currently affecting the nursing profession topics will be varied and opportunities will be available for discussion and critical analysis.

Textbook:

Journal articles and portions of books will be used in lieu of a set text.

Co-ordinator: to be advised.

GHMB902 Nursing Management

Spring session; 6 credit points (3 hrs per wk). Assessment: tutorial presentation and participation 50%, project 50%.

This subject will introduce the basic concepts of nursing administration at all levels - at the ward, middle management and at senior levels. Differences in management styles will be addressed; ward design and its impact on care delivery; and nursing care delivery assignments will be examined in detail. Nursing involvement in the public and the private sector will be examined.

Textbook:

Cuthbert M, Duffield C, and Hope J, *Management in Nursing*, Sydney, Harcourt Brace Jovanovich Publishers, 1992.

Green J, *Evaluation of Hospital Ward Design*, Kensington, University of NSW Press, 1986.

Co-ordinator: Mr B Janes.

GHMB903 Scientific and Qualitative Developments in Critical Care Nursing

Spring session; 6 credit points (3 hrs per wk). Pre-requisite: GHMB906.

Assessment: seminar presentation 40%, 1 written assignment 60%.

This subject investigates technological, biological, psychological and sociological developments that have created an impact in critical care nursing in recent times. Insights into specific technology and

pharmacology used for diagnostic or therapeutic purposes by nurses and the Health team will be targeted, including their characteristics, uses and efficacies within an holistic nursing care framework. Pre and pro surgical as well as operative nursing developments will also be discussed in terms of the efficacy of nursing care provision. A portion of each week will be devoted to ECG interpretation.

Textbook:

Journal articles and portions of books will be used in lieu of a set text.

Co-ordinator: Mr B Janes and Dr J Sibbald.

GHMB904 Modalities of Care: Mental Health*

Autumn session; 6 credit points (3 hrs per wk). Assessment: seminar presentation 20%, 1 written assignment 20%, 1 case report 60%.

This subject addresses the most frequently used of therapeutic modalities from mental health nursing perspectives. Selected theoretical approaches are discussed for each treatment modality. Specific characteristics of each type of therapy are presented. In addition the psychiatric nurse's role, and goals for therapy are described and analysed.

Textbook:

Beck, C, Rawlins, R and Williams, S, *Mental Health and Psychiatric Nursing*, The C V Mosby Co, 1988.

Co-ordinator: to be advised.

GHMB905 Special Topic in Nursing

Autumn or Spring session; 12 credit points (3 hrs per wk and seminars as required). Pre-requisite: demonstrated expertise in a special area of nursing as determined by the Head of the Department of Nursing.

Assessment: seminar presentation 20%, research report 80%.

The special topic in nursing will be selected from the list of current research areas provided by supervisors in the Nursing Department. The specific topic in nursing will be closely related to the research subjects and will consist of a research proposal which will be expected to provide the basis for the major investigation to be carried out by the candidate in the subsequent major thesis subject.

Textbook: to be advised.

Co-ordinator: Co-ordinator of Graduate Studies in the Department of Nursing.

GHMB906 Critical Care Nursing: Reflections on Practice

Autumn session; 6 credit points (3 hrs per wk). Assessment: seminar presentation 40%, 1 written assignment 60%.

This subject focuses on relevant theories, themes and issues that have a practical bearing upon critical care clinical practice, (Intensive Care, Accident and Emergency and Coronary Care), and models of critical care nursing that address the practical aspects of this knowledge. Practical aspects include pathophysiology of the Cardiovascular, Respiratory, Nervous and Alimentary systems and Acid Base balance; and Introduction to Electrocardiograph Interpretation.

Textbooks:

Conover, M B, *Understanding Electrocardiography*, St Louis, Mosby Year Book, 1992.

* Not on offer in 1996

McCance, K and Huether, S E, *Pathophysiology: The Biologic Basis for Disease in Adults and Children*, St Louis, Mosby Year Book, 1990.

Co-ordinator: Mr B Janes and Dr J Sibbald.

GHMB907 Fundamental Concepts in Developmental Disability

Autumn session; 6 credit points (3 hrs per wk).

Assessment: seminar presentation and participation 20%, two 1500-2000 word written assignments 40% each.

This subject will provide the basic scientific knowledge on which developmental disability practice is based. Emphasis will be placed upon the student gaining sound understanding of the nature of developmental disability and its complex interactions with society. The study of developmental disability is not merely a medical and educational issue, but rather one of wide social significance that is correctly placed in a broad social context. The body of knowledge which defines and identifies the nature of the clientele and the philosophical and ethical foundations for practice will be addressed in this course.

Textbooks: to be advised.

Co-ordinator: Ms M Gerry.

GHMB908 Applied Behavioural Science For Developmental Disability Practice

Spring session; 6 credit points (3 hrs per wk).

Pre-requisite: GHMB907.

Assessment: seminar presentation 20%, seminar paper 30% and an assignment 2500-3000 words 50%.

Developmental disability practice makes extensive use of such skills and roles as assessment, teaching, programming, behaviour management and supportive counselling. To use these skills effectively, the student requires a knowledge of selected principles drawn from the behavioural sciences. This subject will provide the necessary theoretical framework, together with an emphasis on practical application and problem-solving skills.

Textbooks: to be advised.

Co-ordinator: Ms I Bowen.

GHMB909 Multiple Disability

Autumn session; 6 credit points (3 hrs per wk).

Pre-requisite: GHMB907.

Assessment: seminar presentation 20%, seminar paper 30% and an assignment 3000-4000 words 50%.

Many clients with developmental disabilities, particularly those who are the heaviest users of specialised services, have more than one disability. The problems associated with these clients are usually more complex and long-term than those of clients with a single disability. These clients provide a particular challenge to staff and demand highly individualised and innovative care. Underlying problems of developmental disability may also be complicated by the stresses of transition through the life-cycle, by the disabling effects of institutionalisation or by the socio-economic problems that frequently accompany developmental disability. This subject will address these issues.

Textbooks: to be advised.

Co-ordinator: Ms I Bowen.

GHMB910 Contemporary Issues in Developmental Disability

Spring session; 6 credit points (3 hrs per wk).

Pre-requisite: GHMB907.

Assessment: project proposal presentation 20%, project update presentation 20% and a project 5000-8000 words 60%.

Developmental disability is a field that has changed constantly through its history and a field in which there is a continual questioning of current policies and practices and a searching for better alternatives. It is vitally important therefore, that practitioners in the field are willing to critically assess what is currently being done and to honestly and objectively consider other options. There are also a number of controversial issues in relation to the rights and responsibilities of people with developmental disabilities that must be addressed. This subject will require independent and thoughtful analysis of such issues and critical assessment of current practices.

Textbooks: to be advised.

Co-ordinator: Ms M Gerry.

GHMB920 Applied Midwifery Studies

Double session (A); 12 credit points (clinical practice average 32hrs per wk).

Assessment: one viva examination 25% and 2 x 2hr examination 75%.

This subject is designed to prepare the student as an autonomous practitioner to care for the family throughout pregnancy, parturition and the puerperium. Initially, special emphasis will be on the well mother and healthy baby. Potential complications during childbearing and management of high risk women will be examined. Clinical practice will consist of the experiences suggested by the NSW Nurses' Registration Board.

Textbooks:

Silverton, L, *The Art and Science of Midwifery*, Prentice Hall, 1993.

Enkin M, Keirse, MJNC & Renfrew M, *A Guide to Effective Care in Pregnancy & Childbirth*, Oxford, OUP, 1995.

Co-ordinator: Ms G Stamp.

GHMB921 Reproductive Bioscience

Double session (A); 8 credit points (2 hrs per wk).

Assessment: one major and one minor assignment each semester, one seminar presentation.

This subject is designed to provide students with advanced knowledge of anatomy, physiology and pathophysiology related to conception, pregnancy and parturition. Biochemical, nutritional, genetic and teratogenic influences on conception and embryonic, foetal, neonatal and maternal development will be addressed. Technology used in assessment, diagnosis and intervention at all stages of the reproductive process will be explained in terms of scientific principles. The knowledge gained from this course provides midwives with an important component of a scientific knowledge base from which to plan and provide appropriate care to their clients.

Textbook:

Blackburn, ST & Loper, DL, *Maternal, Fetal, and Neonatal Physiology: A Clinical Perspective*, WB Saunders Company, Philadelphia, 1992.

Co-ordinator: Dr J Sibbald.

GHMB922 Psychosocial Development of the Family

Double session (A); 8 credit points (2 hrs per wk).

Assessment: one class presentation (including written report) 20%, two critical reviews of published articles 10% each one discussion paper 60%.

This subject will provide the student with an in depth knowledge of theory and research, applied largely in the Australian context on psychological, sociological and cultural influences on the family and extended family networks.

Textbook:

Brazelton, TB and Cramer EG, *The Earliest Relationship: Parents, Infants and The Drama of Early Attachment*, Reading Massachusetts, Addison-Wesley, 1990.

Co-ordinator: Mr B Grenyer.

GHMB923 Legal and Professional Issues

Spring session; 6 credit points (3 contact hrs per wk).

Assessment: seminar presentation 20%, seminar paper 30%, major written assignment 50%.

This subject is designed to provide students with a knowledge of legal and professional issues in relation to their area of clinical practice. Relevant Australian legislation, appropriate case law and examples of moral reasoning will be used to provide a framework for clinical decision-making.

Textbooks:

CCH Health & Medical Law (eds), *Law for the Nursing Profession*, North Ryde, NSW, 1990.

Johnstone, MJ, *Bio-ethics: A Nursing Perspective*, Sydney, Saunders, WB, 1989.

Co-ordinator: Ms M Wallace.

GHMB924 Midwifery Studies

Double session (A); 8 credit points (2 hrs per wk).

Assessment: 30 minute seminar presentation 25%, Debate 25%, Critical analysis of research papers 20% and an independent learning task 2000 words 30%.

This subject provides the theoretical framework for the student to function as a safe beginning practitioner caring for childbearing women and families through pregnancy, labour and the puerperium. An evidence-based approach to clinical practice and an ability to review literature critically will be encouraged.

Textbooks:

Enkin M, Keirse, MJNC & Vhalmers I, *Effective Care in Pregnancy and Childbirth*. Volumes 1 and 2, Oxford, OUP, 1989.

Enkin M, Keirse, MJNC, Renfrew M & Neilson, J, *A Guide to Effective Care in Pregnancy & Childbirth*, Oxford, OUP, 1995.

Co-ordinator: Ms G Stamp.

GHMB930 Clinical Education*

Autumn session: 6 credit points (3 hrs per wk).

Assessment: one seminar presentation 30%, written assignment 50%, observed clinical teaching 20%.

The subject will introduce the concepts and practice of clinical education, it will address issues related to the role of the clinical educator, factors influencing student learning, teaching strategies and teaching resources in clinical settings, the clinical

* Not on offer in 1996

environment as an educational topic, and bridging the theory and practice gap. Clinical education research and the health professional responsibilities and leadership in clinical education will be discussed.

Textbook:

White, R and Ewan, C, *Clinical Teaching in Nursing*, Chapman and Hall, 1991.

Co-ordinator: to be advised.

GHMB931 Clinical Supervision and Assessment*

Spring session: 6 credit points (3 hrs per wk).

Pre-requisite GHMB930.

Assessment: various assessment techniques will be employed including seminar presentations, supervision report and a mentor project.

This subject covers the theoretical and practical aspects of clinical supervision and assessment within the health service context. It introduces the concept of competency based assessment, its origins, limitations and practical applications to assessment of professional performance. Students will critically assess and utilise a range of assessment tools and develop skills in assessing students both formatively and summatively. The subject will include practical experience in supervising performance and giving feedback.

Textbooks: to be advised.

Co-ordinator: to be advised.

GHMB940 Indigenous Family Studies

Autumn session: 6 credit points (4 hrs per wk; 2 hrs lectures, 2 hours tutorials).

Pre-requisite: nil.

Assessment: 2 x seminar presentations 20% each, 1 x major assignment 30%, examination 30%.

This subject examines traditional Aboriginal family structures, kinship systems, child-rearing practices, the role of women within the Aboriginal family and the health related situations in town-camps.

Textbook:

Reid, J and Trompf, P, *The Health of Aboriginal Australia*, Sydney, Harcourt Brace Jovanovich, 1991.

Co-ordinator: Ms I Stein.

GHMB941 Indigenous Health Patterns

Spring session: 6 credit points (4 hrs per wk; 2 hrs lectures, 2 hours tutorials).

Pre-requisite: nil.

Assessment: 2 x seminar presentations 20% each, 1 x major assignment 30%, examination 30%.

This subject examines different approaches to the study of Aboriginal health, contemporary patterns of morbidity and mortality, various health services and the related needs and community empowerment.

Textbooks:

Reid, J and Trompf, P, *The Health of Aboriginal Australia*, Sydney, Harcourt Brace Jovanovich, 1991.

Saggers, S and Gray, D, *Aboriginal Health and Society*, North Sydney, Allen & Unwin, 1991.

Co-ordinator: Ms I Stein.

GHMB942 Special Topic

Autumn or Spring session: 12 credit points (2 hrs lecture/seminar).

Pre-requisite: nil.

Assessment: 2 x seminar presentations of

"topic-in-progress" 20% each, Special Topic Submission 60%.

This subject examines the factors affecting illness patterns, health area analysis, epidemiological considerations and health program delivery patterns about the topic under consideration in an Indigenous context. In addition, health audit procedures, service efficiency, service appropriateness and inter-agency co-ordination will be scrutinised in an Indigenous context.

Textbook: to be advised.

Co-ordinator: Ms I Stein.

GHMB998 Minor Thesis

Autumn or Spring or Double session (A); 24 credit points (1 hr of research supervision per wk and 2 hr seminars as required to complete assessment paper).

Assessment: minor thesis.

This is a major component of a combined coursework/thesis program in the Masters of Nursing undertaken by candidates enrolled in the Department of Nursing. A thesis must be submitted and assessed according to the Course Rules for Masters' Candidates. Thesis work is only commenced with the approval from the co-ordinator of the subject and the Head of the Nursing Department. Students will be required to present a seminar on their chosen thesis topic prior to completion of the thesis.

Co-ordinator: selected supervisors.

GHMB999 Major Thesis

48 credit points.

PSYCHOLOGY

COURSES OFFERED

The following postgraduate courses are available:

1. PhD by Research
2. Doctor of Clinical Psychology
3. PhD in Clinical Psychology
4. Master of Clinical Psychology
5. MA (Hons) by Research
6. Master of Science (Pass)
7. Graduate Certificate in Cognitive Neuroscience

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master of Arts degree by research and the Doctor of Philosophy degree:

Adolescent Drug Use and Deviance
Adolescent Development
Attachment Theory and Measurement
Attributional Research; Belief Systems
Autobiographical memory
Belief Systems, Attributional Research
Clinical Applications of Biofeedback
Clinical, Community and Health Psychology (especially constructivist approaches)
Cognition in Sport Performance
Cognitive and Perceptual Aspects of Mental Imagery
Cognitive-Behavioural Treatment of Anxiety and Panic Disorders
Consciousness, Will, Belief, Placebo and Suggestion Effects
Coping with Acute Stress
Creativity
Development of Neuropsychological Tests
Drug and Alcohol Treatment
Evaluation of Early Intervention Programs
Event-related Potential (ERP) Indices of Cognitive Processes, in particular, Attention, Memory and Language
Eye Movement Desensitisation and Reprocessing
General Social Psychology
Health and Medical Psychology
Health Psychophysiology
Human Pavlovian Autonomic Conditioning
Implicit Learning
Indices of Stress, Anxiety, and Arousal
Jungian and Transpersonal Psychology
Learned Helplessness
Life-span Development, particularly Adolescent Development
Long-Term Memory
Measurement Issues in Personal Construct Theory
Mood Disorder
Object Recognition
Orienting Reaction
Perception of Motion
Personal Construct Psychology
Pregnancy and Childbirth
Psychiatric Rehabilitation
Psychoanalytic Research in the areas of:
 Mother-Infant Interactions
 Group work with Children and Adolescents
 Brief Work with Parents and Children up to 5 years
 Child Sexual Abuse
Psychology and Women/Sex and Gender Roles
Psychology of User/Computer Interface
Psychophysiological Correlates of Individual Differences
Psychophysiology of Attentional Processes
Psychosocial Functioning in Adults and the Elderly
Psychosocial Indices in Pregnancy and Childbirth
Psychotherapy Research
Quantitative Psychology
Social Support
Spatio-temporal Processing in Human Vision
Specific Reading Disabilities
Subjectivity, Philosophy of Mind
The Acute and Long-term Effects of Drugs (Especially Alcohol) on Cognitive Functioning
The Causes of Drug and Alcohol Use in Adolescence
The Development and Evaluation of Programs for Intervention with Adolescent and Adult Drug Users
The Development of Reading
Theoretical/Metatheoretical Issues in Psychology and Clinical Theory
Working Memory

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAMS IN CLINICAL PSYCHOLOGY

leading to the Master of Clinical Psychology or the Doctor of Clinical Psychology.

Number	Subject	Credit Points
(i) Master of Clinical Psychology		
GHMC901	Interpersonal Skills for Clinical Psychologists	6
GHMC902	Assessment for Clinical Psychologists	8
GHMC903	Research Skills for Clinical Psychologists	8
GHMC904	Clinical Psychology	8
GHMC905	Child Clinical Psychology	8
GHMC906	Clinical Neuropsychology	8
GHMC907	Psychotherapy with Individuals and Groups	8
GHMC915	Cognitive Behaviour Therapy	6
GHMC916	Practicum A	4
GHMC917	Practicum B	8
GHMC912	Research Project	24
(ii) Doctor of Clinical Psychology		
GHMC901	Interpersonal Skills for Clinical Psychologists	6
GHMC902	Assessment for Clinical Psychologists	8
GHMC903	Research Skills for Clinical Psychologists	8
GHMC904	Clinical Psychology	8
GHMC905	Child Clinical Psychology	8
GHMC906	Clinical Neuropsychology	8
GHMC907	Psychotherapy with Individuals and Groups	8
GHMC915	Cognitive Behaviour Therapy	6
GHMC916	Practicum A	4
GHMC917	Practicum B	8
GHMC914	Thesis (Clinical Psychology)	48 ¹
(iii) PhD in Clinical Psychology		
GHMC901	Interpersonal Skills for Clinical Psychologists	6
GHMC902	Assessment for Clinical Psychologists	8
GHMC904	Clinical Psychology	8
GHMC905	Child Clinical Psychology	8
GHMC906	Clinical Neuropsychology	8
GHMC907	Psychotherapy with Individuals and Groups	8
GHMC915	Cognitive Behaviour Therapy	6
GHMC916	Practicum A	4
GHMC917	Practicum B	8
GHMC918	Thesis (Clinical Psychology)	48 ²

¹ The thesis carries a weighting of 48 credit points per year over 1.5 years

² The thesis carries a weighting of 48 credit points per year over 2.5 years

For further details, see *Course Requirements* below.

OTHER POSTGRADUATE SUBJECTS

Number	Subject	Credit Points
(i) Master of Science (Pass) in Psychology		
GHMC950	Theory Seminar*	8
GHMC951	Health Psychology	8
GHMC953	Psychology of Information Processing	8
GHMC958	Topics in Data Analysis*	8
GHMC959	Research Project	8
GHMC960	Psychology of Reading and Reading Disabilities	8
GHMC961	Assessment in Applied Psychology	8
GHMC962	Counselling Psychology	8
GHMC963	Child and Adolescent Psychology	8
GHMC964	Cognitive and Affective Neuroscience	8
GHMC965	Advanced Sport and Exercise Psychology	8
GHMC974	Principles of Personal Construct Psychology	8
(ii) Honours Master of Arts and Doctor of Philosophy		
GHMC998	Honours Masters by Research	48
GHMC999	Doctor of Philosophy Thesis	48
(iii) Graduate Certificate in Cognitive Neuroscience		
GHMC964	Cognitive and Affective Neuroscience	8
GHMC966	Psychophysiology: Insights into Brain and Behaviour	8
GHMC967	Models of the Human Brain and their Applications	8

* These require special permission from the Head of Department

COURSE REQUIREMENTS

1. DOCTOR OF PHILOSOPHY

To qualify for entry to the Doctor of Philosophy candidates must have a good Honours degree of at least 2(ii) standard. However, only a limited number of places are available, so the required standard may well be higher than this. This degree is a three year full-time degree, the usual minimum period of study. For part-time study the duration will be approximately twice as long. Candidates for this research degree enrol in GHMC999.

2. PhD in CLINICAL PSYCHOLOGY

To qualify for entry candidates must have an Honours Bachelor Degree of at least Class II, Division 1 standard. The program will normally involve eight academic sessions of full-time study. Full-time students are required to present for examination not later than 10 academic sessions from the date of registration. The program for PhD in Clinical Psychology candidates will require successful completion of:

- (i) a supervised research programme on a topic which is in the field of Clinical Psychology. The research programme, to be written up as a thesis, constitutes two-thirds of the program.
- (ii) at least 64 credit points from the Schedule of Graduate subjects in Psychology as follows:

- A. 52 credit points in course work subjects:
 - GHMC901 Interpersonal Skills for Clinical Psychologists
 - GHMC902 Assessment for Clinical Psychologists
 - GHMC904 Clinical Psychology
 - GHMC905 Child Clinical Psychology
 - GHMC906 Clinical Neuropsychology
 - GHMC907 Psychotherapy with Individuals and Groups
 - GHMC915 Cognitive Behaviour Therapy
- B. at least 12 credit points in supervised practical clinical experience:
 - GHMC916 Practicum A and
 - GHMC917 Practicum B

3. DOCTOR OF CLINICAL PSYCHOLOGY

To qualify for entry candidates must have an Honours Bachelor Degree of at least Class II, Division 1 standard. The program will normally involve six academic sessions of full-time study. Full-time students are required to present for examination not later than 8 academic sessions from the date of registration. The program for Doctor of Clinical Psychology candidates will require successful completion of:

- (i) a supervised research programme on a topic which is in the field of Clinical Psychology. The research programme will be written up as a thesis and constitutes half of the program.
- (ii) at least 72 credit points from the Schedule of Graduate subjects in Psychology as follows:

- A. GHMC901 Interpersonal Skills for Clinical Psychologists
- GHMC902 Assessment for Clinical Psychologists
- GHMC903 Research Skills for Clinical Psychologists
- GHMC904 Clinical Psychology
- GHMC905 Child Clinical Psychology
- GHMC906 Clinical Neuropsychology
- GHMC907 Psychotherapy with Individuals and Groups
- GHMC915 Cognitive Behaviour Therapy
- B. at least 12 credit points in supervised practical clinical experience:
 - GHMC916 Practicum A and
 - GHMC917 Practicum B

Coursework will be graded in the same manner as coursework completed by candidates for the degree of Master of Clinical Psychology.

Award of the degree of Doctor of Clinical Psychology is governed by the University Rules for the award of Doctoral degrees as described elsewhere.

4. MASTER OF CLINICAL PSYCHOLOGY

The degree of Master of Clinical Psychology will be subject to the Honours Masters Degree Rules together with the following conditions. Entry to the Master of Clinical Psychology program will be from an Honours degree in Psychology at a standard of Class II, Division 2 or its equivalent. The program will involve four sessions of full-time study or their equivalent part-time. The program requires the successful completion of at least 96 credit points from the Schedule of Graduate Subjects in Psychology as follows:

- A. 60 credit points in course work subjects:
 - GHMC901 Interpersonal Skills for Clinical Psychologists
 - GHMC902 Assessment for Clinical Psychologists
 - GHMC903 Research Skills for Clinical Psychologists
 - GHMC904 Clinical Psychology
 - GHMC905 Child Clinical Psychology
 - GHMC906 Clinical Neuropsychology
 - GHMC907 Psychotherapy with Individuals and Groups
 - GHMC915 Cognitive Behaviour Therapy
- B. at least 12 credit points in supervised practicums:
 - GHMC916 Practicum A and
 - GHMC917 Practicum B
- C. 24 credit points of independent but supervised research in the subject:
 - GHMC912 Research Project.

5. HONOURS MASTER OF ARTS BY RESEARCH

To qualify for entry to the Master of Arts (Honours) by Research candidates must have a good Honours degree of at least 2(ii) standard. However, only a limited number of places are available, so the required standard may well be higher than this. The usual minimum period of study is two years full-time. For part-time study the duration will be approximately twice as long. Candidates for this research degree enrol in GHMC 998.

6. MASTER OF SCIENCE (PASS) IN PSYCHOLOGY

The Master of Science (Pass) in Psychology is available to graduates with the degree of Bachelor with at least 24 credit points in 300-level Psychology subjects, or their equivalent. The Master of Science enables pass students to update or extend their psychological studies into an APS accredited fourth year.

It normally occupies two sessions of full-time study or four sessions of part-time study. Admission to the program must be through recommendation by the Head of the Department of Psychology. It is subject to the University Rules governing the award of Master of Science.

The Master of Science requires successful completion of 48 credit points made up as follows:

- A. 24 credit points in the core subjects:
 - GHMC959 Research Project
 - GHMC961 Assessment in Applied Psychology
 - GHMC962 Counselling Psychology
- B. 8 credit points selected from one of four specialisations:
 - GHMC953 Psychology of Information Processing
 - GHMC963 Child and Adolescent Psychology
 - GHMC965 Advanced Sport and Exercise
 - GHMC974 Principles of Personal Construct Psychology
- C. 16 credit points selected from the following three electives:
 - GHMC951 Health Psychology
 - GHMC960 Psychology of Reading and Reading Disabilities
 - GHMC964 Cognitive and Affective Neuroscience

There is no guarantee that students will get their first preference within the specialisation and elective subject groupings.

7. GRADUATE CERTIFICATE IN COGNITIVE NEUROSCIENCE

The Graduate Certificate in Cognitive Neuroscience is available to graduates with undergraduate degrees deemed appropriate by the Head of Department.

The course provides an opportunity for graduates to begin formal studies in Cognitive Neuroscience. It will be of particular interest to those with undergraduate training in Psychology, Medicine, Biomedical Science or Human Movement Science, but also of interest to those with a background in Electrical Engineering or Computer Science.

It normally occupies three sessions of part-time study, involving subjects presented via SBS by the PAGE consortium with some residential requirements. It may be available in an on-campus mode over 1 or 2 sessions.

The Graduate Certificate requires successful completion of 24 credit points made up as follows:

8 credit points each:

- GHMC964 Cognitive and Affective Neuroscience
 GHMC966 Psychophysiology: Insights into Brain and Behaviour
 GHMC967 Models of the Human Brain and their Applications

Students with appropriate backgrounds may be permitted, by the Head of Department, to replace GHMC966 by an individual project (GHMC959 Research Project).

SUBJECT DESCRIPTIONS

CLINICAL PSYCHOLOGY

GHMC901 Interpersonal Skills for Clinical Psychologists

Double session (A); 6 credit points (52 hrs).

Assessment: assignments.

This subject has two components. The first component requires the personal involvement of students meeting regularly in a group with the aim of facilitating their work as clinical psychologists through exploration of their personal capacities. The group will serve as a "laboratory" for personal and interpersonal "experiments" using psychoanalytic group work, existential group work, and psychodrama. Students will be invited to experience changes in themselves (as we expect our clients to do), achieve personal learning and integration, come to "use" themselves as effectively as possible and develop insight, as well as creativity and innovativeness.

The second component also focuses on developing better interpersonal skills, but doing so in the wider context of family, work place, community and culture. Systems theory is employed for this purpose. Students are also encouraged to become more aware of cultural influences in their lives and their work practices. Workshops are one of the tools applied in this course for this purpose.

Textbooks: to be advised.

Co-ordinator: Associate Professor L Viney.

GHMC902 Assessment for Clinical Psychologists

Double session (A); 8 credit points (52 hrs).

Assessment: assignments and examination.

This subject assumes that students have a knowledge of the theory of psychological testing and measurement. Competence in the areas included in PSYC347 Assessment and Intervention in Psychology (or its equivalent) is a course pre-requisite. The aim of the course is to develop skill in the choice, administration, interpretation and reporting of psychological assessment techniques. There will be an emphasis on workshops, including peer and video feedback regarding assessment skills. The specific objectives of the subject are that participants demonstrate:

1. an understanding of the ethical issues associated with clinical psychological assessment;
2. an understanding of the principles of test construction and of criteria for evaluating assessment techniques;
3. competence in conducting assessment interviews;
4. competence in writing assessment reports;

5. mastery of the procedures for administering, scoring and interpreting the following tests: (a) WAIS-R, WISC-R (b) MMPI. (c) Projective tests;
6. knowledge of the purposes, administration procedures and criteria for interpretation of a number of additional cognitive, personality and behavioural assessment techniques;
7. the ability to choose assessment procedures appropriate to particular cases; and
8. the ability to assess specific problem areas.

References:

Lists will be distributed during the course. There will be considerable use of test manuals and accompanying texts.

Co-ordinator: Mr J Freestone.

GHMC903 Research Skills for Clinical Psychologists

Double session (A); 8 credit points (52 hrs).

Assessment: seminar presentations.

This subject has been designed to prepare its participants to conduct rigorous and yet useful research in clinical psychology. Building on the earlier achievements of those who are eligible for it, it aims to develop research expertise in these specific areas:

1. evaluation of the existing clinical psychology research literature, from the points of view of both researchers and practising clinicians;
2. selection of viable clinical problems for research;
3. development of research projects/programs appropriate to those problems;
4. preparation and evaluation of funding proposals;
5. consultation about the research of other associated professional groups, including critical evaluation and proposal of solutions; and
6. awareness and minimizing of ethical problems in research in clinical psychology.

Textbooks: to be advised.

Co-ordinator: Associate Professor L Viney.

GHMC904 Clinical Psychology

Double session (A); 8 credit points (52 hrs).

Assessment: Assignments; written examinations.

This subject aims to provide the student with an overview of descriptive adult psychopathology. Issues surrounding models of abnormal behaviour and the classification of mental disorders will be critically examined. The student will be taught how to identify and diagnose mental disorders encountered by clinical psychologists working with adult clients. Attention will be paid to current aetiological theories of these disorders. In addition, clinical assessment and a critical evaluation of the different methods of therapeutic intervention are important components of this course. The course format will include lectures, seminar presentations, and case discussions with diagnostic formulation exercises.

Textbooks:

There is no set text but all students are advised to purchase:

American Psychiatric Association, *The Diagnostic and Statistical Manual of Mental Disorders*, 4th ed, Washington, DC, American Psychiatric Association, 1994.

References:

A comprehensive list of references will be provided at the start of the course.

Co-ordinator: Dr J de Wet.

GHMC905 Child Clinical Psychology

Double session (A); 8 credit points (52 hours).

Assessment: assignments.

This subject will focus on a range of theory, assessment and intervention strategies and evaluative research in relation to specific topics in child, adolescent and family-based disturbances. Perspectives will include developmental, cognitive behavioural, psychodynamic, medical, family systems and cross-cultural. Specific topics include disturbances in pregnancy, childbirth and postpartum; developmental disabilities; problems of adjustment in the under 5s; conduct and behaviour disorders; attention deficit and hyperactivity disorders; learning disabilities; grief and separation; anxiety and depression; problems associated with deviations in parenting (deprivation and abuse; separation and divorce, custody and access; adoption and fostering); physical disabilities; borderline and psychotic functioning; perversion, psychopathy and antisocial functioning

Textbooks: no set text.

Co-ordinator: Dr R M Henry.

GHMC906 Clinical Neuropsychology

Double session (A); 8 credit points (52 hours).

Assessment: Seminar presentations, assignments and examination.

The aim of this subject is to provide students with sufficient theory and knowledge about brain functioning for them to be able to carry out neuropsychological assessments and to plan and implement interventions to assist brain-damaged people. The subject will deal with:

1. basic brain anatomy;
2. theories of brain functioning;
3. the causes of brain dysfunction;
4. principles of neuropsychological assessment;
5. the use of neuropsychological tests;
6. neuropsychological report writing;
7. treatment and rehabilitation of the brain damaged.

Textbooks:

Lezak, M, *Neuropsychological Assessment*, NY, Oxford University Press, 1983.

Kolb, B and Whishaw, IQ, *Fundamentals of Human Neuropsychology*, 3rd Ed, NY, W H Freeman & Co, 1990.

Co-ordinator: Ms V Bliokas.

GHMC907 Psychotherapy with Individuals and Groups

Double session (A); 8 credit points (52 hrs).

Assessment: seminar papers, case work.

The aim of this subject is to provide students with an integrated theoretical and practical grounding in psychotherapy. It offers intensive training in one of a restricted number of psychotherapies with individuals or groups. The kinds of specialisations available will vary from year to year, depending on staff availability. They are likely to be from the psychoanalytic, cognitive-behavioural, constructivist and family approaches. The work consists of clinical reading and seminars in the selected approach, and

supervision of work (therapeutic programmes, therapy cases etc) which participants will be required to undertake. The skills of peer supervision will also be developed. Where it is appropriate to the selected approach, there may also be workshop demonstrations of techniques or more experiential exercises.

Textbooks: to be advised.

Co-ordinator: Associate Professor L Viney.

GHMC912 Research Project

Double session (A); 24 credit points.

All applied psychologists should know how to answer psychological questions by recourse to raw data. All students are required to design and carry out a small research project under supervision. This research will be in any area of Psychology relevant to Clinical Psychology subject to the availability of supervision. To fulfil the requirements of this course the student will:

1. review the relevant literature and formulate a valid and testable hypothesis;
2. give an oral presentation of the theoretical background and the intended study to a critical audience before data collection begins;
3. collect, analyse and interpret those data;
4. report their findings in the form of an article suitable for a refereed journal of their choice.

Co-ordinator: Associate Professor L Viney.

GHMC914 Major Thesis (Clinical)

This thesis for the Doctor of Clinical Psychology requires one and a half years full-time or the equivalent part-time.

GHMC918 Major Thesis (Clinical)

This thesis for the PhD in Clinical Psychology entails two and a half years full-time or the equivalent part-time.

GHMC915 Cognitive Behaviour Therapy

Double session (A); 6 credit points (52 hours).

Assessment: Multiple choice short answer exam; video or audio tape evaluation of applied assessment skills and treatment skills; file audit, oral presentation and discussion of casework.

This subject aims to provide students with a comprehensive understanding and training in the principles and practical applications of cognitive behavioural therapy in clinical settings. The overall objective is the development of competence in practice of cognitive behavioural therapy. The content of this subject is designed to provide students with knowledge and skills regarding cognitive behavioural theory of psychopathology and the therapeutic process, cognitive-behavioural restructuring, behavioural self-management, systematic desensitisation, problem solving skills and measurement and assessment. Specific characteristics of each type of therapy intervention will be presented in relation to anxiety and phobic disorders, depression, obsessive disorders, substance abuse, pain management, eating disorders and anger management. Ethical issues and sociocultural aspects relevant to assessment and therapy will also be examined. Student will be required to satisfactorily carry out at least two cognitive-behavioural interventions under supervision. On completion of the subject,

students will demonstrate both an understanding of the principles underpinning Cognitive Behavioural Therapy and demonstrate skills in assessment, case formulation and the development, implementation, evaluation of an appropriate cognitive behavioural intervention.

Textbook:

Hawton, K, Salkovskis, P, Kirk, J and Clark D, *Cognitive Behaviour Therapy for Psychiatric Problems*, Oxford University Press, 1989.

Co-ordinator: Dr J Wragg.

GHMC916 Practicum A

Double (A) or single sessions; 4 credit points (250 hours).

Assessment: Adult Clinical placement - 150 hours (100 of them in the Department's Northfields Clinic); Child placement - 100 hours in the Learning and Behavioural Support Unit (LABSU) within Northfields Clinic.

The bulk of this practicum is taken up in the Department's own clinic, where the main treatment approach is a cognitive-behavioural one. The LABSU placement is in a 4 months block and is tied to the Child Clinical subject, with the blocks spanning the entire year. The adult placement may be in a short block or spread over a longer period and will be linked to the subject of Cognitive Behaviour Therapy.

Co-ordinator: Mr J Freestone.

GHMC917 Practicum B

Double (A) or single sessions; 8 credit points (500 hours).

Assessment: Psychiatric placement - 150 hours; Child placement - 150 hours; Specialist placement: 150 hours. Any one of these three placement categories may be further extended for 50 hours to make up the full complement of 500 hours.

The purpose is for students to have a range of supervised clinical placements so as to develop skills in interviewing, testing, diagnosis, report-writing, case presentation and the application of therapeutic techniques with different populations. The placements also provide opportunities to explore professional and ethical issues while working with other professionals in a variety of contexts.

Co-ordinator: Mr J Freestone.

MSC (PASS) IN PSYCHOLOGY

GHMC950 Psychology Honours Theory Seminar¹

Autumn session; 8 credit points.

Assessment: Seminar papers, major theory paper.

The Honours Theory Seminar, which is available as a separate subject to candidates for the MSc(Pass), with special permission from the Head of Department, will examine key theoretical and metatheoretical issues in psychology, especially as they affect the specializations and chosen courses of the students. The course also aims to sharpen critical reasoning and arguing skills. Topics may include ethical issues in psychological practice; the relation of psychology to other disciplines; and conceptual problems in contemporary psychological theories.

Co-ordinator: Dr N Mackay.

GHMC951 Health Psychology

Autumn session; 8 credit points (3 hrs lecture/seminar).

Assessment: essay, take home exam, program and evaluation presentations and final research report.

This subject will address key theoretical and empirical issues in the area of Health Psychology. It is predicated on preserving a balance between internal and external factors in the causation and maintenance of complex human behaviour. Since the delivery of any effective service or program presupposes that personal and social systems interact in health care, current theories about biological, psychological, social and cultural determinants of behaviour will be examined from a scientist practitioner model. A range of psychological principles will be examined within the context of formulating a treatment and evaluation proposal or prevention program designed to change health injurious behaviour or support health enhancing behaviour. Topics that will be examined in this course include drug and alcohol problems, stress, pain management and weight control.

Textbook:

Brannon, J and Feist, J, *Health Psychology*, 2nd ed, Belmont, California, Wadsworth Publishing Co, 1992.

Anshel, MH, and Reeves, L, *Aerobics for Fitness*, 3rd ed, Burgess, Minneapolis, 1992.

Co-ordinator: Associate Professor M Anshel.

GHMC953 Psychology of Information Processing

Spring session; 8 credit points (3 hrs lecture/seminar/laboratories per week).

Pre-requisites: PSYC345 or its equivalent

Assessment: seminar presentations and assignments.

This subject covers advanced theoretical topics in cognitive psychology. An emphasis is placed on theoretical models of cognition. The areas covered may include face recognition, long-term memory, ecological optics, selective attention and an introduction to neural network models. Classes will involve seminar presentations and discussions, but there will also be some laboratory classes to demonstrate and develop principles of neural networks.

Textbook: No set text.

Co-ordinator: Dr S Roodenrys.

GHMC958 Topics in Data Analysis¹

Double session (A); 8 credit points (26 hrs of seminars).

Assessment: practical exercises and major assignment.

A course of seminars dealing with the fitting of models to psychological data. Topics will include multidimensional scaling and clustering models, and methods for analysing categorical data, including log-linear models for multiway contingency tables. The emphasis of the course will be on the application of techniques in data analyses to practical problems, and issues pertaining to selection of an appropriate analysis will be discussed in depth. Towards the end of the course, a number of case studies in data analysis will be presented with the aim of promoting the integration of old and new techniques for the analysis of data. Students will be expected to have some familiarity with a statistical package and to perform some analyses using it.

¹ This subject requires special permission from the Head of Department.

Students will also be encouraged to discuss problems in data analysis arising from their own research projects. A reading list will be provided.

Co-ordinator: Mr P Caputi.

GHMC959 Research Project

Double session (A); 8 credit points.

This subject involves the completion of a single empirical study.

Co-ordinator: Dr S Ginsberg.

GHMC960 Psychology of Reading and Reading Disabilities

Autumn session; 8 credit points (3 hrs lecture/seminar per week).

Pre-requisites: PSYC345 or its equivalent.

Assessment: seminar presentations, essay and assignments.

The aim of this subject is to consider the psychology of reading and reading disabilities within a human information processing framework. Models of reading acquisition and skilled reading will be considered in terms of the available experimental evidence. A range of possible reasons for failing to learn to read will be considered. These will include visual, memory and language deficit theories. Furthermore, a range of remedial procedures will be considered. This subject will also consider the evidence regarding normal adult reading that can be gained from studying acquired dyslexias.

Textbook:

No set text. Research articles will mostly be used in this subject.

Co-ordinator: Dr S Roodenrys.

GHMC961 Assessment in Applied Psychology

Double session (A); 8 credit points (2 hrs lecture/seminar per fortnight).

Pre-requisite: PSYC235 or its equivalent, plus eligibility to MSc(Pass).

Assessment: 2 assignments worth 50% each.

This is a skills oriented course aimed at providing students with the opportunity to administer, score and interpret psychological tests under supervision. Assessment techniques used in a number of fields of applied psychology will be studied. In addition, attention will be devoted to ethical standards in psychological assessment.

Textbooks:

No set text. A list of references will be provided at the start of the course.

Co-ordinator: Dr J de Wet.

GHMC962 Counselling Psychology

Autumn session (may be repeated in Spring in 1996); 8 credit points (3 hrs lectures/practicals).

Assessment: tape transcript analysis, major essay, videotaped counselling skills assignment.

This subject will initially focus on a microskills approach to working with clients. A workshop format with roleplay, observation, feedback and discussion will be used. Students will be expected to develop a critical and analytical understanding of the conceptual and developmental framework from which different counselling orientations can develop. In order to provide students with an alternative but complimentary framework from which counselling can proceed the second half of the course will examine a cognitive behavioural approach.

Textbooks:

Egan, G, *The Skilled Helper*, California, Brooks Cole, 1989.

Hawton, K, Salkovskis, P, Kirk, J and Clark D, *Cognitive Behaviour Therapy for Psychiatric Problems*, Oxford University Press, 1989.

Co-ordinator: Dr J Wragg.

GHMC963 Child and Adolescent Psychology

Autumn session; 8 credit points (2 hrs lecture, 1 hr practical per wk).

Pre-requisites: PSYC235 and PSYC233 or their equivalent.

Assessment: 1 assessment 45%, 1 major essay 30%, 1 take home examination 25%.

This subject focuses on a range of childhood and adolescent concerns or problem behaviours within a broad developmental framework. The subject will provide students with a general introduction to the specific problems and needs of children and parents who present at community health or child guidance clinics. Individual and family based assessment and intervention approaches will be examined for such problems as conduct disorders, attention deficit hyperactive disorders, school based adjustment and learning problems, anxiety disorders, problems of abuse and adolescent health risk behaviours such as substance abuse and adolescent deviancy.

Textbooks: No set text. Readings from several sources.

Co-ordinator: Dr J Wragg.

GHMC964 Cognitive and Affective Neuroscience²

Double session (A); 8 credit points (2 hrs lecture/seminars per fortnight and labs 9hrs per session).

Pre-requisites: PSYC352 or its equivalent.

Assessment: individual project 50%, lab reports based on laboratory exercises 50%.

The emphasis in this subject will be on the use of physiological measures to explore human brain function in relation to a range of psychological concepts such as arousal, stress, anxiety and repression, personality, perception, learning, cognition. Selected examples of recent research investigating these connections in both normal and psychiatric patients will be discussed. The subject will include laboratory sessions developing expertise in electrophysiological recording, involvement in on-going departmental research, and a small individual pilot project (which may form the basis for subsequent independent research).

Textbooks: to be advised, plus readings from current journals.

Co-ordinator: Professor R J Barry.

GHMC965 Advanced Sport and Exercise Psychology

Spring session; 8 credit points (3 contact hrs).

Pre-requisite: PSYC399 or equivalent subjects.

Assessment: mid-term exam 30%, oral presentation 20%, lab report (3000 words) 20%, paper eg observations, counselling, research proposal 30%.

The subject will focus on the role of psychological factors in sport and exercise particularly as they relate to aspects of

cognitive processes, psychosocial factors and health-related issues. Students will become familiar with and be able to interpret and apply research literature in sport and exercise psychology. They will experience the processes of research experimentation, including data collection and analysis, and complete a manuscript in reporting their experiment using APS style. Students will also lead a seminar on a segment of the scientific literature and be familiar with the application and presentation of performance enhancement strategies.

Textbooks:

Anshel, M H, *Sport Psychology: From Theory to Practice*, Gorsuch Scarisbrick, Scottsdale, Arizona, 1990.

Horn, T S (ed), *Advances in Sport Psychology*, Human Kinetics, Champaign, Illinois, 1992.

Co-ordinator: Associate Professor M Anshel.

GHMC966 Psychophysiology: Insights into Brain and Behaviour³

Autumn and/or Spring session; 8 credit points (external course with residential requirement; may be available on campus in 1996).

Pre-requisites: a three year undergraduate degree deemed appropriate by the Head of Department. Assessment: weekly quizzes 15%, practical reports 45%, examinations 40%.

This subject will present psychophysiology as the systematic study of peripheral and central physiological correlates of perceptual and cognitive functioning. Students will be required to attain a basic level of proficiency in the electrical recording and assessment of a range of peripheral measures (including muscle, respiratory, cardiovascular, and electrodermal activity), as well as the traditional central indicators (EEG and event related potentials). Current research using these techniques to extend our understanding of cognitive/perceptual functioning in both normal and atypical individuals will be examined. Practical skills will be developed in two residential weekends.

Textbook: to be advised.

Coordinator: Professor R J Barry.

GHMC967 Models of the Human Brain and their Applications³

Autumn and/or Spring session; 8 credit points (external course; may be available on campus in 1996).

Pre-requisites: a three year undergraduate degree deemed appropriate by the Head of Department. Assessment: two assignments 40% and 60%.

This subject will have the biophysics of human brain function as the frame of reference for all content. It will explore a broad range of approaches, including evolutionary and anatomical models of the brain, models of electrical and metabolic brain function, psychological models of the brain, artificial neural networks and artificial intelligence models of the brain, the mind/body problem, psychoanalytic and psychotherapy models, brain imaging technologies, application of models of the brain to psychology, medicine, artificial neural networks and artificial intelligence, and human-computer interactions.

Textbook: to be advised.

Coordinator: Professor R J Barry.

² May be available also in external mode in 1996.

³ Offered externally through PAGE.

GHMC974 Principles of Personal Construct Psychology

Spring session; 8 credit points (42 hrs).

Prerequisites: the completion of the requirements for any Bachelor level degree.

Assessment: laboratory report, case study and personal diary (relating the students' own construing to their own behaviour).

This subject will provide an introduction to the underlying assumptions, principles and methodologies of Personal Construct Psychology, including constructive alternativism, the person as scientist, behaviour as an experiment, construing as bipolar and hierarchical, relations with others and the process of transition. Laboratory work will focus on understanding of self and others using constructivist methods, ranging from self-characterisation to the repertory grid and dependency grid techniques. The resulting understanding of principles and methods will then provide a basis for examination of current applications of Personal Construct Psychology in counselling, organisational and health psychology.

Textbook:

Dalton, P and Dunnnett, G, *A Psychology for Living*, Wiley, Chichester, 1992.

Co-ordinator: Associate Professor BM Walker.

GHMC998 Thesis (Honours Masters by Research)

GHMC999 Thesis (Doctor of Philosophy)

PUBLIC HEALTH AND NUTRITION

COURSES OFFERED

1. RESEARCH DEGREES
 - 1.1 Doctor of Philosophy
 - 1.2 Doctor of Public Health
 - 1.3 Honours Master of Science
2. MASTERS DEGREES BY COURSEWORK AND RESEARCH
 - 2.1 Master of Public Health
 - 2.2 Master of Science
 - a) Master of Science (Environmental Health)
 - b) Master of Science (Health Policy and Management)
 - c) Master of Science (Mental Health)
 - d) Master of Science (Nutrition and Dietetics)
 - e) Master of Science (Nutrition)
 - f) Master of Science (Occupational Health and Rehabilitation)
3. GRADUATE DIPLOMAS
 - 3.1 Graduate Diploma in Public Health
 - 3.2 Graduate Diploma in Science
 - a) Graduate Diploma in Science (Environmental Health)
 - b) Graduate Diploma in Science (Health Policy and Management)
 - c) Graduate Diploma in Science (Mental Health)
 - d) Graduate Diploma in Science (Occupational Health and Rehabilitation)
4. GRADUATE CERTIFICATES
 - 4.1 Graduate Certificate in Health Policy and Management
 - 4.2 Graduate Certificate in Mental Health
 - 4.3 Graduate Certificate in Public Health Research Methods

CURRENT RESEARCH AREAS

Supervision in the following areas of research is likely to be available to candidates undertaking the Doctor of Philosophy, the Doctor of Public Health and the Honours Master of Science.

Cardiovascular disease prevention
 Child and family health
 Environmental Health
 Geriatrics and rehabilitation
 Health information systems
 Health policy and management
 Health promotion
 Health services development and evaluation
 Health and Society
 Mental health
 Nutrition (Obesity, Diabetes)
 Occupational Health and Rehabilitation

POSTGRADUATE PROGRAMS OFFERED

1. *Research program*
 - i) Doctor of Philosophy
 - ii) Doctor of Public Health
 - iii) (Honours) Master of Science
2. *Health Policy and Management*¹
 - i) Master of Science
 - ii) Graduate Diploma in Science
 - iii) Graduate Certificate
3. *Mental Health*¹
 - i) Master of Science
 - ii) Graduate Diploma in Science
 - iii) Graduate Certificate in Mental Health
4. *Nutrition and Dietetics*
 - i) Master of Science (Nutrition and Dietetics)
 - ii) Master of Science (Nutrition)
5. *Occupational Health and Rehabilitation*
 - i) Master of Science
 - ii) Graduate Diploma in Science

¹ Also offered externally through the Professional and Graduate Education Consortium (PAGE).

POSTGRADUATE PROGRAMS OFFERED (cont'd).

- 6. *Public Health*
 - i) Master of Public Health
 - ii) Graduate Diploma in Public Health
 - iii) Graduate Certificate in Public Health Research Methods¹
- 7. *Environmental Health*
 - i) Master of Science (Environmental Health)
 - ii) Graduate Diploma (Environmental Health)

SCHEDULE OF PROGRAMS

1. RESEARCH DEGREES

(i) DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy (PhD) is available to candidates in the major research areas of the Department of Public Health and Nutrition for which supervision is available, namely, Public Health, Environmental Health, Health Policy and Management, Mental Health, Nutrition, Health Information Systems, International Health, Epidemiology, Medical Anthropology. The PhD provides supervised research training of excellence in a program of not less than three years duration (full-time).

Admission details and regulations governing the award are set out in the General Information: Postgraduate Admission section of the Calendar.

Potential candidates should discuss their research plan with the Head of Department at which time the supervision arrangements of the Department will be outlined. Research seminars are held in Autumn and Spring sessions to assist research students structure their program and, in particular, make rapid progress with proposal design. Opportunities exist for outstanding candidates to gain scholarship support by application to the University. Details of Research Scholarships are listed under Conditions of University Postgraduate Research Awards in the General Information section of the Calendar.

The Doctor of Philosophy degree is a widely recognised pathway to excellence in Public Health research.

(ii) DOCTOR OF PUBLIC HEALTH

The Doctor of Public Health degree aims to prepare professional leaders in Public Health. The program requires the successful completion of 48 credit points of coursework and at least two years of research leading to the presentation of a thesis. Coursework can either broaden the education in Public Health of a candidate who has a strong disciplinary background (eg a health economist who requires more reading in Public Health) or provide more specialised knowledge for a candidate who has already achieved a general education (eg MPH) in Public Health. Additionally the Doctor of Public Health degree includes a major thesis. Admission to the research component is consequent upon acceptance of a formal proposal, presented after at least 36 credit points of coursework have been completed.

To qualify for entry candidates must have an Honours Bachelor degree of at least Class II, Division I standard or have completed the coursework requirements in the Master of Public Health degree or equivalent.

The program for Doctor of Public Health candidates includes successful completion of:

- (i) 48 credit points of coursework, chosen in association with the Head of the Department, from the 900-level subjects offered by the Department or by other Departments within the University.
- (ii) a supervised research project on a topic in the field of Public Health. The research project will be submitted as a thesis as partial fulfilment of the requirements for the degree.

(iii) HONOURS MASTER OF SCIENCE

The degree of Honours Master of Science is designed to provide supervised training in independent research. For candidates who are admitted with an Honours Bachelor Degree, the program will consist of 48 credit points of research leading to the submission of a thesis. For candidates who are admitted with a Bachelor Degree the program will consist of 96 credit points of research leading to the submission of a thesis, and may involve directed coursework in research design, methodology and skills.

Potential candidates should discuss their research interest with the coordinator of the program and present a research project title and general outline. Once a supervisor has been nominated the candidate will undertake an approved course recommended by the Departmental Head, together with such examinations and other work as may be prescribed by Council. Otherwise requirements shall be the same as requirements specified in the Honours Masters Degree Rules (refer to Calendar, General Information).

2. POSTGRADUATE PROGRAM IN HEALTH POLICY AND MANAGEMENT

leading to the degree of Master of Science (Health Policy and Management) or the Graduate Diploma in Science (Health Policy and Management) or the Graduate Certificate in Health Policy and Management.

Number	Subject	Credit Points
(i) Master of Science (Health Policy and Management)		
Part-time Course		
First Year		
GHMD906	Health Services Organisation and Management	6
GHMD909	Comparative Health Systems: Policies and Politics	6
GHMD950	Financial Management for Health Services	6
GHMD983	Statistics in Health Research	6

¹ Also offered externally through the Professional and Graduate Education Consortium (PAGE).

2. POSTGRADUATE PROGRAM IN HEALTH POLICY AND MANAGEMENT (cont'd).

leading to the degree of Master of Science (Health Policy and Management) or the Graduate Diploma in Science (Health Policy and Management) or the Graduate Certificate in Health Policy and Management.

Number	Subject	Credit Points
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Second Year

ECON918	Economics of Health Care	6
GHMD908	Health Services Planning and Evaluation	6
GHMD924	Health Information Systems	6
LAW960	Legal Studies for Professionals	6

Third Year

Students may select one of the following options:

GHMD904	Epidemiology	6
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and three electives selected from the subjects listed below under "Electives".

or

GHMD997	Major Project*	24
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*Students who select the Major Project option please note:

1. membership of the Australian College of Health Service Executives requires completion of GHMD904 Epidemiology in place of ECON918 Economics of Health Care;
2. GHMD984 Health Research Methodology is a pre-requisite for GHMD997 Major Project and should be taken in place of GHMD908 Health Planning and Evaluation.

(ii) Graduate Diploma in Science (Health Policy and Management)**Part-Time Course****First Year**

GHMD906	Health Services Organisation and Management	6
GHMD909	Comparative Health Systems: Policies and Politics	6
GHMD950	Financial Management for Health Services	6
GHMD983	Statistics in Health Research	6

Second Year

GHMD924	Health Information Systems	6
Elective		6
GHMD908	Health Services Planning and Evaluation	6
Elective		6

Electives may be selected from the list of core subjects or elective subjects in the Master of Science (Health Policy and Management) with the agreement of the Head of Department. Candidates for the Graduate Diploma who have specific credit given for any of the above compulsory subjects are required to undertake elective study to make up the total credit points. The additional subjects can be selected from subjects in the Master program (core or elective) in consultation with the Program Co-ordinator.

Students who seek membership of the Australian College of Health Service Executives need to complete GHMD904 Epidemiology and LAW960 Legal Studies for Health Professionals.

(iii) Graduate Certificate in Health Policy and Management

The Graduate Certificate requires the completion of 4 subjects selected from the following:

ECON918	Economics of Health Care	6
GHMD905	Social Foundations of Public Health	6
GHMD906	Health Services Organisation and Management	6
GHMD909	Comparative Health Systems: Policies and Politics	6
GHMD924	Health Information Systems	6
GHMD950	Financial Management for Health Services	6
GHMD983	Statistics in Health Research	6

Electives

The electives for the Master degree may be chosen from the subjects listed below. The electives for the Graduate Diploma may be chosen from the Master degree and the subjects listed below. In addition, candidates can substitute other subjects offered at a postgraduate level at the University with approval of the Head of Department.

GHMD907	Independent Study in Public Health	6
GSMB902	Nursing Management	6
GHMD905	Social Foundations of Public Health	6
MGMT911	Organisational Behaviour	6
MGMT915	Management of Change	6
MGMT938	Managing Services Marketing	6
MGMT953	Human Resource Management	6
GHMD984	Health Research Methodology	6
MGMT947	Quality Management	6

3. POSTGRADUATE PROGRAM IN MENTAL HEALTH

leading to the degree of Master of Science (Mental Health) or the Graduate Diploma in Science (Mental Health) or the Graduate Certificate in Mental Health.

Number	Subject	Credit Points
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(i) Master of Science (Mental Health)**Schedule 1 Core Subjects**

GHMD905	Social Foundations of Public Health	6
GHMD965	Principles and Practices of Psychosocial Rehabilitation	6
GHMD970	Comprehensive Systems of Mental Health Care	6
GHMD971	Assessment and Diagnosis in Mental Health	6

3. POSTGRADUATE PROGRAM IN MENTAL HEALTH (cont'd).

leading to the degree of Master of Science (Mental Health) or the Graduate Diploma in Science (Mental Health) or the Graduate Certificate in Mental Health.

Number	Subject	Credit Points
GHMD973	Case Management in Mental Health	6
GHMD983	Statistics in Health Research	6
<i>together with at least two subjects from the following:</i>		
Schedule 2	Electives	
ECON918	Economics of Health Care	6
GHMD904	Epidemiology	6
GHMD906	Health Services Organisation and Management	6
GHMD907	Independent Study in Public Health	6
GHMD908	Health Services Planning and Evaluation	6
GHMD909	Comparative Health Systems: Policies and Politics	6
GHMD913	Drug Problems and Issues	6
GHMD950	Financial Management for Health Services	6
GHMD976	Supervised Clinical Practice	6
GHMD984	Health Research Methodology	6

Schedule 3

together with either

24 credit points of further course work from the elective subjects listed above.

or

GHMD997 Major Project (24 credit points)

Note: GHMD984 Health Research Methodology is a pre-requisite for GHMD997 Major Project.

A candidate for the Master of Science specialising in Mental Health shall undertake a 72 credit point program. This includes all core subjects listed in Schedule 1 (ie 36 credit points) and the Major Project (GHMD997) of 24 credit points, or 24 credit points of further course work including GHMD984, together with at least 12 credit points of additional course work chosen from Schedule 2 of this program.

Subject to approval relevant subjects from other programs may also be taken as electives.

(ii) Graduate Diploma in Science (Mental Health)

Schedule 1	Core Subjects	
GHMD905	Social Foundations of Public Health	6
GHMD965	Principles and Practices of Psychosocial Rehabilitation	6
GHMD970	Comprehensive Systems of Mental Health Care	6
GHMD971	Assessment and Diagnosis in Mental Health	6
GHMD973	Case Management in Mental Health	6
GHMD983	Statistics in Health Research	6

together with 2 subjects from the following:

Schedule 2	Electives	
ECON918	Economics of Health Care	6
GHMD904	Epidemiology	6
GHMD906	Health Services Organisation and Management	6
GHMD907	Independent Study in Public Health	6
GHMD908	Health Services Planning and Evaluation	6
GHMD909	Comparative Health Systems: Policies and Politics	6
GHMD913	Drug Problems and Issues	6
GHMD950	Financial Management for Health Services	6
GHMD976	Supervised Clinical Practice	6
GHMD984	Health Research Methodology	6

A candidate for the Graduate Diploma in Science specialising in Mental Health shall undertake a 48 credit point program. This includes all subjects listed in Schedule 1 of this Diploma (ie 36 credit points) with at least 12 credit points chosen from Schedule 2 of this Diploma. Subject to approval relevant subjects from other programs may also be taken as electives.

(iii) Graduate Certificate in Mental Health

A candidate for the Graduate Certificate in Mental Health shall undertake a 24 credit point program. This includes *four* of the *five* subjects below:

GHMD965	Principles and Practices of Psychosocial Rehabilitation	6
GHMD970	Comprehensive Systems of Mental Health Care	6
GHMD971	Assessment and Diagnosis in Mental Health	6
GHMD973	Case Management in Mental Health	6
GHMD906	Health Services Organisation and Management	6

4. POSTGRADUATE PROGRAM IN NUTRITION AND DIETETICS

leading to the degree of Master of Science (Nutrition and Dietetics) or the Master of Science (Nutrition).

Students who have not completed an undergraduate program with a major in nutrition will be required to undertake a number of specific nutrition subjects during the course. This will limit their opportunity to take elective subjects.

Number	Subject	Credit Points
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(i) Master of Science (Nutrition and Dietetics)

Students should note that CHEM215, Food Chemistry, is a pre-requisite for GHMD934 Dietetics 2: Secondary and Tertiary Health Care. Students who have not passed CHEM215 should take this subject in Autumn session. Students may count only *one* undergraduate subject (PHN301 or CHEM215) towards their Masters program.

Session 1 All students*Introductory session*

GHMD931	Dietetics 1: Primary Health Care	6
GHMD936	Public Health Nutrition	6
GHMD935	Nutrition and Food Services	6

Students without nutrition major do

PHN301	Nutrients and Metabolism	8
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Students with nutrition major do

GHMD902	Communication and Education	6
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Session 2 All students

GHMD933	Communication in Nutrition and Dietetics	6
GHMD934	Dietetics 2: Secondary and Tertiary Health Care	6
GHMD984	Health Research Methodology	6

Elective Subjects (select one)

GHMD904	Epidemiology	
GHMD907	Independent Study in Public Health	
GHMD912	Health Promotion	
GHMD913	Drug Problems	
GHMD938	Behavioural Aspects of Nutrition	

Session 3

GHMD937	Practical Studies in Nutrition and Dietetics	24
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Session 4

GHMD997	Major Project	24
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Note: GHMD984 Health Research Methodology is a pre-requisite for GHMD997 Major Project.

(ii) Master of Science (Nutrition)

As for MSc (Nutrition and Dietetics) Session 1 and Session 2 only.

5. POSTGRADUATE PROGRAM IN OCCUPATIONAL HEALTH AND REHABILITATION

leading to the degree of Master of Science (Occupational Health and Rehabilitation) or the Graduate Diploma in Science (Occupational Health and Rehabilitation).

Number	Subject	Credit Points
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(i) Master of Science (Occupational Health and Rehabilitation)**Schedule 1 Core Subjects**

GHMA914	Ergonomics	8
GHMD904	Epidemiology	6
GHMD905	Social Foundations of Public Health	6
GHMD906	Health Services Organisation and Management	6
GHMD940	Principles and Practice of Occupational Health and Rehabilitation	6
GHMD941	Occupational Hygiene and Industrial Toxicology	6
GHMD983	Statistics in Health Research	6
GHMD984	Health Research Methodology	6

Plus

GHMD997	Major Project	24
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Or 24 credit points chosen from Schedule 2 of this degree

Schedule 2 Electives

ECON918	Economics of Health Care	6
GHMD908	Health Services Planning and Evaluation	6
GHMD909	Comparative Health Systems: Policies and Politics	6
LAW960	Legal Studies for Professionals	6
MGMT953	Human Resource Management	6

A candidate for the MSc specialising in Occupational Health and Rehabilitation shall undertake a program of at least 72 credit point which includes subjects listed in Schedule 1 of this degree, including either a major project (GHMD997) of 24 credit points or 24 credit points of further coursework from subjects listed in Schedule 2 of this degree.

Note: GHMD984 Health Research Methodology is a pre-requisite for GHMD997 Major Project.

5. POSTGRADUATE PROGRAM IN OCCUPATIONAL HEALTH AND REHABILITATION (cont'd).

leading to the degree of Master of Science (Occupational Health and Rehabilitation) or the Graduate Diploma in Science (Occupational Health and Rehabilitation).

Number	Subject	Credit Points
(ii) Graduate Diploma in Science (Occupational Health and Rehabilitation)		
Schedule 1 Core Subjects		
GHMA914	Ergonomics	8
GHMD904	Epidemiology	6
GHMD905	Social Foundations of Public Health	6
GHMD906	Health Services Organisation and Management	6
GHMD940	Principles and Practice of Occupational Health and Rehabilitation	6
GHMD941	Occupational Hygiene and Industrial Toxicology	6
GHMD983	Statistics in Health Research	6
<i>plus 6 credit points chosen from Schedule 2 of this degree</i>		
Schedule 2 Electives		
ECON918	Economics of Health Care	6
GHMD908	Health Services Planning and Evaluation	6
GHMD909	Comparative Health Systems: Policies and Politics	6
GHMD984	Health Research Methodology	6
LAW960	Legal Studies for Professionals	6
MGMT953	Human Resource Management	6

6. POSTGRADUATE PROGRAM IN PUBLIC HEALTH

leading to the degree of Master of Public Health or the Graduate Diploma in Public Health or the Graduate Certificate in Public Health Research Methods.

Number	Subject	Credit Points
(i) Master of Public Health		
Schedule 1: MPH Core Subjects		
GHMD904	Epidemiology	6
GHMD905	Social Foundations of Public Health	6
GHMD906	Health Services Organisation and Management	6
GHMD983	Statistics in Health Research	6
GHMD984	Health Research Methodology	6
GHMD997	Major Project	24
Electives		
ECON918	Economics of Health Care	6
GE0G934	Nutrition and Hunger: Analysis and Policy	12
GHMC951	Health Psychology	8
GHMD902	Communication and Education	6
GHMD907	Independent Study in Public Health	6
GHMD912	Health Promotion	6
GHMD913	Drug Problems and Issues	6
GHMD925	Aboriginal Health Issues*	6
GHMD926	Qualitative Research: Methods and Issues*	6
GHMD936	Public Health Nutrition	6
GHMD980	International Health: Health Care Delivery in Developing Countries	6
GHMD981	Maternal and Child Health in Developing Countries	6
GHMD982	Special Topic in International Health	6
GHMD986	Environmental Health	6
GHMD987	Risk Assessment	6

Note: GHMD984 Health Research Methodology is a pre-requisite for GHMD997 Major Project.

(ii) Graduate Diploma in Public Health

GHMD904	Epidemiology	6
GHMD905	Social Foundations of Public Health	6
GHMD906	Health Services Organisation and Management	6
GHMD912	Health Promotion	6
GHMD983	Statistics in Health Research	6

together with subjects selected from the Master of Public Health Schedule and subjects from other departments approved by the Head of Department for a total of 48 credit points of coursework.

International students admitted to candidature in the Master of Public Health will discuss their educational needs with the coordinator and may have a program of study specified which will best meet their homeland requirements.

(iii) Graduate Certificate in Public Health Research Methods

Entrants to the course normally hold a three year undergraduate degree (or equivalent). In special circumstances, an applicant holding other acceptable qualifications and with relevant work experience of not less than two years may be admitted to studies.

The Graduate Certificate will be awarded on successful completion of 24 credit points of course work, selected from the following subjects.

GHMD904	Epidemiology	6
GHMD908	Health Planning and Evaluation	6

*Not on offer in 1996.

6. POSTGRADUATE PROGRAM IN PUBLIC HEALTH (cont'd).

leading to the degree of Master of Public Health or the Graduate Diploma in Public Health or the Graduate Certificate in Public Health Research Methods.

Number	Subject	Credit Points
GHMD924	Health Information Systems	6
GHMD983	Statistics in Health Research	6
GHMD984	Health Research Methodology	6

7. POSTGRADUATE PROGRAM IN ENVIRONMENTAL HEALTH

leading to the degree of Master of Science (Environmental Health) or the Graduate Diploma in Science (Environmental Health).

Number	Subject	Credit Points
(i) Master of Science (Environmental Health)		
Core Subjects		
GHMD904	Epidemiology	6
GHMD983	Statistics in Health Research	6
GHMD984	Health Research Methodology	6
GHMD985	Environmental Epidemiology	6
GHMD986	Environmental Health	6
GHMD987	Risk Assessment: Essential Methods and Techniques	6
ENVI921	Environmental Planning	8
STS931	Risk Assessment, Health and Safety*	12
<i>and</i>		
GHMD997	Major Project	24

Enrolment in the Major Project will be contingent on the availability of supervision of the project and evidence of former successful research or project work by the student. The content matter must also fit with the research program carried out at the University.

The option exists to satisfy requirements for MSc (Environmental Health) by coursework only. This would require the substitution for the Major Project of 24 credit points from the following electives:

Electives		
GHMD902	Communication and Education	6
GHMD905	Social Foundations of Public Health	6
GHMD906	Health Services Organisation and Management	6
GHMD909	Comparative Health Systems: Policies and Politics	6
GHMD940	The Principles and Practice of Occupational Health and Rehabilitation	6
GHMD941	Occupational Hygiene and Industrial Toxicology	6
LAW960	Legal Studies for Professionals	6
STS929	Studies in Resource and Environmental Policy*	8

or other subjects offered by the University with the approval of the Head of Department.

*Refer to Department of Public Health and Nutrition.

(ii) Graduate Diploma in Science (Environmental Health)

Core Subjects		
GHMD904	Epidemiology	6
GHMD983	Statistics in Health Research	6
GHMD984	Health Research Methodology	6
GHMD986	Environmental Health	6
GHMD987	Risk Assessment: Essential Methods and Techniques	6

plus 18 credit points chosen from the following electives:

Electives		
GHMD902	Communication and Education	6
GHMD905	Social Foundations of Public Health	6
GHMD909	Comparative Health Systems: Policies and Politics	6
GHMD940	The Principles and Practice of Occupational Health and Rehabilitation	6
GHMD941	Occupational Hygiene and Industrial Toxicology	6
GHMD985	Environmental Epidemiology	6
ENVI921	Environmental Planning	8
LAW960	Legal Studies for Professionals	6
STS929	Studies in Resource and Environmental Planning*	8*
STS931	Risk Assessment, Health and Safety*	12*

*Refer to Department of Public Health and Nutrition.

COURSE REQUIREMENTS**1. RESEARCH DEGREES****1.1 DOCTOR OF PHILOSOPHY**

The degree of Doctor of Philosophy (PhD) is available to candidates in the major research areas of the Department of Public Health and Nutrition for which supervision

is available, namely, Public Health, Primary Health Care, Environmental Health, Health Policy and Management, Mental Health, Nutrition, Health Information Systems, International Health, Epidemiology, Medical Anthropology. The PhD is designed to provide supervised research training of excellence in a program of not less than three years duration (full-time). Admission details and regulations governing

the award are set out in the General Information: Postgraduate Admission section of the Calendar.

Applicants should discuss their research plan with the Head of Department at which time the supervision arrangements of the Department will be outlined. Research seminars are held in Autumn and Spring sessions to assist research students structure their program and, in particular, make rapid

progress with proposal design. Opportunities exist for outstanding candidates to gain scholarship support by application to the University. For information regarding scholar-ships refer to the Calendar, General Inform-ation: Postgraduate Scholarships section.

The Doctor of Philosophy degree is a widely recognised pathway to excellence in research in Public Health and Nutrition.

1.2 DOCTOR OF PUBLIC HEALTH

The purpose of the degree of Doctor of Public Health is to prepare professional leaders in Public Health.

The Doctor of Public Health program requires the completion of two years of research leading to the presentation of a thesis together with 48 credit points of coursework. The coursework is selected to meet the individual requirements of the candidate. Coursework will *either* broaden the education in Public Health of a candidate who has a strong disciplinary background (eg a health economist or epidemiologist) *or* will provide a more specialised focus to a candidate who has a general background, eg Master of Public Health. Admission to the thesis component is consequent upon acceptance of a formal proposal, presented after at least 36 credit points of coursework have been completed.

Entry Requirements

To qualify for entry candidates must have an Honours Bachelor degree of at least Class 11, Division 1 standard or have completed the coursework requirements in the Master of Public Health degree or equivalent.

Course Structure

The minimum period for the completion of the degree of Doctor of Public Health will be 6 academic sessions of full-time study. Full-time students are required to present for examination not later than 8 academic sessions from the date of candidature.

The program for Doctor of Public Health candidates includes successful completion of:

- (i) at least 48 credit points from the Schedules of Graduate subjects of the Department or from approved subjects of other Departments of the University;
- (ii) a supervised research project on a topic in the field of Public Health. The research project will be submitted as a thesis as partial fulfilment of the requirements for the award of the Degree.

Through an agreement with the School of Public Health, University of California (Berkeley), it is expected that Doctor of Public Health students will be able to spend one session at University of California (Berkeley) advancing research and/or coursework interests which are part of their approved program of study.

1.3 HONOURS MASTER OF SCIENCE

The Honours Master of Science degree is available in each of the Public Health domains of the Department for which

supervision is available, namely, Public Health, Environmental Health, Primary Health Care, Health Policy and Management, Mental Health, Nutrition, Nutrition and Dietetics, Health Information Systems, International Health, Epidemiology, Medical Anthropology.

The degree of Honours Master of Science is designed to provide supervised training in independent research. For candidates who are admitted with an Honours Bachelor Degree, the program will consist of 48 credit points of research leading to the submission of a thesis. For candidates who are admitted with a Bachelor Degree the program will consist of 96 credit points of research leading to the submission of a thesis, and may involve directed coursework in research design, methodology and skills.

Course Requirements

Potential candidates will discuss their area of interest with the coordinator of the program and present a research project title and general outline. A supervisor will be nominated and the candidate will undertake an approved course recommended by the Departmental Head, together with such examinations and other work as may be prescribed by Council. Otherwise requirements shall be the same as requirements specified in the Honours Masters Degree Rules.

2. MASTERS DEGREES BY COURSEWORK AND RESEARCH

2.1 MASTER OF PUBLIC HEALTH

a) Master of Public Health

A candidate for the Master of Public Health shall undertake at least a 72 credit point program comprising 48 credit points of coursework together with 24 credit points of major research project. A candidate for the Master of Public Health in International Health shall undertake subjects in consultation with the co-ordinator of this program designed especially for students wishing to practise in developing countries.

Public Health is the discipline area associated with the efforts made by society to protect, promote and restore the people's health. Health is defined as a state of well-being, not just the absence of disease; the goals of public health include the promotion of health as well as prevention of disease, premature death, and disease-produced discomfort and disability in the population.

The Master of Public Health degree structure includes a number of core subjects. Intending students are advised to obtain further course information from the Department of Public Health and Nutrition.

Candidates successfully completing the Graduate Diploma in Public Health may seek admission to the Master of Public Health degree.

2.2 MASTER OF SCIENCE

a) Master of Science (Environmental Health)

The Environmental Health courses combine 2 short (summer) courses, distance education through the Professional and Graduate Education Consortium (PAGE), on-campus subjects and video-conferencing. Many government and industry institutions have legal obligations in environmental health. This course is designed for those wishing to pursue a career in environmental health or for those already in the field who wish to improve their understanding of health and environmental risk assessment and management, environmental epidemiology and toxicology, with a focus on health rather than the technical aspects of environmental science.

Course Structure

A candidate for the Master of Science (Environmental Health) will successfully complete a 72 credit point program. This includes 48 credit points of Core Subjects. The remaining 24 credit points can be gained in one of two ways:

- a) by undertaking 24 credit points of elective subjects;
- or*
- b) by undertaking GHMD997 Major Project (24 credit points).

Entry Requirements

Pre-requisites to enrol in the Masters Program include a foundation in chemistry, mathematics and health sciences. Entrants to the course should normally hold a three year undergraduate degree (or equivalent) in a relevant discipline.

Enrolment in the Major Project will be contingent on availability of supervision and evidence of former successful research or project work by the student. The content matter must also agree with the subjects covered in the current research program of the University.

b) Master of Science (Health Policy and Management)

The Health Policy and Management courses are available for on-campus attendance or nationally, by distance education (UW574), through the Professional and Graduate Education Consortium (PAGE).

The aim of this degree is to provide advanced study which develops professional health service managers and enhances their competence for senior management roles in the health industry. The degree is intended for graduates in health service management and other related health professions wishing to pursue a management career.

Professional Recognition

The degree has been accredited by the Australian College of Health Service Executives and the Royal Australian College of Medical Administrators.

Course Design

The course develops the candidate's ability to cope with health service

management problems and challenges in a logical and analytical manner. It emphasises the social and environmental factors impacting on the manager's task and the dynamic and pluralistic nature of health service management. The candidate acquires concepts and knowledge relevant to the work of senior health service managers. Candidates who choose the all course work option select Epidemiology and three electives from a range of relevant topics including a 'Capstone' subject designed to integrate the knowledge gained throughout the course.

Course Structure

On a part-time basis the course can be completed in three years. There are approximately six hours of contact per week for the part-time candidate and wherever possible, classes are scheduled on one afternoon per week beginning at 1.30pm.

The course requires the completion of 72 credit points including eight core subjects (48 credit points). The remaining 24 credit points can be gained in one of two ways:

- a) by undertaking GHMD90 Epidemiology and three electives;
- or
- b) by undertaking GHMD997 Major Project (24 credit points).

Entry Requirements

Entrants to the course should normally hold a three year undergraduate degree (or equivalent) in a relevant discipline together with a minimum of four years of relevant work experience. In special circumstances, an applicant holding other acceptable academic qualifications and with relevant work experience of not less than four years may be admitted as a candidate. For students with less than four years of relevant work experience, a planned one session program of field experience is required in addition to the course work.

- c) **Master of Science (Mental Health)**
Also available (UW574) externally through the Professional and Graduate Education Consortium (PAGE).

The postgraduate mental health program responds to national priorities to equip a) the mental health workforce, and b) the general health workforce, for comprehensive, community-based treatment and rehabilitation of people suffering from serious mental illness. The program is multidisciplinary and in line with the National Mental Policy and Plan, provides knowledge and supervised skills for case-management, rehabilitation, health services management and mental health research.

The Mental Health program is available for on-campus attendance or nationally, by distance education, through the Professional and Graduate Education Consortium (PAGE)

Course Structure

The course can be undertaken full-time over 18 months or part-time over 3 years. The Master of Science (Mental

Health) degree, is designed with the part-time student in mind within the on-campus program. There are approximately four hours of contact per week for the part-time candidate and wherever possible, classes are scheduled on one afternoon per week beginning at 1.30pm.

The course requires the completion of 72 credit points including six core subjects and 2 electives (48 credit points). The remaining 24 credit points can be gained in one of two ways:

- a) by undertaking four approved elective subjects totalling at least 24 credit points;
- or
- b) by undertaking GHMD997 Major Project (24 credit points).

GHMD984 Health Research Methodology is a pre-requisite for this option.

Course Requirements

A candidate for the Master of Science (Mental Health) will successfully complete a 72 credit point program. This includes 36 credit points of coursework from the core schedule, 24 credit points for Major Project, and 12 credit points chosen from the elective schedule. Students who wish to complete the degree by course work only, as detailed in point (a) above, may select this option with approval from the course coordinator.

The course is multidisciplinary and is open to appropriately qualified health professionals interested in further education and training in mental health.

Entry requirements include:

- (i) a relevant 3 year undergraduate degree or equivalent from an approved tertiary institution;
- (ii) two years (minimum) of relevant experience in the field.

Candidates satisfactorily completing the Graduate Diploma in Science (Mental Health) may seek admission to the Master of Science program.

Assessment

Assessment of coursework is the responsibility of the subject coordinator and the Assessment Committee. All other Rules shall be as for the Graduate Diploma in this Calendar.

- d) **Master of Science (Nutrition and Dietetics)**

Graduates holding the Master of Science (Nutrition and Dietetics) are eligible for membership of the Dietitians Association of Australia and thus may be employed as nutritionists/dietitians in Australia and some overseas countries.

The Master of Science (Nutrition and Dietetics) program of coursework and placements will develop the knowledge and skills required by nutritionists/dietitians working in a variety of community settings and in public health, as well as in hospital and other tertiary health care facilities. It will also provide students with the opportunity to undertake a supervised research project on a subject related to nutrition and dietetics.

Course design

The course is designed to equip graduates with knowledge and skills to address the major nutritional problems in Australia. The curriculum is based on the national competency standards for professional dietitian-nutritionists and has a focus on community nutrition and the principles of primary health care.

The course commences with an overview of the role nutrition plays in health and disease in the Australian community. Following this, studies are included to develop the knowledge and skills required by a nutritionist/dietitian working in particular environments, for example hospitals, community locations, public health. The theme is that, in any of these capacities, the nutritionist/dietitian is working towards the goal of addressing major causes of ill-health through supportive nutritional practices, through professional practice at the primary, secondary or tertiary level.

Course Requirements

A candidate for the Master of Science (Nutrition and Dietetics) will undertake a program of study, student placements and a research project. The program is designed to cover those areas essential for the professional practice of dietitians in Australia, with an emphasis on community aspects of dietetics and nutrition. Some of the subjects are taken in common with other postgraduate programs and there is limited flexibility of subject choice to allow students to pursue individual interests.

The placement involves supervised training for the candidate in nutrition and dietetics in hospitals, community health organisations and other units involved in aspects of nutrition care or health promotion.

The major project provides an opportunity for students to learn research skills under supervision in a particular area of dietetics and/or nutrition.

Duration

The Master of Science (Nutrition and Dietetics) is a two year, full-time course of 96 credit points. Opportunity exists to undertake part-time study, with the approval of the Departmental Head.

Entry Requirements

Entry will be based on selection by a panel. The panel will include at least the Departmental Head and course coordinator, together with members of the program's External Advisory Committee. Applicants should obtain a supplementary application form from the course coordinator

Students should have completed a Bachelor of Science or equivalent degree. The University of Wollongong Bachelor of Science majoring in nutrition is an appropriate qualification for entry. This includes studies in food chemistry, nutrition through the human lifecycle, social/behavioural aspects of nutrition and metabolic nutrition. These

studies are in addition to full year studies in both metabolic biochemistry and human systems physiology at second year BSc level which is a requirement of the profession. Completed studies in statistics and the ability to use computers are desirable attributes.

An average assessment of not less than credit level (65 per cent) in the major study of the previous four sessions (2 years) of equivalent full-time study should normally be achieved for selection. These criteria may be varied in the case of students who have been in the workforce since graduation; in such cases other criteria relating to postgraduate activity may be applied.

Graduates holding a BSc or equivalent degree from other recognised tertiary institutions may be admitted as candidates for the Master of Science (Nutrition and Dietetics) provided their undergraduate performance is deemed equivalent to those entering with the University of Wollongong Bachelor of Science (Nutrition). Bridging courses are available where students do not have the required subjects in their undergraduate degree and potential candidates should seek advice on this matter from the course coordinator.

- e) **The Master of Science (Nutrition)**
Comprises the first year of the MSc (Nutrition and Dietetics) and is intended for students who do not seek the Australian professional dietetic qualification. Places in this course are very limited.

Student intake is at the discretion of the Head of Department

- f) **Master of Science (Occupational Health and Rehabilitation)**
The aim of this degree is to provide advanced study which develops knowledge and professional skills for practice in Occupational Health and/or Rehabilitation Services. The degree is intended for graduates in a health-related discipline who wish to advance their career by working in an Occupational Health or Rehabilitation setting.

Course Design

This program provides core studies in Public Health and specialist subjects in Occupational Health and Rehabilitation, including research skill training in relation to a current issue in Occupational Health or Rehabilitation.

The Department has developed close relationships with BHP Port Kembla, and The Institute of Rehabilitation and Geriatrics of the Illawarra Area Health Service which support this program. Industry-relevant teaching and research opportunities are available to students through participation from senior professionals in Occupational Health and Rehabilitation.

Course Structure

The degree of Master of Science (Occupational Health and

Rehabilitation) requires the satisfactory completion of at least 72 credit points, including at least 48 credit points of coursework and either 24 credit points of major research project or 24 credit points of further coursework. The course can be undertaken full-time over one and a half years or part-time over three years. In some sessions, subjects are timetabled to ensure that the part-time load (2 subjects per session) can be undertaken in one half-day of attendance on campus.

Entry Requirements

Students admitted to the Masters Degree normally hold a Bachelor Degree, plus at least one year of relevant work experience. In special circumstances an applicant who holds other acceptable academic qualifications and with relevant work experience may be admitted as a candidate.

3. GRADUATE DIPLOMAS

3.1 GRADUATE DIPLOMA IN PUBLIC HEALTH

The Graduate Diploma in Public Health is designed for health professionals working in Public Health. It caters for health professionals who do not wish to undertake a research component in their studies. Those who do wish to undertake such a component may apply for enrolment in the Master of Public Health degree.

3.2 GRADUATE DIPLOMA IN SCIENCE

a) Graduate Diploma in Science (Environmental Health)

The Graduate Diploma in Science (Environmental Health) is designed to cater for environmental health professionals in government or industry settings who want to upgrade their knowledge, or to Public Health Officers with an interest in environmental issues.

Course Structure

The course can be undertaken full-time over one year or part-time over two years. The course is designed with the part-time student in mind. The course requires a total of at least 48 credit points by satisfactory completion of subjects outlined in the accompanying schedule.

Articulation with the Master of Science (Environmental Health)

Candidates who satisfactorily complete the Graduate Diploma may apply for admission to the Master of Science (Environmental Health). Candidates who undertake the Master of Science degree following completion of the Graduate Diploma in Science (Environmental Health) must surrender the testamur prior to the conferring of the Master degree. The five core subjects of the Graduate Diploma also form part of the core subject requirements of the Master program.

Entry Requirements

Entrants to the course normally hold a relevant degree or other acceptable qualifications, together with one year of work in a relevant health area.

b) Graduate Diploma in Science (Health Policy and Management)

Also available nationally, by distance education, (UW650) through the Professional and Graduate Education Consortium (PAGE).

The aim of this course is to provide skills and knowledge to function effectively as a health service manager. The course is intended to cater for a variety of health and health related professionals wishing to pursue a management career within the health industry.

Professional Recognition

This course has been accredited by the Australian College of Health Service Executives as an appropriate qualification for membership.

Course Design

The course develops the candidate's ability to manage pro-actively and to address problems in a logical and analytical manner. It emphasises the social and environmental factors impacting on the manager's task and the dynamic and pluralistic nature of health service management.

Course Structure

The course can be undertaken full-time over one year or part-time over two years. There are approximately six hours of contact per week for the part-time candidate. As with the Master of Science (Health Policy and Management) degree the course is designed with the part-timer in mind. The course requires a total of at least 48 credit points by satisfactory completion of subjects outlined in the accompanying schedule. A brief description of each subject appears in this calendar.

Articulation with the Master of Science (Health Policy and Management)

Candidates who successfully complete the Graduate Diploma may apply for admission to the Master of Science (Health Policy and Management). Candidates who undertake the Master of Science degree following completion of the Graduate Diploma in Science (Health Policy and Management) must surrender the testamur prior to the conferring of the Master degree. The six core subjects of the Graduate Diploma also form part of the core subject requirements of the Master program. The Master of Science degree requires the completion of a major project or four additional subjects selected from those listed for the Master of Science (Health Policy and Management) one of which must be GHMD904: Epidemiology.

Entry Requirements

Entrants to the course normally hold a three year degree (or equivalent) together with a minimum of four years of relevant work experience. In special circumstances an applicant holding

other acceptable academic or professional qualifications and with relevant work experience of not less than four years may be admitted as a candidate. For students with less than four years of relevant work experience, a planned one session program of field experience is required in addition to the course work.

c) Graduate Diploma in Science (Mental Health)

Also available externally (UW650) through the Professional and Graduate Education Consortium (PAGE).

The Graduate Diploma in Science (Mental Health) is designed to provide education and training for the multidisciplinary group of practitioners who provide services for clients in comprehensive, community based mental health services. It aims to produce graduates with the clinical and professional competence to work across the full range of mental health services and to provide assessment, diagnosis, treatment, rehabilitation and support for people with serious mental illness and their families in line with the National Mental Health Policy and Plan.

Course Structure

The course can be undertaken full-time over one year or part-time over two years. As with the Master of Science (Mental Health) degree, the Diploma is designed with the part-time student in mind, in that wherever possible, the two subjects of the part-time load can be undertaken by attendance at the campus for one half-day per week, from 1.30pm.

Course Requirements

A candidate for the Graduate Diploma in Science (Mental Health) will successfully complete subjects with a total value of 48 credit points, 36 of which will be core subjects in Schedule 1 of the Mental Health Program, and 12 of which will be chosen from elective subjects as set out in the Schedule or relevant subjects chosen from other programs subject to approval of Departmental Head.

Not all subjects in Schedule 2 will be offered each year. Elective subjects will be offered subject to demand and according to availability of teachers.

Entry Requirements

Admission to the course is normally by applicants who hold a relevant degree or other acceptable qualifications (eg. Registered Nursing Certificate), together with a minimum of one year of work in a mental health service setting. In special circumstances an applicant holding other acceptable academic or professional qualifications may be admitted to studies.

Entry requirements will be as for Graduate Diploma Rules paragraphs 5(1), 5(2a), 5(2c) and 5(3) in this Calendar including at least 1 year of appropriate experience in the field.

Assessment

Assessment of course work is the responsibility of the subject coordinator and the Assessment Committee. *All other Rules shall be as for the Graduate Diploma in this Calendar.*

Articulation with the Master of Science (Mental Health)

The Graduate Diploma articulates with The Master of Science (Mental Health) in that students who successfully complete the Diploma may apply for advanced standing in 48 credit points of course work in the Master of Science degree. (Note that GHMD984 is a prerequisite for enrolling in the Major Project).

On completion of the requirements for the Master of Science and prior to graduation, a student who has received the Graduate Diploma of Science (Mental Health) will be required to surrender the testamur in order to receive the Master of Science degree.

d) Graduate Diploma in Science (Occupational Health and Rehabilitation)

The aim of this course is to provide the knowledge and industry experiences necessary to successfully work as a practitioner in Occupational Health and Rehabilitation services. The course is intended to cater for a multidisciplinary group of students who have gained their primary qualifications in a health-related discipline and who seek a career in Occupational Health and Rehabilitation services.

The Graduate Diploma articulates with the Master of Science (Occupational Health and Rehabilitation) in that students who successfully complete the Diploma may apply for advanced standing in 50 credit points of course work in the Master of Science degree.

Course Design

The course is designed to provide a broadening education in core Public Health knowledge and skill of relevance to Occupational Health and Rehabilitation and specialised knowledge in the conceptual, legal, and professional foundations of Occupational Health and Rehabilitation practice.

Course Structure

The course can be undertaken full-time over one year or part-time over two years. As with the Master of Science degree, the Diploma is designed with the part-time student in mind, in that wherever possible, the two subjects of the part-time load can be undertaken by attendance at the campus for one half-day per week. Satisfactory completion of the Graduate Diploma requires that at least 48 credit points of course work in the relevant schedules will have been undertaken.

Entry Requirements

Admission to the course is normally by applicants who hold a relevant degree together with a minimum of one year of work in the health or human service

setting. In special circumstances an applicant holding other acceptable academic or professional qualifications may be admitted to studies.

4. GRADUATE CERTIFICATES

4.1) Graduate Certificate in Health Policy and Management

Also available externally (UW693) through the Professional and Graduate Education Consortium (PAGE).

The aim of this course is to provide an introduction to advanced professional education for health service managers in the concepts, theories, approaches and practices of health policy and management.

Course Design

The course provides students with the opportunity to gain a qualification in health service management in a flexible manner, including a wide choice of subjects and a manageable investment of time and money.

Articulation with the Graduate Diploma in Science (Health Policy and Management)

Students who complete the Graduate Certificate may, on application, be granted advanced standing totalling 24 credit points towards the award of the Graduate Diploma in Science (Health Policy and Management). On completion of the requirements for the Graduate Diploma and prior to graduation, a student who has received the Graduate Certificate will be required to surrender the testamur in order to receive the Graduate Diploma.

Entry Requirements

Entrants to the course normally hold a three year degree (or equivalent) together with a minimum of four years of relevant work experience. In special circumstances an applicant holding other acceptable academic or professional qualifications and with relevant work experience of not less than four years may be admitted as a candidate. For students with less than four years of relevant work experience, a planned one session program of field experience is required in addition to the course work.

Course Structure

The Graduate Certificate will be awarded on successful completion of 24 credit points of course work, selected from the six subjects listed previously for this award.

Professional Recognition

For members of the Australian College of Health Service Executives, successful completion of individual subjects attracts Continuing Professional Development (CPD) credit.

4.2) Graduate Certificate in Mental Health

Also available externally (UW693) through the Professional and Graduate Education Consortium (PAGE).

The aim of this course is to provide an introduction to advanced professional

education for mental health practitioners in current legislation and policy regarding the care of people with serious mental illness and recent developments in concepts, theories, and practices of mental health intervention including assessment, diagnosis, treatment and rehabilitation.

Course Design

The course provides students with the opportunity to gain a qualification in mental health in a flexible manner, including a manageable investment of time and money.

Articulation with the Graduate Diploma in Science (Mental Health)

Students with appropriate entry qualifications, who complete the Graduate Certificate may, on application, be granted advanced standing totalling 24 credit points towards the award of the Graduate Diploma in Science (Mental Health). On completion of the requirements for the Graduate Diploma and prior to graduation, a student who has received the Graduate Certificate will be required to surrender the testamur in order to receive the Graduate Diploma.

Entry Requirements

Admission to the course is normally by applicants who hold a relevant degree or other acceptable qualifications (e.g.; Registered Nursing Certificate), together with a minimum of one year of work in a mental health service setting. In special circumstances an applicant holding other acceptable academic or professional qualifications may be admitted to studies.

For students with less than one year of relevant work experience, a planned one session program of field experience is required in addition to the course work.

Entry requirements will be as for Graduate Diploma Rules paragraphs 5(1), 5(2a), 5(2c) and 5(3) in this Calendar including at least 1 year of appropriate experience in the field.

Course Structure

The Graduate Certificate will be awarded on successful completion of 24 credit points of course work, selected from core mental health subjects of the Graduate Diploma in Science (Mental Health), ie GHMD970, GHMD971, GHMD973 and GHMD965.

4.3 Graduate Certificate in Public Health Research Methods

Only available externally (UW693) through the Professional and Graduate Education Consortium (PAGE).

The aim of this course is to provide health professionals with the opportunity to develop primary competencies in public health research and evaluation.

Course Design

The course provides students with the opportunity to gain a qualification in public health research in a flexible manner, including a wide choice of subjects and a manageable investment of time and money.

Entry Requirements

Entry to the course normally hold a three year undergraduate degree (or equivalent). In special circumstances, an applicant holding other acceptable qualifications and with relevant work experience of not less than two years may be admitted to studies.

Course Structure

The Graduate Certificate will be awarded on successful completion of 24 credit points of course work.

On completion of the Graduate Certificate in Public Health Research Methods, students may apply to enter the Graduate Diploma in Public Health. Successful applicants will be required to complete a further 24 credit points of coursework from the Diploma Schedule. Candidates who undertake the Graduate Diploma in Public Health following the completion of the Graduate Certificate must surrender the testamur prior to the conferring of the Graduate Diploma.

EXTERNAL COURSES

Currently, four programs of study are available externally: Health Policy and Management, Mental Health, Graduate Diploma in Public Health, and the Graduate Certificate in Public Health Research Methods. They are available through the Professional and Graduate Education (PAGE) Consortium of the University of Wollongong.

SUBJECT DESCRIPTIONS

GHMD902 Communication and Education

Autumn session; 6 credit points (2 hrs).

Assessment: Major assignment incorporating small group studies and seminar presentations 50%. Mid session class exam 30%. Participation 20%.

Students will be able to identify the relevance of communication and education in the health care context. They will critically review adult learning theory, discuss the development of educational programs and relate notions of competency to supervision and assessment of student health professionals. Students will discuss the relationship between communication and culture and appreciate the social construction of talk in the institutional setting. They will analyse and discuss communication processes in the small group learning context.

Textbooks:

Knowles M, *The Adult Learner: A Neglected Species*, 4th ed, Houston, Gulf Pub, 1990.

Readings on the range of topics are provided in the closed reserve section of the library.

Co-ordinator: Ms L Tapsell.

GHMD904 Epidemiology

Spring session; 6 credit points (2 hrs).

Pre-Requisite: GHMD983 or approval from the Co-ordinator.

Assessment: two minor assignments on study design and critical appraisal; end of session written examination.

Principles and methods of epidemiological investigation including analytic and experimental epidemiology. Topics to be covered

are: measurement in epidemiology, descriptive epidemiology, screening, design of case-control and cohort studies, analysis of studies, critical appraisal, clinical trial design, biological inference and causality.

Textbook:

Mausner, JS, Bahn, S, *Epidemiology, An Introductory Text*, 3rd ed, WB Saunders, Philadelphia, 1985.

Co-ordinator: Dr I A Kreis.

GHMD905 Social Foundations of Public Health

Autumn session; 6 credit points (2 hrs).

Assessment: two written assignments 60%, final exam 40%.

This subject introduces students to theories and concepts from the social sciences necessary for the understanding and analysis of public health issues. Topics include; trends in public health, socio-economic and environmental influences on health and health inequities, biomedical and anthropological models of health and illness, the role of culture in health and health behaviour and the political economy of health.

Textbook:

Willis, E, *The Sociological Quest: An Introduction to the Study of Social Life*, (2nd ed), Allen and Unwin, Sydney, 1995.

Book of readings.

Co-ordinator: Dr L Harrison.

GHMD906 Health Services Organisation and Management

Spring session; 6 credit points (1 hr lecture, 1 hr tutorial).

Assessment: satisfactory completion of two assignments and an examination.

This subject aims to further develop knowledge and skills relevant to the management of health care services through the application of management theories and concepts to practice. The subject examines the complex and multiple tasks which challenge the health service manager and provides options for issue analysis and action based on management theory and the literature of health service management.

Textbook: Shortell, SM, and Kaluzny, AD, *Health Care Management: Organisation Design and Behaviour*, Delmar Publishers Inc, New York, 1994.

Co-ordinator: Ms M G Harris.

GHMD907 Independent Study in Public Health

Spring session, Autumn session; 6 credit points.

Assessment: Major Report.

The candidate, in conjunction with a supervisor appointed by the Departmental Head of Public Health and Nutrition, will present a proposal for an independent study of 6 credit points which incorporates objectives, methods and criteria for assessment of the independent study. The proposal is approved by a committee of the Department of Public Health and Nutrition responsible for academic oversight of programs. The time commitment involved in the independent study would be at least as great as that involved in a subject of equivalent credit points. Candidates will be expected to meet their supervisors regularly and to conduct independent library research as well as directed readings, assignments and assessments.

Textbooks: No set text.

Co-ordinator: Associate Professor R D Harris.

GHMD908 Health Services Planning and Evaluation

Spring session; 6 credit points (2 hrs seminar per wk).

Practical and theoretical aspects of health service planning and evaluation will be covered in this subject. Topics include: planning, its scope and theory; planning approaches and methods; corporate planning; strategic planning; strategy formulation and analysis; operational planning; and facility planning. Principles of evaluation will be illustrated through design and implementation of health program evaluation. Topics include: process evaluation; impact and outcome evaluations; monitoring and outcome management.

Textbooks: References will be provided.

Co-ordinator: Ms K Eagar.

GHMD909 Comparative Health Systems: Policies and Politics

Autumn session; 6 credit points (2 hrs seminar).

Assessment: satisfactory completion of 2 essays and an examination.

This subject examines how ideologies and political processes influence health policy development and health service delivery. International measures of performance are used to identify and explore similarities and differences between countries. The impact of broad socio-economic forces on health status and health policy development are emphasized. The subject is designed to assist individuals to develop analytical and strategic skills which will enable them to influence health policy development.

Textbooks:

Gardner, H, (ed) *Health Policy Development Implementation and Evaluation in Australia*, Churchill, Livingstone, Melbourne, 1992.

Palmer, GR and Short, SD, *Health Care and Public Policy, An Australian Analysis*, (2nd ed), MacMillan, Melbourne, 1994.

Co-ordinator: Ms M G Harris.

GHMD912 Health Promotion

Spring session; 6 credit points (2 hrs seminar per wk).

Pre-requisite: GHMD902.

Assessment: seminar presentation and discussion. Assignments will examine the assessment of need for health promotion programs and will evaluate the relative cost-effectiveness of different health promotion strategies. Passes in all components are necessary for satisfactory completion of the course.

This subject will develop and understanding of the concept of health promotion and discuss the principles of the Ottawa Charter. Students will critically review current approaches to health promotion at the local, state and /or national level. Areas discussed may include use of the media; community development programmes; healthy public policies; lifestyle change programmes. A needs assessment on a particular health issue will be undertaken by each student. Students also will develop health advocacy skills and will identify potential health promotion aspects of the health care system.

Textbooks:

Downie, R S, Fyfe, C and Tannahill, A, *Health Promotion, Models and Values*, Oxford University Press, 1990.

Hawe, P, Degeling, D and Hall, J, *Evaluating Health Promotion: A Health Worker's*

Guide, MacLennan and Petty, 1990.

Glanz, K, Lewis, FM and Rimer, B K, *Health Behaviour and Health Education, Theory, Research and Practice*, Jossey-Bass Pub, 1990.

Co-ordinator: Ms H Yeatman.

GHMD913 Drug Problems and Issues

Spring session; 6 credit points (2 hrs seminar per wk).

Assessment: seminar presentation and discussion. Satisfactory completion of individual assignments related to literature review and analysis of a specific problem or issue within the field of alcohol or drug misuse. Passes in all components are necessary for satisfactory completion of the course.

This course will provide an understanding of the pharmacological, psychological, and sociological basis of drug dependence; methods of treatment and prevention of drug abuse; an analysis of government policies to combat drug related problems; the development and management of drug and alcohol services; contemporary issues and controversies.

Textbooks: to be advised.

Co-ordinator: Mr G Lake, Drug and Alcohol Service, Illawarra Area Health Service.

GHMD924 Health Information Systems

Autumn session; 6 credit points (2hrs per wk lecture/seminars and practical sessions).

This subject examines issues of managing information systems in health services. It is designed to provide health service managers with an understanding of the principles of: data and data storage, classification and coding, data communication and networking, decision support and knowledge based systems. These principles will be applied to information systems in Hospitals, Nursing and Primary Health Care. Current issues in information systems design and implementation in health services will be covered.

Textbook: : to be advised.

Co-ordinator: Dr R Jayasuriya.

GHMD925 Aboriginal Health Issues

Autumn session; not offered in 1996; 6 credit points (2 hrs seminar).

Assessment: written assignments 65%, seminar presentation 25% and seminar participation 10%.

This subject is offered in alternate years and examines the current health status of Aboriginal people from a social and historical perspective. Issues to be explored include the interaction between culture and health, the experience of ill-health, and the political and economic context of health. It also focuses on access to and use of health services and problems of cross-cultural communication within the health sector. Emphasis will be placed on communities in settled rather than remote Australia and comparisons will be made, where appropriate, with the health experience of similar populations, such as Native Americans.

Textbook:

Reid, J and Trompf, P (eds), *The Health of Aboriginal Australia: A Social Perspective*, Harcourt Brace Jovanovich, Sydney, 1991.

Co-ordinator: Dr L Harrison.

GHMD926 Qualitative Research: Methods and Issues

Autumn session; not offered in 1996, 6 credit points (3 hrs per wk).

Pre-requisite: GHMD984 or equivalent.

Assessment: class participation 25%; practical interview 35%; review and analysis of interview data 40%.

Students enrolling in this subject will explore a variety of qualitative research methodologies and issues within this particular research paradigm. Philosophical and epistemological issues will be addressed. Field research, interview techniques, sampling strategies, the use of content analysis and other forms of data analysis will be discussed. Issues of reliability, validity and triangulation will also be examined.

Textbook:

Minichiello, V, Aroni, R, Timewell, E and Alexander, L, *In-depth Interviewing: Researching People*, Longman Cheshire, Australia, 1990.

Co-ordinator: Dr L Harrison.

GHMD931 Dietetics 1: Primary Health Care

Autumn session; 6 credit points (2 hrs lectures, 2 hr seminar/wk; 3 hrs clinic/session).

Pre-requisite: admission to MSc (Nutrition and Dietetics).

Assessment: assignments completed during the session 30%; end of session examination 50%; participation in clinic and journal club 20%. Students must demonstrate competence in the diet history to pass the subject.

Students will be able to list and describe the significance of common nutritional problems in the community; describe the nutritional requirements of individuals throughout the lifecycle and pathophysiology of major nutrition related diseases in the community. They will outline the processes of nutritional assessment, compare and contrast different methods of dietary assessment, develop skills in taking dietary histories, and analyse and evaluate dietary intake data. Students will outline appropriate dietary prescriptions and develop and utilise a "ready reckoner" for estimating these formulations. Students will critically review their performance in a nutrition outpatient clinic.

Textbooks:

English, R and Lewis, J, *Nutritional Values of Australian Foods*, AGPS, Canberra, 1991.

Schils, ME, Olson, JA, Shike, M, *Modern Nutrition in Health and Disease*, (8th ed), Lea and Febiger, USA, 1994.

Department of Nutrition and Dietetics, School of Community Health, *Dietitian's Pocketbook*, Curtin University of Technology, Perth, WA, 1994.

National Health and Medical Research Council, *Recommended Dietary Intakes for Use in Australia*, AGPS, Canberra, 1991.

Co-ordinator: Ms L Tapsell.

GHMD933 Communication in Nutrition and Dietetics

Spring session: 6 credit points (2 hrs lectures, 2 hrs seminar/wk, 3 hrs clinic/session).

Pre-requisite: admission to MSc (Nutrition and Dietetics).

Assessment: assessment of competence in nutrition counselling 40%; assessment of competence in nutrition education skills 40%; assessment of critical skills in conflict resolution 20%.

Students will be able to counsel individuals

and families on nutrition, food and diet issues; plan, implement and evaluate a nutrition education program for a small group and explore other aspects of communication in nutrition and dietetics practice.

Textbook:

Holli and Calabrese, *Communication and Education Skills: The Dietitians Guide*, Lea & Febiger, Philadelphia, 1990.

Co-ordinator: Ms L Tapsell.

GHMD934 Dietetics 2: Secondary and Tertiary Health Care

Spring session; 6 credit points (2 hrs lectures, 2 hr seminar, 1 hr tutorial per wk).

Pre-requisite: CHEM215, GHMD931.

Pre-requisite: admission to MSc (Nutrition and Dietetics).

Assessment: one three hr examination at the end of Spring session 50%; written assignments during the session 50%. It is necessary to pass all assignments and the examination in order to pass this subject.

This subject is designed to build on the knowledge and skills studied in GHMD931 through the study of nutritional management of individuals with acute illness. Students will be required to undertake a case study for presentation. Topics are introduced through the study of case management and supported by lectures provided by specialist clinicians from the medical and dietetic professions. Topics include enteral and parenteral nutrition, the pathophysiology of disease states of the gastrointestinal, endocrine, cardiovascular and renal systems, stroke, hypermetabolic conditions, AIDS, clinical paediatrics and the rationale and protocol for the associated diet therapy.

Textbooks: to be advised. Plus: Medical Dictionary as required for GHMD931.

Co-ordinator: Mr B Gazibarich.

GHMD935 Nutrition and Food Services

Autumn session: 6 credit points (wkly management/food services seminars; sessions with TAFE Food School - timetable to be advised).

Assessment: written assignments on food services 30%, small group report and presentation on menu planning 30%, written assignment on management 20%, group report and presentation on management 20%.

Students will examine the theoretical and practical aspects of management and organisation in health services particularly with respect to management of hospital food services.

Aspects of the subject will focus on the development of basic cooking skills in small and large scale operations and the manipulation of standard recipes in keeping with dietetic modifications. Basic food groups will be investigated in relation to food principles, food skills and food science. Students will also develop the skills and knowledge necessary to assist in and/or manage the provision of meals via a hospital or institutional food service.

Textbooks and other readings: to be advised.

Co-ordinator: Mr B Gazibarich.

GHMD936 Public Health Nutrition

Autumn session; 6 credit points (4 hrs seminars per wk).

Assessment: small group report and presentation 35%; seminar presentation and

report 55%; participation 10%.

This subject will introduce the student to the principles of community health and the history of public health nutrition in Australia. Key areas of public health nutrition discussed include food and nutrition surveillance, food policy, programme planning and health promotion. Selected public health nutrition programmes designed to reach different segments of the community will be examined.

Textbook:

Lester, I, *Australia's Food and Nutrition*, AGPS, 1994.

Hawe, P, Degeling, D, Hall, J, *Evaluating Health Promotion, A Health Worker's Guide*, MacLennan and Petty, 1990.

Other readings recommended by the lecturer.

Co-ordinator: Ms H Yeatman.

GHMD937 Practical Studies in Nutrition and Dietetics

Over three sessions; 24 credit points (21 wk placements; 35 hrs of seminars).

Pre-requisite: GHMD931, GHMD934.

Assessment: mastery of skills and satisfactory achievement of objectives and completion of assignments (as outlined in the subject handbook) will be necessary for a pass in this subject. Specific tasks or assignments will be allocated to each student, negotiated between the field supervisor and subject co-ordinator prior to the commencement of each placement component. Assignments will include seminar and workshop presentations. Where a student does not pass this subject, a second opportunity is not normally provided. This decision is made after consideration of both the professional and resource implications.

This subject comprises a practicum of 20 weeks which is spent in hospitals, community health centres and other food-related organisations/units under the supervision of experienced dietitians or nutritionists. The placements are designed to develop the student's skills in areas such as specialised therapeutic diets, food service management, provision of community nutrition programs etc. Placements will be arranged to suit individual student needs, at the same time as meeting the minimum standards as set down by the Dietitians Association of Australia. A minimum of 5 weeks of the practicum will be spent at a major teaching hospital. Students will also be able to spend periods of time (2 wks minimum) in various other locations including country hospitals, community health units programs, food industries, non-government organisations, nutrition research units, departments of public health, private enterprise or other government departments. While on placement students will be supervised by a dietitian or nutritionist who has a minimum of 3 years experience in her/his current field. Also included in this subject is a series of seminars on professional skills, to assist students to undertake their responsibilities while on placement. A series of therapeutic diet workshops will be held to update students on the latest information and therapeutic principles in a number of specialised dietary/nutrition areas.

Textbooks: to be advised.

As required for GHMD931 and GHMD934

Co-ordinator: Mr B Gazibarich.

GHMD938 Behavioural Aspects of Nutrition

Spring session; 6 credit points (2 hrs seminars, 1 hr tutorial).

Pre-requisite: normally some undergraduate study of Psychology or Sociology.

Assessment: assignments 50% and seminar presentation and reports 50%.

This subject outlines and discusses the social, cultural and psychological determinants of health-related behaviour. Basic concepts of sociology and anthropology are illustrated by health-related examples. Models of individual behaviour and behaviour change are discussed, together with theories of social change, including community development, legislative action, and healthy public policy.

Textbooks:

egger, G, Spark, R, and Lawson, J, *Health Promotion Strategies and Methods*, McGraw-Hill Book Co., Sydney, 1990.

Fieldhouse, P, *Food and Nutrition: Customs and Culture*, Croom Helm, 1986.

Glanz, K, Lewis, FM, and Rimer, BK (eds), *Health Behaviour and Health Education: Theory Research and Practice*, Jossey-Bass Pub., San Francisco, 1990.

Co-ordinator: Ms H Yeatman.

GHMD939 Human Nutrition in Health and Disease

Spring session; 6 credit points (2 hrs lecture, 1 hr tutorial).

Pre-requisite: entry into Masters program.

Assessment: assignments 50% and seminar presentation and reports 50%.

Nutrition needs through the life cycle – foetus, childhood, pregnancy, middle and old age. Clinical conditions and their nutritional implications eg metabolic disease, renal disease, diseases of the digestive tract, coronary heart disease, trauma, burns, eating disorders (bulimia, anorexia nervosa), AIDS, alcoholism, drugs, basic principles of pharmacology.

Textbook:

Williams, Worthington-Roberts, *Nutrition throughout the lifestyle*, 1988.

Co-ordinator: Mr B Gazibarich.

GHMD940 The Principles and Practices of Occupational Health and Rehabilitation

Autumn session; 6 credit points (2 hrs seminar).

Pre-requisite: admission to MPH (Occupational Health and Rehabilitation).

Assessment: seminar presentation 50%; written examination 50%.

Topics include history and development of occupational health, occupational health services and programs, health development in industry, management of occupational health in the workplace, health promotion in the workplace, including stress management and the principles of a healthy lifestyle, ethics of occupational medicine practice, management of occupational health and safety programs.

Textbook:

Waldron, H A, *Occupational Health Practice*, 3rd Ed, Butterworths.

Co-ordinator: Associate Professor R D Harris.

GHMD941 Occupational Hygiene and Industrial Toxicology

Spring session; 6 credit points (2 hrs seminar).

Pre-requisite: admission to MPH (Occupational Health and Rehabilitation).

Assessment: end of session written examination plus major written assignment 70%; written assignment during session 30%.

The subject introduces the fundamental aspects of toxicology, including toxic response mechanisms, models of cancer-dose response, threshold and tolerance, basic principles of pharmacokinetic models for humans, mechanism of disease induction, and the formulation of health risk assessment protocols for use in occupational settings and environmental health; monitoring methods and the use of monitored information to manage risks; legal aspects of health protection and safety. Technological ways to reduce hazards and risks will also be discussed. The subject aims to develop a sound appreciation of the principles of toxicology, carcinogenesis, and other fundamental aspects of the discipline, and to provide students with the means to interpret the data associated with those mechanisms and apply them to practical instances where humans are at risk.

Textbook: Book of readings, available at cost from department

Co-ordinator: Associate Professor P Ricci.

GHMD950 Financial Management for Health Services

Spring session; 6 credit points (3 hrs tutorials per wk).

Assessment: written report and discussion paper.

Moving from management of costs towards management of value for money. Efficiency and effectiveness. Measuring cost, quality of care, outcome, and utility. Product costing and utilisation review. Resource allocation.

Textbooks:

Levy, VM, *Financial Management of Hospitals*, (4th ed), Law Book Co, Sydney, 1992.

Co-ordinator: Associate Professor P Solomon.

GHMD962 Adolescent Mental Health*

6 credit points (2 hrs per wk).

Assessment: a variety of methods including literature review, case reports, seminar presentation, research proposals.

This subject presents a sociocultural overview of the concept of adolescence and introduces major theories of adolescent psychological development. It examines family, social, cultural, and political influences upon the developing adolescent. It provides the student with a comprehensive description of adolescent mental health disorders, individual and family assessment, intervention and treatment options. Special topics include suicide and para-suicide, substance abuse, delinquency, behavioural disorders, sexual assault, and parent-adolescent conflict.

Textbooks: to be advised.

Co-ordinator: Mr P O'Halloran.

GHMD964 Mental Health Problems of the Aged*

6 credit points (2 hrs per wk).

Assessment: a variety of methods including literature review, case reports, seminar

presentations, research proposals.

This subject presents an overview of the aging process, including physical, social, cultural, and psychological factors. It provides a comprehensive examination of common psychiatric and behavioural disorders, assessment, diagnosis, psycho-pharmacology and therapeutic and management approaches. Special topics include death and bereavement, alcohol and drug abuse, legal and ethical issues.

Textbooks: to be advised.

Co-ordinator: Mr P O'Halloran.

GHMD965 Principles and Practices of Psychosocial Rehabilitation

Spring session; 6 credit points (2 hrs per wk).

Assessment: a variety of methods including literature review, case reports, seminar presentations, research proposals.

This subject provides an examination of current approaches and practices in the rehabilitation of people following long-term mental illness. Students will examine and utilise functional assessments; develop individual management plans; design, implement and evaluate living skills programs across a range of functional domains.

Textbook:

Lieberman, R, *Psychiatric Rehabilitation of Chronic Mental Patients*, American Psychiatric Press, Washington DC, 1988.

Watts, F, and Bennett, D, *Theory and Practice of Psychiatric Rehabilitation*, John Wiley and Sons, London, 1991.

Co-ordinator: Associate Professor R Harris.

GHMD966 Family and Systems Interventions for Mental Health*

6 credit points (2 hrs per wk).

Assessment: a variety of methods including literature review, case reports, seminar presentations, research proposals.

This subject examines the current research of the effects of social and emotional milieu on mental illness. It also examines various interventions and support strategies, particularly for families in dealing with the burden and distress of mental illness.

Textbooks:

McFarlane, WR, *Family Therapy in Schizophrenia*, Guildford Press, New York, 1983.

Lefley, HP and Johnson, DL, *Families as Allies in the Treatment of the Mentally Ill*, Academic Press, Washington, DC, 1990.

Co-ordinator: Mr P O'Halloran.

GHMD970 Comprehensive Systems of Mental Health Care

Autumn session; 6 credit points (2 hrs per wk).

Assessment: a variety of methods including review, case reports, seminar presentations, research proposals.

This subject provides an overview of basic theoretical models used to explain psychiatric disorder and presents a historical overview of mental health services. It outlines the design and impact of relevant legislation, deinstitutionalisation, and the subsequent development of a comprehensive service model. It provides students with an understanding of each component of a community service network, including the role and function of crisis intervention services, residential services, community health centres, living skills and rehabilitation services, hospital based services, and multidisciplinary mental

health structures. The role, structure, function and policy of relevant government, non-government and advocacy organisations is examined with particular reference to NSW organisations.

Textbook:

Busfield, J, *Managing Madness: Changing Ideas and Practice*, Unwin Hyman, London, 1986.

Co-ordinator: Mr P O'Halloran.

GHMD971 Assessment and Diagnosis in Mental Health

Autumn session; 6 credit points (2 hrs per wk).

Assessment: a variety of methods including literature review, case reports, seminar presentations, research proposals.

This subject examines the definition, classification, assessment, diagnosis, therapeutic approaches and management of mental health problems at major stages of human development, with particular emphasis on serious psychiatric disorders. The formulation of management plans and the therapeutic and pharmacological considerations are addressed.

Textbook:

Kaplan, H and Sadock, B, *Synopsis of Psychiatry* (5th Ed), Williams and Wilkins, Baltimore, 1988.

Co-ordinator: Mr P O'Halloran.

GHMD973 Case Management in Mental Health

Spring session; 6 credit points (2 hrs per wk).

Assessment: a variety of methods including literature review, case reports, seminar presentations, research proposals.

This subject provides an overview of intervention and treatment options for people presenting with acute psychiatric disorders as well as those requiring more intensive rehabilitation. Principles and strategies for crisis intervention, including pharmacological management and family and social network interventions are examined in detail. The principles and practices of case management are examined and utilised as the basis of current and subsequent service delivery.

Textbooks:

Onyett, S, *Case Management in Mental Health*, Chapman and Hall, London, 1992.

Co-ordinator: Mr P O'Halloran.

GHMD976 Supervised Clinical Practice

Offered in Autumn or Spring sessions according to demand; 6 credit points (not offered through PAGE).

Assessment: upon commencement of the placement, students must present a written report detailing goals and objectives of the placement as contracted with the field supervisor. Upon conclusion of the practicum, students must submit an evaluative report indicating clinical activity, competencies developed, difficulties encountered and positive outcomes for self, client and service agency. The student must also present a daily log of clinical activities during the course of the placement. The clinical supervisor must support this report and submit a report to the student's academic adviser.

Students must complete a supervised clinical practicum. A range of placements exist in both the local Area Health Service and in Rural and Metropolitan areas. Students are to negotiate details in conjunction with the academic advisers

* Not on offer in 1996.

and nominated clinical supervisors before they begin and must develop and submit an outline including a description of the nature of the clinical work, specific competencies to be developed, and how the development of competencies will be monitored and evaluated by the clinical supervisor.
Co-ordinator: Mr P O'Halloran.

GHMD980 International Health: Health Care Delivery in Developing Countries

Autumn session; 6 credit points (2 hrs per wk).
Assessment: students will submit two papers. The first (approximately 2000 words) will describe health and the health care delivery system in a developing country, identifying major issues for health development. The second paper (approximately 2500 words) will be a detailed analysis of one such issue and a plan for strengthening management of the program.
This subject provides an orientation to health care systems in developing countries. Issues of socio-economic development and health, decentralisation and health financing will be addressed. The relationships of the environment and nutrition to morbidity and mortality, and of population dynamics to service delivery will be covered. Health Program Management issues such as resource management, logistics, information systems in this context will be illustrated.
Textbooks: Special reading lists will be provided.
Co-ordinator: Dr R Jayasuriya.

GHMD981 Maternal and Child Health in Developing Countries

Spring session; 6 credit points (2 hrs per wk).
Assessment: two written papers. The first paper of about 1500 words will review the literature on a selected aspect of Maternal and Child Health in Developing Countries. The second of about 2500 words will be a proposal for strengthening the selected program in the context of a selected developing country.
Students taking this subject will examine the components of the "safe motherhood" intervention and "child survival" strategies in developing countries. The subject will give emphasis to the delivery of care in a primary health care approach and the use of appropriate technology. Issues of integration of maternal community health and family planning services and the organisation of services in decentralised settings will be discussed.
Textbook:
Williams, C, Baumslag, N, and Jelliffe DB, *Mother and Child Health: Delivering the Services*, (3rd ed), New York, Oxford University Press, 1994.
Co-ordinator: Dr R Jayasuriya.

GHMD982 Special Topic in International Health

Spring session; 6 credit points.
Pre-requisite: GHMD984 or equivalent research subject.
Co-requisite: GHMD980.
Assessment: a research proposal with substantial review of the literature on a topic chosen for research in a developing country (about 5000 words).
This subject will enable students to further their knowledge in a special topic of interest relevant to health in developing countries. The student will also obtain skills in developing and writing a research proposal

for Health Systems Research. Topics for study currently include Aspects of Maternity Services, Injury Control, Nutritional Issues, Training of Health Care Workers, Health Information Systems. The topic chosen may assist the student by providing background for the choice of topic for their major project. The subject will be taught in tutorials rather than formal lectures.
Textbook: Special reading list will be supplied.
Co-ordinator: Dr R Jayasuriya.

GHMD983 Statistics in Health Research

Autumn session: 6 credit points (3 hrs).
Assessment: three written assignments.
Students will be introduced to statistical concepts and techniques in developing health research studies. Topics include the use of probability samples, probability theory and statistical inference, distributions, and regression methods.
Textbooks: to be advised
Co-ordinator: Associate Professor P Ricci.

GHMD984 Health Research Methodology

Spring session; 6 credit points (2 hrs).
Pre-requisites: GHMD983 or equivalent.
Assessment: semi-structured interview 40%, design of survey 40%, research proposal 20%.
This subject introduces students to health research methodology. Topics include formulating a research question, conducting a literature review and writing a research proposal. Students will acquire skills in interviewing, survey design and appropriate methods of qualitative and quantitative analysis. Ethical issues such as informed consent and confidentiality will be addressed.
Textbook:
Kellehear, A, *The Unobtrusive Researcher: A Guide to Methods*, Allen and Unwin, Sydney, 1993
May, T, *Social Research: Issues, Methods and Process*, Open University Press, Birmingham, 1993.
Book of readings.
Co-ordinator: Dr L Harrison.

GHMD985 Environmental Epidemiology

Spring session, 6 credit points (2 hrs).
Co-requisite: GHMD904.
Assessment: 3 essays and 1 short research report based on a computer practice and a seminar presentation of these results.
The course will consist of a 4 part computer practice to be conducted in teams of 2 students. The practice concerns a case of a local environmental contamination and the methods to investigate the situation and its health effects. The student will be placed in the situation of a local public health official with a limited financial budget and many options for research. Primary investigation, risk evaluation, potential study designs and actual study analysis will be covered. Presenting the results to a critical audience will be simulated in the final presentation.
Textbook: to be advised.
Co-ordinator: Dr I A Kreis.

GHMD986 Environmental Health

Autumn session, 6 credit points.
The course will cover various cases studies in environmental health where the

students will take an active part in presenting some of these cases. The course will consist of lectures in which some of the theories and internationally relevant cases are presented. In the seminars the students will present cases they are working on or planning to and aspects related to these cases will be discussed.
Textbook: to be advised.
Co-ordinator: Dr I A Kreis.

GHMD987 Risk Assessment

Autumn session; 6 credit points.
Pre-requisite: GHMD904.
This course will address issues related to concepts of risk, risk modelling and setting guidelines for exposure and acceptable risks. The implications for management of risk, research and policy will be addressed. The emphasis will be on environmental issues related to risk to health.
Textbook: to be advised.
Co-ordinator: Associate Professor P Ricci.

GHMD997 Major Project

24 credit points.
The major project forms the main problem-oriented component of the course. It is an individual endeavour under supervision. The candidate is encouraged to research a contemporary issue in their area of specialisation. It is expected that there be both a substantive theoretical and empirical content to the project. A series of seminars provides a structured and supervised setting for the development of the project proposal.
Textbook:
Polgar, S and Thomas, S, *Introduction to Research in Health Sciences*, Churchill Livingstone, UK, 1991.
Co-ordinator: Dr I A Kreis.

GHMD998 Thesis

36 credit points.
Co-ordinator: Associate Professor R D Harris.

GHMD999 Major Thesis

Co-ordinator: Associate Professor R D Harris.

FACULTY OF
INFORMATICS

FACULTY OF INFORMATICS

FACULTY OFFICE

Dean: Professor David A Griffiths

Sub Dean: Dr Grahame Morris

Faculty Officer: Mr David McDonald

(042) 21 3814

Administrative Assistants: Mrs Gina Portscher
Ms Christine Bray

(042) 21 3843

MEMBERSHIP

The Faculty of Informatics is made up of the following Departments:

Applied Statistics
Computer Science
Electrical and Computer Engineering
Information and Communication Technology
Mathematics

RESEARCH COURSES AVAILABLE

The Faculty offers Honours Master of Information Technology and Communication, Honours Master of Engineering, Honours Master of Science and Doctor of Philosophy degrees by research.

POSTGRADUATE PROGRAMS

Major coursework programs are available in the Faculty in the following areas:

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FULL TIME STAFF**Dean**

David A Griffiths, BSc UNSW, DPhil Oxf

Sub-Dean

Grahame Morris, BSc N'cle (NSW), PhD UNSW

Faculty Officer

David McDonald, BA Macq

Administrative Assistant

Gina Portscher

DEPARTMENT OF APPLIED STATISTICS**Departmental Head**

John C W Rayner, MA Syd, PhD

Professor of Statistics

David A Griffiths, BSc UNSW, DPhil Oxf

Senior Lecturers

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Chandra M Gulati, MA Delhi, MS New Mexico State, PhD Carnegie Mellon

Kenneth G Russell, BA Macq, MStat PhD UNSW

David G Steel, BSc Adel, MSc ANU, PhD S'ton

Associate Lecturer

Janette Green, BSc(Hons) UNSW

Lecturer

Yan-Xia Lin, BSc Fujian NU (China), MMath Jordan, PhD ANU

Administrative Assistant

Kerrie Gamble

DEPARTMENT OF COMPUTER SCIENCE**Departmental Head and Director of****Centre for Computer Security Research**

Jennifer Seberry, BSc UNSW, MSc PhD LaT FIMA, FACS, FTICA, CMATH, MIEEE, MACM, MIACR

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Neil A B Gray, BSc Imperial, MSc Dip NA and CompSc PhD Cantab

Josef Pieprzyk, MSc (EE) Bydgoszcz, MSc (Maths) Torun, PhD Warsaw, MIACR

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John A Fulcher, BE Q'ld, MSc LaT, MIEEE

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Reihaneh Safavi-Naini, BSc(EE) MSc(EE) Tehran, PhD Waterloo, SMIEE, MIEEE, MACM, MIACR

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Shane Richards, BCompSc

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David Wilson, BMath, MSc

Research Associate

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Research Assistant

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Computer Systems Officer

Michael J Milway, BE Monash, DipCompSci

Senior Technical Officer

Les Ohlbach

Administrative Assistants

Lyn Nicholson

Margot Hall

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING**Professor of Electrical Engineering**

Christopher D Cook, BSc BE Adel, PhD UNSW, FIEAust, CPEng

Professor of Telecommunications Engineering

Gary J Anido, BE PhD UNSW, MIEEE

Associate Professors

Victor J Gosbell, BSc BE PhD Syd, FIEAust, MIEEE, CPEng

Frank J Paolori, BSc PhD Syd, FIEAust, MIEEE, MAPS, CPEng

Senior Lecturers

HW Peter Beadle, BSc PhD Syd, MACM

Joe F Chicharo, BE PhD, MIEEE

Fazel Naghdy, BSc Tehran, MSc PhD Brad, MIEE CEng

Golshah Naghdy, BSc Tehran, MPhil Brad, PhD Portsmouth, MIEE, CEng

Don Platt, BSc BE UNSW, PhD, MIEEE

Ara Samouelian, BE Syd, ME UNSW, MIEEE

Geoffrey W Trott, BSc BE Adel, PhD Alta, MIEEE, MACS

Lecturers

David J Atkinson, BE, MIEEE

Ian S Burnett, BSc MEng PhD Bath, AMIEE, MIEEE

Parviz Doulai, BSc(Eng) Tabriz, MSc Brad, PhD Q'ld, MIEEE, MIEAust, CPEng

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Computer Systems Officer

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Maree J Fryer, BA

Administrative Assistants

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Helen Whiter

DEPARTMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY**Departmental Head and Professor**

Joan A Cooper, BMath PhD N'cle (NSW), FTICA

Senior Lecturer

Dr Leone Dunn

BA(Hons), MA WA, PhD Qld

Lecturers

Carole Alcock, BA Q'ld, GradDipLib, AALIA

Anthony Dean, BEd CSU M Litt UNE

Richard A Joseph, BSc Griffith, MSc Manc, PhD

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Associate Lecturer

David Bomba, BInfoTech

Administrative Officer

Sonia Jennings, DipTeachWIE

Administrative Assistant

Karen Williams

DEPARTMENT OF MATHEMATICS**Departmental Head and Professor of****Applied Mathematics**

Philip Broadbridge, BSc PhD Adel, DipEd Tas

Professor of Mathematics

Sidney A Morris, BSc Qld, PhD Flin, FIMA, CMATH, CompIEAust

Associate Professors

Martin W Bunder, BSc UNSW, MA NE, PhD Amst

Desmond J Clarke, BSc WA, MSc Adel, PhD UNSW, MAGU

James M Hill, BSc PhD DSc Q'ld

Philip G Laird, MSc Well and ANU, PhD Calg

Rodney V Nilsen, BSc Tas, MSc PhD Flin

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Grahame Morris, BSc *N'cle (NSW)*, PhD
UNSW

Frank P Prokop, BS MA *Detroit*, PhD

Graham H Williams, BSc PhD *Adel*,
DipCompStud *Melb*

Song Ping Zhu, BS *Huazhong (China)*, MSE
PhD MS *Michigan*

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Xiao-Ping Lu, BE *Beijing*, MSE PhD *Mich*

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Peter Nickolas, BMath *N'cle*, PhD *UNSW*,
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Annette L Worthy, BSc *UNSW*, PhD

Associate Lecturers

Vladimir Belov, BSc, MSc, PhD *Novosibirsk*
(*Russia*)

Maureen Edwards BMath(Hons)

Joanna Goard, BMath

Carolyn E McPhail, BMath, DipEd

Research Fellows

Danny Arrigo, BMath MMath *Waterloo*,
PhD *Georgia IT*

Administrative Assistants

Carolyn Silveri

Paula Madden

**FACULTY VISITING
COMMITTEE**

Dr D Cooper, Chief, CSIRO Division of
Radiophysics

Mr R F Evans, Chief Engineer, Engineering
Technology, BHP Slab and Plate
Products Division

Dr J Gray, Manager, Quantitative Research,
AMP Investments Australia Ltd

Mr J Mann, Regional Manager, BHP
Information Technology (Chair)

Dr D Nicholls, Dean, Faculty of Economics
and Commerce, Australian National
University

Mr J Park, Siemens Limited

Dr P Pentony, Assistant Statistician,
Australian Bureau of Statistics

Mr I Robinson, Engineering Operations
Manager, Illawarra Electricity

Mr A Whitworth, Systems Consultant,
Keycorp Ltd

Ms J Wright, Director of Public Libraries
and Extension Services, State Library of
NSW

APPLIED STATISTICS

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Science by Research or Coursework
3. Master of Statistics
4. Graduate Diploma in Statistics

POSTGRADUATE PROGRAM

Applied Statistics

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master of Science degree by research and the Doctor of Philosophy degree:

Epidemiology
 Experimental design
 Goodness of fit
 Image analysis
 Multivariate analysis
 Population dynamics and plant growth
 Quasi-likelihood
 Sample survey design and methodology
 Statistical decision theory
 Statistical quality control

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN APPLIED STATISTICS

leading to the degree of Honours Master of Science or Master of Statistics or the Graduate Diploma in Statistics.

Number	Subject	Credit Points
<i>Core</i>		
<i>Either</i>		
STAT990	Minor Project	6
<i>or</i>		
STAT991	Project	12
<i>or</i>		
STAT992	Thesis	36
<i>or</i>		
STAT993	Major Thesis	48
<i>Electives</i>		
STAT901	Modern Inference	6
STAT902	Advanced Data Analysis	6
STAT903	Survey Design and Analysis	6
STAT904	Statistical Consulting	6
STAT905	Time Series*	6
STAT906	Experimental Design*	6
STAT941	Statistical Quality Control 1	6
STAT942	Design & Analysis for Quality Control	6
STAT944	Regression and Observational Studies*	6
STAT971	Preliminary Topics in Statistics A	6
STAT972	Preliminary Topics in Statistics B	6
STAT981	Advanced Topics in Statistics A	6
STAT982	Advanced Topics in Statistics B	6
STAT983	Advanced Topics in Statistics C	6

* Not on offer in 1996.

For further details, see *Course Requirements* below.

COURSE REQUIREMENTS

1. DOCTOR OF PHILOSOPHY

Candidates for this degree enrol in STAT993.

2. HONOURS MASTER OF SCIENCE (in STATISTICS)

The degree of Honours Master of Science shall be subject to the University Course Rules for the award of the degree of Honours Master together with the following conditions.

- (1) A candidate shall undertake research, or a course of graduate studies and research, normally chosen from one of the postgraduate programs offered by the Department of Applied Statistics.
- (2) Entry to the Honours Master of Science will normally be from an Honours bachelor degree in Statistics at a standard of Class II, Division 2 or higher. Entry may also be approved for candidates with the qualification of Master of Statistics on the recommendation of the Head of the Department of Applied Statistics.
- (3) The Honours Master of Science will normally occupy two sessions of full-

time study or four sessions of part-time study, and requires satisfactory completion of 900 level subjects to the value of at least 48 credit points chosen from one of the postgraduate programs offered by the Department of Applied Statistics including either:

- (a) the subject STAT993 (48 credit points), *or*
- (b) the subject STAT992 (36 credit points) and other 900 level subjects to the value of at least 12 credit points approved by the Head of Department. In exceptional circumstances, and subject to approval of the Head of the Department, subjects with the value of

at most 6 credit points from the program may be replaced by any other 900 level subjects with value of at least 6 credit points.

- (4) The registration of a candidate will be subject to termination if that candidate fails subjects to the total value of 18 or more credit points.
- (5) Each candidate shall have a supervisor appointed on the recommendation of the Head of the Department of Applied Statistics.
- (6) Before the award of Honours Master of Science is conferred on a candidate who holds a testamur of the University of Wollongong for the degree of Master of Statistics, the candidate shall surrender the testamur and the corresponding rights to the degree of Master of Statistics.

3. MASTER OF STATISTICS

The degree of Master of Statistics shall be subject to the University Course Rules for the award of the degree of Master together with the following conditions.

- (1) A candidate shall undertake a course of graduate studies, normally chosen from the graduate Statistics subjects offered by the Department of Applied Statistics.
- (2) Entry to the Master of Statistics will normally be from a pass degree with an appropriate 3 year sequence in Statistics, or an appropriate Graduate Diploma, or, subject to the approval of Council on the recommendation of the Head of Department, from a degree or diploma containing substantial study in an appropriate discipline.
- (3) The Master of Statistics will normally occupy two sessions of full-time study or four sessions of part-time study, and requires satisfactory completion of 900 level Statistics subjects to the value of at least 48 credit points approved by the Head of Department. The subject STAT990 must be included, except that with the approval of the Head of the Department the subject STAT991 may replace STAT990. In some circumstances, and subject to approval of the Head of the Department, Statistics subjects with the value of at most 12 credit points may be replaced by other 900 level subjects with the same or greater credit point value.
- (4) The registration of a candidate will be subject to termination if that candidate fails subjects to the total value of 18 or more credit points.
- (5) Each candidate shall have a supervisor appointed on the recommendation of the Head of the Department of Applied Statistics.

Satisfactory completion of the Master of Statistics permits registration for HONOURS MASTER OF SCIENCE (in the Department of Applied Statistics).

4. GRADUATE DIPLOMA IN STATISTICS

In addition to the University's Rules for Graduate Diplomas, candidates for the Graduate Diploma in Statistics shall:

- (a) complete Statistics subjects to a value

not less than 36 credit points from those listed in the schedule of the BMath and MStat, at least 24 credit points being for subjects at the 300-level or 900-level. With approval of the Departmental Head STAT949 may be included instead of a 100 or 200 level subject;

- (b) not include in the diploma program subjects which, in the opinion of the Departmental Head, are equivalent in contents to those for which credit has already been obtained towards some other degree or diploma;
- (c) have their programs approved by the Departmental Head before enrolling.

Satisfactory completion of the Graduate Diploma in Statistics permits registration for MASTER OF STATISTICS.

SUBJECT DESCRIPTIONS

Subjects

For further details, see the Head of Department.

Textbooks

Students will be advised on the appropriate texts for each subject in the first lecture of the subject. In all cases, the lecturer should be consulted before textbooks are purchased.

Credit Points

All subjects listed below, with the exception of STAT991, STAT992 and STAT993, have a credit point value of 6.

Contact Hours

All subjects listed below involve at least one contact hour per week for both sessions, or its equivalent.

Method of Assessment

All 900-level subjects will be assessed by final examinations, or final examinations and limited assignments.

STAT901 Modern Inference

Assessment: examination 75%, assignments 25%.

Replication, jackknife, bootstrapping; Cross-validation; Non-parametric confidence intervals; Permutation tests; Monte-Carlo tests; Robust estimation.

Co-ordinator: Dr P Davy.

STAT902 Advanced Data Analysis

Assessment: examination 75%, assignments 25%.

A selection of topics from: Regression model building and checking; Causal modelling; Cluster analysis; Multi-dimensional scaling; Log-linear models; Generalized linear models; Time series methods; Principal components, Factor analysis; Canonical correlations; Statistical computer packages.

Co-ordinator: Professor D Griffiths.

STAT903 Survey Design and Analysis

Assessment: examination 75%, assignments 25%.

Survey methods - survey development; Cluster and multi-stage sampling; Repeated and longitudinal surveys; Non-sampling errors; General methods of variance estimation; Small area estimation; Non-

response adjustment; Analysis of complex survey data; Report writing.

Co-ordinator: Dr D Steel.

STAT904 Statistical Consulting

Assessment: examination 75%, assignments 25%.

Project management; Client liaison; Problem identification; Consulting ethics and principles; Sources of data; Choosing design and analysis procedures; Common problems in statistical consulting; Setting sample size -power calculations; Consulting case studies; Report writing.

Co-ordinator: Dr K Russell.

STAT905 Time Series*

Assessment: examination 75%, assignments 25%.

Prediction theory; Linear models - identification, estimation, diagnostic checking; multivariate models.

Co-ordinator: Dr C Gulati.

STAT906 Experimental Design*

Assessment: examination 75%, assignments 25%.

The general linear model; Complete and incomplete block designs; The construction of optimal block designs; Factorial designs and fractional factorial designs; Response surface methodology.

Co-ordinator: Dr K Russell.

STAT941 Statistical Quality Control 1

Assessment: examination 75%, assignments 25%.

Why control charts?; Level of variability; Differences between specification limits and control limits; Deming's philosophy; Quality circles; Cause and effect diagrams; Pareto diagrams; Control charts; Benefits of using control charts; Shewhart charts, such as x-charts, c-charts, p-charts, R-charts, s-charts; Cumulative sum (CUSUM) control charts; Exponentially weighted moving averages; Moving average and moving range charts; Average run length of the above mentioned control charts; Comparison of charting methods; Process capability indices; Determining process capability using control charts; Some case studies.

Co-ordinator: Dr C Gulati.

STAT942 Design and Analysis for Quality Control

Assessment: examination 75%, assignments 25%.

Experimental design; Principles of design; Importance of randomisation; Randomised block designs; Fractional designs; Fractional factorials; Taguchi's philosophy and how it relates to experimental design; Introduction to variance components; Fixed models as opposed to random (mixed) models; Estimation of variance components; Evolutionary processes. Co-ordinator: Dr Y X Lin.

STAT944 Observational Studies and Regression Techniques*

Assessment: examination 75%, assignments 25%.

Linear regression; Regression diagnostics; Multicollinearity; Residual analysis; Response surface methodology; Logistic

*Not on offer in 1996.

regression; Planning of observational studies; Effects of matching and covariates as controls. Concepts of confounding.
Co-ordinator: Dr C Gulati.

STAT992 Thesis
36 credit points.

STAT993 Major Thesis
48 credit points per year.

STAT949 Statistical Thinking
6 credit points.

Assessment: assignments and tutorial work 50%, examination 50%.

The importance of variability; Why statistics?; Statistics and quality; Exploratory data analysis; Numerical and graphical summaries; Measures of location and spread; Elementary probability; The Binomial; Poisson and Normal Distributions; The role of the Central Limit Theorem in statistics; The nature and purpose of statistical inference; Point estimation and confidence intervals; Concepts of hypothesis testing; Simulation techniques; Sampling methods; Elementary control charts.

Co-ordinator: Professor D Griffiths.

STAT971 Preliminary Topics in Statistics A

Assessment: examination 75%, assignments 25%.

A selection of topics will be available from time to time to serve as preliminary material in the Master of Statistics.

Co-ordinator: Head of Department.

STAT972 Preliminary Topics in Statistics B

Assessment: examination 75%, assignments 25%.

A selection of topics will be available from time to time to serve as preliminary material in the Master of Statistics.

Co-ordinator: Head of Department.

STAT981 Advanced Topics in Statistics A

Assessment: examination 75%, assignments 25%.

A selection of advanced topics will be available from the research interests of current members of staff and from visitors to the Department of Applied Statistics.

Co-ordinator: Head of Department.

STAT982 Advanced Topics in Statistics B

Assessment: examination 75%, assignments 25%.

A selection of advanced topics will be available from the research interests of current members of staff, and from visitors to the Department of Applied Statistics.

Co-ordinator: Head of Department.

STAT983 Advanced Topics in Statistics C

Assessment: examination 75%, assignments 25%.

A selection of advanced topics will be available from the research interests of current members of staff, and from visitors to the Department of Applied Statistics.

Co-ordinator: Head of Department.

STAT990 Minor Project
6 credit points.

STAT991 Project
12 credit points.

COMPUTER SCIENCE

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Science by Research or Coursework
3. Master of Computer Science
4. Graduate Diploma in Science (in Computing)

POSTGRADUATE PROGRAMS

Computer Security
Software Engineering
Intelligent Systems

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master of Science degree by research and the Doctor of Philosophy degree:

Computer Security
Communication security
Cryptographic primitive design
Access control
Security protocols
Authentication
Network security
Data and system integrity
Distributed systems security

Software Engineering
Graphical user interfaces
Object-oriented programming
Database management systems
Computer-aided learning
Science of computer programming

Intelligent Systems
Artificial intelligence
Expert systems
Robotics
Neural networks

Algorithms
Combinatorial designs
Hadamard matrices and Bent functions
Error correction codes

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN COMPUTER SECURITY

leading to the Honours Master of Science.

Number	Subject	Credit Points
CSCI943	Advanced Topics in Computer Science C	6
CSCI965	Design and Analysis of Algorithms	6
CSCI966	Information Theory and Coding	6
CSCI967	Complexity Theory	6
CSCI971	Computer Security	6

plus subjects from the other Programs.

For further details, see *Course Requirements* below.

POSTGRADUATE PROGRAM IN SOFTWARE ENGINEERING

leading to the Honours Master of Science.

Number	Subject	Credit Points
CSCI941	Advanced Topics in Computer Science A	6
CSCI945	Parallel Architectures and Algorithms	6
CSCI955	Computer Networks	6
CSCI957	Advanced Topics in Database Management	6
CSCI963	Advanced Computer Graphics	6
CSCI973	Computer Assisted Learning	6
CSCI974	Systems Analysis	6

plus subjects from the other Programs.

For further details, see *Course Requirements* below.

POSTGRADUATE PROGRAM IN INTELLIGENT SYSTEMS

leading to the Honours Master of Science.

Number	Subject	Credit Points
CSCI942	Advanced Topics in Computer Science B	6
CSCI944	Robot Perception and Planning	6
CSCI954	Artificial Intelligence	6
CSCI956	Robot Modelling	6
CSCI962	Logic Programming	6
CSCI964	Neural Computing	6

*plus subjects from the other Programs.*For further details, see *Course Requirements* below.**OTHER POSTGRADUATE SUBJECTS**

Number	Subject	Credit Points
CSCI980	Preliminary Topics in Computer Science A	6
CSCI981	Preliminary Topics in Computer Science B	6
CSCI982	Preliminary Topics in Computer Science C	6
CSCI983	Preliminary Topics in Computer Science D	6
CSCI991	Project	12
CSCI992	Minor Thesis	24
CSCI993	Thesis	48

COURSE REQUIREMENTS**1. DOCTOR OF PHILOSOPHY**

Candidates for this degree enrol in CSCI993.

2. HONOURS MASTER OF SCIENCE

The degree of Honours Master of Science shall be subject to the University Course Rules for the award of the degree of Honours Master, together with the following conditions.

- (1) A candidate shall undertake research, or a course of graduate studies and research, normally chosen from the graduate subjects offered by the Department of Computer Science.
- (2) Entry to the Honours Master of Science will normally be from an Honours bachelor degree in Computer Science at a standard of Class II, Division 2 or higher. Entry may also be approved for candidates with the qualification of Master of Computer Science on the recommendation of the Head of the Department of Computer Science.
- (3) The Honours Master of Science will normally occupy two sessions of full-time study or four sessions of part-time study, and requires satisfactory completion of 900 level subjects to the value of at least 48 credit points, including either:
 - (a) the subject CSCI993 (48 credit points), or
 - (b) the subject CSCI992 (24 credit points) and other 900 level subjects (except subjects from the CSCI980 suite of subjects) to the value of at least 24 credit points approved by the Head of Department. In exceptional circumstances, and subject to approval of the Head of the

Department, subjects with the value of at most 6 credit points may be replaced by 900 level subjects with value of at least 6 credit points offered by Departments other than the Department of Computer Science.

- (4) The registration of a candidate will be subject to termination if that candidate fails subjects to the total value of 18 or more credit points.
- (5) Each candidate shall have a supervisor appointed on the recommendation of the Head of the Department of Computer Science.
- (6) Before the award of Honours Master of Science is conferred on a candidate who holds a testamur of the University of Wollongong for the degree of Master of Computer Science, the candidate shall surrender the testamur and the corresponding rights to the degree of Master of Computer Science.

3. MASTER OF COMPUTER SCIENCE

The Master of Computer Science is designed to provide advanced studies in Computer Science at a professional level to graduates of this or another university who have some background in Computer Science.

The Master of Computer Science shall be subject to the University Course Rules for the award of the degree of Master, together with the following conditions:

- (1) A candidate shall undertake a course of graduate studies and research, normally chosen from the graduate subjects offered by the Department of Computer Science.
- (2) Entry to the Master of Computer Science will normally be from a pass degree with an appropriate sequence

in Computer Science, or, subject to the approval of Council on the recommendation of the Head of Department, from a degree or diploma containing substantial study in an appropriate discipline. The expected level of Computer Science background will be equivalent to at least CSCI203 Computer Science IIB.

- (3) The Master of Computer Science will normally occupy two sessions of full-time study or four sessions of part-time study, and requires satisfactory completion of 900 level subjects to the value of at least 48 credit points, including the subject CSCI991 (12 credit points) and other 900 level subjects to the value of at least 36 credit points approved by the Head of Department. In exceptional circumstances, and subject to approval of the Head of the Department, subjects with the value of at most 12 credit points, other than CSCI991, may be replaced by 900 level subjects with value of at least 12 credit points offered by Departments other than the Department of Computer Science.
- (4) The registration of a candidate will be subject to termination if that candidate fails subjects to the total value of 18 or more credit points.
- (5) Each candidate shall have a supervisor appointed on the recommendation of the Head of the Department of Computer Science.

4. GRADUATE DIPLOMA IN SCIENCE (IN COMPUTING)

This course is intended for graduates in disciplines with no Computer Science background. The course consists of a fixed program of first and second year undergraduate subjects from the Department of Computer Science, and can only be taken part-time, because of the pre-

requisite relationships between the subjects.

Prospective candidates who have already satisfactorily completed more than one of the prescribed subjects, or equivalent, will not be permitted to register for this course. Such applicants should register for the Bachelor of Computer Science or the Master of Computer Science. However, substitution of one of these subjects by another subject offered by the Department of Computer Science may be permitted, with the approval of the Head of Department.

The Graduate Diploma in Science (in Computing) shall be subject to the University Rules for the award of Graduate Diplomas together with the following conditions:

- (1) The Graduate Diploma in Science (in Computing) is a coherent program of study with the value of at least 48 credit points which requires the satisfactory completion of each of the subjects:
 - CSCI100 Computing Studies;
 - CSCI111 Computer Science 1A;
 - CSCI121 Computer Science 1B;
 - CSCI131 Introduction to Computer Systems;
 - CSCI202 Computer Science IIA;
 - CSCI203 Computer Science IIB;
 - CSCI1212 Operating Systems; and
 - CSCI235 Databases.
 with the exception that an alternative Computer Science subject from the General Schedule may replace one of the above with the approval of the Head of Department.
- (2) A candidate who accumulates failures in subjects to the value of 18 or more credit points shall be required to show cause why enrolment should be allowed to continue.

SUBJECT DESCRIPTIONS

Assessment

Where not otherwise specifically stated, assessment will be by a combination of assignments, seminar presentations, and final examination. Precise details will be announced in the first lecture for each subject.

CSCI941 Advanced Topics in Computer Science A

Autumn or Spring session; 6 credit points (2 hrs per wk).

Topics will be selected from those areas of computing science in which visiting staff members of the Department are engaged in active research.

Co-ordinator: to be advised.

CSCI942 Advanced Topics in Computer Science B

Autumn or Spring session; 6 credit points (2 hrs per wk).

Topics will be selected from those areas of computing science in which visiting staff members of the Department are engaged in active research.

Co-ordinator: to be advised.

CSCI943 Advanced Topics in Computer Science C

Autumn or Spring session; 6 credit points (2 hrs per wk).

Topics will be selected from those areas of computing science in which visiting staff members of the Department are engaged in active research.

Co-ordinator: to be advised.

CSCI944 Perception and Planning

Autumn or Spring session; 6 credit points (2 hrs per wk).

Perception involves the organisation of data to achieve understanding of the environment. It facilitates planning, which involves: developing a model of the problem and inferring from that model the consequences of current or proposed actions. In robotics, we collect the data with sensors and external sensors. Internal sensors are the sensors used to measure robot parameters relative to the reference frame of the robot. Robot parameters include: joint angle, joint motion, linkage deflection, grip force and joint torque. External sensors are used to measure the environment. External sensing includes touch, range finding and vision. Once the parameters have been measured, the data must be fused into a coherent model of the environment which can be used for planning.

Co-ordinator: Dr P McKerrow.

CSCI945 Parallel Architectures and Algorithms

Autumn or Spring session; 6 credit points (2 hrs per wk).

The immense computational power required for many modern applications has led to the development of both hardware and software techniques to harness the capabilities of complex multi-processor machines. The subject concentrates on defining the many different approaches adopted to the construction of parallel algorithms and architectures. Emphasis is placed on the suitability of each paradigm to potential and actual application areas. This is developed both in theory and practice, with practical work based on a network of transputers running occam.

Co-ordinator: Mr J Fulcher.

CSCI954 Artificial Intelligence Programming

Autumn or Spring session; 6 credit points (2 hrs per wk).

All languages LISP and Prolog. Knowledge Representation and acquisition. Expert Systems. Understanding Natural Language. Learning. Theorem-Proving.

Co-ordinator: Dr M Balachandran.

CSCI955 Computer Networks

Autumn or Spring session; 6 credit points (2 hrs per wk).

Introduction to computer communications networks and data transmission systems. Circuit-switching, packet-switching and, packet-broadcasting. Topologies. Research local area networks and standards. Higher level protocols.

Co-ordinator: Professor G J Anido.

CSCI956 Robot Modelling

Autumn or Spring session; 6 credit points (2 hrs per wk).

Survey of robot systems and their applications. Tactile and visual sensors. Three-dimensional interpretation and geometric representation. Programming languages for robotics.

Co-ordinator: Dr A Zelinsky.

CSCI957 Advanced Topics in Database Management

Autumn or Spring session; 6 credit points (2 hrs per wk).

The objective of this course is to study the implementation aspects of a Database Management System *DBMS*, i.e. the software that handles all access to the database. A *DBMS* runs on top of an operating system and complements and/or duplicates many operating system functions. The functional components discussed in the course include the file manager, the buffer manager, the query optimizer, the recovery manager, and the concurrency controller.

Co-ordinator: Dr J Getta.

CSCI962 Logic Programming

Autumn or Spring session; 6 credit points (2 hrs per wk).

The guiding ideal of logic programming is that a program should be a logical theory and that the processing of a query by a logic programming system should be an attempt to prove a theorem in that theory. If the ideal were realised, logic programs would have the clear and precise semantics available for logical theories, and the imposition of control over the execution of queries would be managed entirely by the implementation. Actual logic programming languages, the most widely known of which is Prolog, fall well short of the ideal, in that it is typically necessary for programs to contain both non-logical code and control information.

This subject covers the theoretical and practical issues raised by the above description, and includes most or all of the following topics: propositional calculus; predicate calculus; model-theoretic semantics; resolution; logic programming and Prolog (theory, applications, extensions, integration with other programming paradigms and implementation).

References:

- Amble, T, *Logic Programming and Knowledge Engineering*, Addison-Wesley, 1987.
- Clocksin, W F and Mellish, C S, *Programming in Prolog*, 2nd ed, Springer-Verlag, 1984.
- Lloyd, J W, *Foundations of Logic Programming*, 2nd ed, Springer-Verlag, 1987.
- Mendelson, E, *Introduction to Mathematical Logic*, 3rd ed, Wadsworth and Brooks/Cole, 1987.
- O'Keefe, R A, *The Craft of Prolog*, MIT Press, Cambridge, Mass, 1990.
- Sterling, L and Shapiro, E, *The Art of Prolog*, MIT Press, 1986.

Co-ordinator: to be advised.

CSCI963 Advanced Computer Graphics

Autumn or Spring session; 6 credit points (2 hrs per wk).

The representation of three-dimensional scenes by continuous tone images has advanced significantly over the last 20 years. One of the major advances in

imaging has been the use of ray tracing to produce highly realistic pictures containing such features as shadows, reflection, refraction, texturing, penumbras and motion blur. These techniques can be implemented in an object-oriented fashion using a constructive solid geometry approach. The purpose of this course is to acquaint the student with the current status of ray tracing techniques and their subsequent implementation into a CSG ray tracer.

Co-ordinator: Mr P Castle.

CSCI964 Neural Computing

Autumn or Spring session; 6 credit points (2 hrs per wk).

Students will become familiar with the structures, algorithms and capabilities of neural networks. Topics covered will include: The biological neuron- cell, synapses, dendrites, axon, threshold, firing rate; Origins of neural computing: Hebbian learning, McCulloch & Pitts simple threshold model, perceptron, adaline; Multi-layer feedforward networks (multi-layer perceptron) & error backpropagation, gradient descent in weight space, escape from local minima, convergence; Supervised learning/training; Later refinements- counter-propagation, Boltzmann machines; Hopfield networks, symmetrical weights, training, convergence, Hamming nets; Characteristics of neural nets- long-term memory (connections), short-term memory (input firing pattern), adaptive weights, learning ability, generalisation, noise- and fault-tolerance; Hardware realisation- massively parallel architectures, VLSI (digital & analog), optical. Comparison/contrast of neural networks versus digital computers; Connectionism versus traditional (rule-based, heuristic) artificial intelligence; Applications of neural nets- pattern recognition (handwriting, speech, image). Laboratory exercises and assignments will be conducted using public domain neural network simulators on the IBM PC, Apple Macintosh and Unix.

References:

- Aleksander & Morton, *An Introduction to Neural Computing* Chapman & Hall, 1990.
 Byte (special issue on Neural Networks), Vol 14, No 8, August 1989.
 Beale & Jackson, *Neural Computing: An Introduction*, Adam Hilger, 1990.
IEEE Spectrum (special issue on Artificial Neural Networks), Vol 21, No 3, March 1988.
 Simpson, P K, *Artificial Neural Systems*, Pergamon, 1990.
 Lippmann, R P, *An Introduction to Computing with Neural Nets*, *IEEE ASSP Magazine*, April 1987, pp 4-22.
 Co-ordinator: Mr J Fulcher.

CSCI965 Design and Analysis of Algorithms

Autumn or Spring session; 6 credit points (2 hrs per wk).

Pre-requisite: CSCI202, CSCI203, Discrete Math or equivalent.

Assessment 5 assignments each worth 6%, final examination 70%.

An algorithm is "any special method of solving a certain kind of problem" (Webster's Dictionary). The study of algorithms is the heart of computer science, and it gives answers to the following two fundamental questions: (a) how to find an efficient algorithm for solving a given problem, and

(b) once the algorithm is found, how to compare its efficiency with other existing algorithms.

The objective of this subject is to develop the knowledge, skills and techniques for designing and analysing computer algorithms. Topics to be studied include:

- (1) design of algorithms, which includes divide and conquer, the greedy method, dynamic programming, backtracking, randomised algorithms, hill climbing, simulated annealing.
- (2) analysis and comparison of algorithms, which includes models of computation, time complexity and space cost.
- (3) applications of the techniques which include the FFT, polynomials, matrix operation, computational geometry, number theoretical algorithms.

References:

- Cormen, T H, Leiserson, C E & Rivest, R L, *Introduction to Algorithms*, MIT Press and McGraw-Hill, 1990.
 Brassard, G and Bratley, P, *Algorithmics: Theory and Practice*, Prentice-Hall, 1988.
 Aho, A V, Hopcroft, J E and Ullman, J D, *The Design and Analysis of Computer Algorithms*, Addison-Wesley Publishing Company, 1974.
 Greene, D H and Knuth, D E, *Mathematics for the Analysis of Algorithms*, Birkhauser, 1982.
 Hofri, M, *Probabilistic Analysis of Algorithms: on Computing Methodologies for Computer Algorithms Performance Evaluation*, Springer-Verlag, 1987.
 Knuth, D E, *The Art of Computer Programming*, Vol 1 (Fundamental algorithms), Vol 2 (Seminumerical algorithms) and Vol 3 (Sorting and Searching), Addison-Wesley Publishing Company, 1973, 1981.
 Co-ordinator: Professor J Seberry.

CSCI966 Information Theory and Coding

Autumn or Spring session; 6 credit points (2 hrs per wk).

Pre-requisite: CSCI202, CSCI203, Discrete Maths (including probability).

Assessment: 3 assignments, each worth 10%, final examination 70%.

Transmission of data over a channel or its storage in any kind of memory is subject to data corruption due to noise addition. In late 1940s Shannon introduced channel capacity as the fundamental bound on the rate of error free data transmission. In this course basic concepts of information theory such as entropy and mutual information are studied and are used to define and calculate capacity of a channel (communication or storage). This is followed by a study of various kinds of error detecting/correcting codes which provide the required protection against noise and allow efficient coding/decoding.

Topics include:

- (1) entropy, joint entropy, conditional entropy;
- (2) relative entropy and mutual information;
- (3) asymptotic equipartition property (AEP);
- (4) channel capacity;
- (5) linear codes and their fundamental parameters;
- (6) cyclic codes and their coding/decoding using shift registers;
- (7) BCH codes;

(8) Reed-Solomon codes.

References:

- Cover, T and Thomas, J, *Elements of Information Theory*, Wiley 1991.
 MacWilliams, F J and Sloane, N J, *The Theory of Error-Correcting Codes*, North-Holland Publishing Company, 1990.
 Seberry, J and Pieprzyk, J, *Cryptography: An Introduction to Computer Security*, Prentice Hall, Sydney, 1990.
 Berlekamp, E R, *Algebraic Coding Theory*, McGraw-Hill, New York, 1968.
 Street, A and Wallis, W D, *Combinatorics: A First Course*, CBRC, Winnipeg, Canada, 1982.
 Pless, V, *Introduction to the Theory of Error-Correcting Codes*, Wiley-Interscience, New York, 1982.
 Hoffman, DG, Leonard, DA, Lidner, CC, Rodger, CA and Wall, JR, *Algebraic Coding Theory*, CBRC, Winnipeg, Canada, 1987.
 Co-ordinator: Dr R Safavi-Naini.

CSCI967 Complexity Theory

Autumn or Spring session; 6 credit points (2 hrs per wk).

Pre-requisite: CSCI203, Knowledge of Discrete Math.

Assessment: 3 assignments, each worth 10%, final examination 70%.

The aim of the course is to introduce basic notions of the complexity theory. The theory has emerged as the answer to the questions about inherent difficulty of problems.

A problem can be solved by a computer if it is possible to design an algorithm for it.

It turns out that there are problems for which it is impossible to find algorithms.

An example of such a problem is the well-known halting problem which asks if a given computer program eventually halts.

For some problems it is easy to find algorithms but they may not be efficient ones.

For example the travelling salesperson problem has resisted all attempts to find an efficient algorithm and all known algorithms are not much better than trying all possible solutions.

Complexity theory deals with problems which can be programmed and solved by computers.

As the basic model of computation, we use Turing machines.

During the course, the classes of P, NP, NPI and NP-complete will be defined.

Cook's theorem and its implications will be discussed.

We will also show some standard methods of proving the complexity of some problems.

Some applications of complexity theory will also be discussed.

References:

- Garey, M R and Johnson, D S, *Computers and Intractability: A Guide to the Theory of NP-Completeness*, WH Freeman, San Francisco, 1979.
 Co-ordinator: Associate Professor J Pieprzyk.

CSCI971 Advanced Computer Security

Autumn or Spring session; 6 credit points (2 hrs per wk).

Pre-requisite: CSCI361 Computer Security.

Assessment: seminar presentation 40%, final examination 60%.

Topics to be covered will include:

- computer crimes, legal aspects of information protection;

- mathematical methods used in cryptography, overview of selected aspects of complexity theory, information theory versus cryptography;
- review of classical ciphers;
- symmetric encryption algorithms, information access control mechanisms, secure communication protocols, public-key cryptography, authentication methods;
- applications of cryptography in computer networks and databases.

Textbooks:

Seberry, J & Pieprzyk, J *Cryptography: An Introduction to Computer Security*, Prentice-Hall, Englewood Cliffs, New Jersey, 1989.

References:

Konheim, A *Cryptography: A Primer*, Wiley, New York, 1981

Meyer, C H & Matyas, S T *Cryptography: A New Dimension in Computer Data Security*, Wiley, New York, 1982.

Co-ordinator: Professor J Seberry.

CSCI973 Computer Assisted Learning

Autumn or Spring session; 6 credit points (2 hrs per wk).

Assessment: literature review 20%, written report 20%, seminar presentation 30%, practical project 30%.

"Whenever a computer and a human interact and one of them learns something then computer assisted learning has taken place", Professor Dan Bitzer. Many claims are made for the advantages provided by computer-assisted learning. There appears to be, however, a shortfall between "dreams" and "reality". In this course students will research the current state of CAL developments, the technology available, the software tools used and the general "styles" of CAL applications. We will discuss the current state of CAL from the point of view of the inter-relationship between pedagogical theory and technological developments. Students will display their understanding of CAL by producing a short CAL sequence. Topics covered will include: What is CAL? Where is CAL used? Types of CAL material - e.g. drill and practice, tutorial, programmed instruction; Teaching a course sequence; Teaching a course; Managing a CAL environment; Features of "good" CAL; Current trends and future possibilities. Technology available eg CD ROM, videodisk, multi-media, etc. Technological feasibility and educational/social acceptance. "Authoring systems". Practical work will use Apple Macintosh and Hypercard and other available systems. Written assignments are to be word processed.

References:

Godfrey, D and Sterling, S, *The Elements of CAL: The How-To Book on Computer-Aided-Learning*, Press Porcepic, Victoria BC Canada 1982.

Romisowski, A J, *Developing Auto-Instructional Materials: From Programmed Texts to CAL and Interactive Video*, Kogan Page, London 1986.

Tawney, D A (Ed), *Learning Through Computers: An Introduction to Computer Assisted Learning in Engineering, Mathematics and the Sciences at Tertiary Level*, MacMillan, London 1979.

Co-ordinator: Dr I Pirie.

CSCI974 Systems Analysis

Autumn or Spring session; 6 credit points (2 hrs per wk).

Pre-requisite: CSCI311 Software Engineering. Assessment: three assignments each 10%, seminar presentation 10%, final examination 60%.

This course is intended to follow CSCI311 Software Engineering that introduces topics related to the development of large scale systems.

Objectives

The course concentrates on the analysis and design stages of the software implementation process, both for initial implementation, and for long term maintenance. The aim is to present an integrated view of a number of software engineering models.

Topics

Basic tools including dataflow models, entity-relationship and access and object-relationship data models, control flow and access diagrams, and event tables. Combination of basic tools into software engineering environments such as IPSEs and Quality Function Deployment (QFD) environments, together with additional process modelling and process control support tools. Case studies are based on representation large scale projects in the real time arena.

Textbooks:

Sommerville, A, *Software Engineering*, 3rd Edition, Addison-Wesley, 1989.

Rumbaugh, J, *Object-Oriented Modelling and Design*, Prentice-Hall, 1991.

Chazzi, C, *Fundamentals of Software Engineering*, Prentice-Hall, 1991.

Co-ordinator: to be advised.

CSCI980 Preliminary Topics in Computer Science A

Autumn or Spring session; 6 credit points (2 hrs per wk).

A selection of topics will be available from time to time to serve as preliminary material in the Master of Computer Science.

Co-ordinator: to be advised.

CSCI981 Preliminary Topics in Computer Science B

Autumn or Spring session; 6 credit points (2 hrs per wk).

A selection of topics will be available from time to time to serve as preliminary material in the Master of Computer Science.

Co-ordinator: to be advised.

CSCI982 Preliminary Topics in Computer Science C

Autumn or Spring session; 6 credit points (2 hrs per wk).

A selection of topics will be available from time to time to serve as preliminary material in the Master of Computer Science.

Co-ordinator: to be advised.

CSCI983 Preliminary Topics in Computer Science D

Autumn or Spring session; 6 credit points (2 hrs per wk).

A selection of topics will be available from time to time to serve as preliminary material in the Master of Computer Science.

Co-ordinator: to be advised.

CSCI991 Project

12 credit points.

CSCI992 Minor Thesis

24 credit points.

CSCI993 Thesis

48 credit points.

ELECTRICAL AND COMPUTER ENGINEERING

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Engineering by Research
3. Honours Master of Engineering in Telecommunications Engineering by Coursework/Research
4. Master of Engineering Studies
5. Graduate Certificate in Engineering (Telecommunications)

POSTGRADUATE PROGRAMS

Automation and Power Engineering
 Computer and Telecommunications Engineering
 Telecommunications Engineering

CURRENT RESEARCH AREAS

There are two major research centres within the Department. These are the Switched Networks Research Centre and the Industrial Automation Research Centre. Under these two programs, the following areas of research are available to candidates undertaking the degrees of Honours Master of Engineering by research and the Doctor of Philosophy:

Switched Networks

Antenna arrays and microwave antennas
 Coding
 Communications
 Computer networks
 Computer systems
 Digital signal processing
 Expert systems
 Microwave imaging
 Microwave heating
 Sensors and image processing
 System identification

Industrial Automation

Advanced control systems
 Computer integrated manufacturing systems
 Electric motors
 Mobile robots, navigation and control
 Power electronics
 Power system control and stability
 Robotics and sensors
 Variable speed drives

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN AUTOMATION AND POWER ENGINEERING

leading to the Master of Engineering Studies.

Number	Subject	Credit Points
<i>Core:</i>		
ELEC953	Report	12
<i>Electives* (a total of 36 credit points to be chosen from the following):</i>		
ELEC911	Choppers and Inverters	6
ELEC912	AC Converters	6
ELEC922	Industrial Design	6
ELEC924	Power Systems	6
ELEC925	Computer Applications in Power Systems	6
ELEC926	Machine Transients	6
ELEC928	Variable Speed Drives	6
ELEC943	Computer Controlled Systems	6
ELEC944	Identification and Optimum Control	6
ELEC955	Advanced Laboratory	6
ELEC970	Advanced Topics in Engineering	6
ELEC973	Advanced Robotics and Sensory Systems	6

*Only a limited number of subjects will be available in any one year. Subject to the approval of the Head of Department relevant subjects from other programs may also be taken as electives.

For further details, see *Course Descriptions* below.

POSTGRADUATE PROGRAM IN COMPUTER AND TELECOMMUNICATIONS ENGINEERING

leading to the Master of Engineering Studies.

Number	Subject	Credit Points
<i>Core:</i>		
ELEC953	Report 12	
<i>Electives* (a total of 36 credit points to be chosen from the following):</i>		
ELEC915	Advanced Logic Design	6
ELEC932	Computer Hardware Architecture	6
ELEC933	Real-time Computing	6
ELEC955	Advanced Laboratory	6
ELEC960	Telecommunication Systems	6
ELEC961	Digital Signal Processing	6
ELEC962	Analysis and Transmission of Signals	6
ELEC963	Advanced Digital Signal Processing	6
ELEC965	Telecommunications Network Management	6
ELEC969	Computer Communications	6
ELEC970	Advanced Topics in Engineering	6

*Only a limited number of subjects will be available in any one year. Subject to the approval of the Head of Department relevant subjects from other programs may also be taken as electives.

For further details, see *Course Descriptions* below.

POSTGRADUATE PROGRAM IN TELECOMMUNICATIONS ENGINEERING

leading to the Honours Master of Engineering in Telecommunications Engineering.

Number	Subject	Credit Points
<i>Core:</i>		
ELEC952	Thesis 36	
<i>Electives* (choice of not less than 12 credit points from the following):</i>		
ELEC964	Integrated Service Networks	4
ELEC966	Telecommunications Signal Processing	4
ELEC967	Teletraffic Engineering	4
ELEC968	Transmission Systems	4

*Note: Only three elective subjects will be offered in any one year. With the approval of the Head of Department, one elective may be replaced by a suitable equivalent subject offered by another department.

For further details, see *Course Requirements* below.

SCHEDULE OF POSTGRADUATE SUBJECTS

Number	Subject	Credit Points
<i>Graduate Certificate in Engineering (Telecommunications)</i>		
ELEC861	Telecommunications Systems	6
ELEC862	Transmission Systems	6
ELEC863	Telecommunication Signal Processing	6
ELEC864	Telecommunication System Management	6
<i>Master of Engineering Studies</i>		
ELEC911	Choppers and Inverters	6
ELEC912	AC Converters	6
ELEC915	Advanced Logic Design	6
ELEC922	Industrial Design	6
ELEC924	Power Systems	6
ELEC925	Computer Applications in Power Systems	6
ELEC926	Machine Transients	6
ELEC928	Variable Speed Drives	6
ELEC932	Computer Hardware Architecture	6
ELEC933	Real-time Computing	6
ELEC943	Computer Controlled Systems	6
ELEC944	Identification and Optimal Control	6
ELEC953	Report	12
ELEC955	Advanced Laboratory	6
ELEC960	Telecommunication Systems	6
ELEC961	Digital Signal Processing	6
ELEC962	Analysis and Transmission of Signals	6
ELEC963	Advanced Digital Signal Processing	6
ELEC965	Telecommunications Network Management	6
ELEC969	Computer Communications	6
ELEC970	Special Topics in Engineering	6
ELEC973	Advanced Robotics and Sensory Systems	6

SCHEDULE OF POSTGRADUATE SUBJECTS (cont'd).

Number	Subject	Credit Points
<i>Master of Engineering in Telecommunications Engineering (Honours)</i>		
ELEC952	Thesis	36
ELEC964	Integrated Service Networks	4
ELEC966	Telecommunications Signal Processing	4
ELEC967	Teletraffic Engineering	4
ELEC968	Transmission Systems	4
<i>Master of Engineering (Honours) and Doctor of Philosophy</i>		
ELEC951	Thesis	48 per year

For the Master of Engineering Studies, unless demand warrants, only seven (7) subjects will be available in any one year.

COURSE REQUIREMENTS**1. DOCTOR OF PHILOSOPHY**

Candidates for this degree enrol in ELEC951 Thesis.

2. HONOURS MASTER OF ENGINEERING

Under the Rules for the degree of Honours Master of Engineering, candidates may meet the major requirements by satisfactorily completing a thesis embodying the results of an investigation.

Entry for graduates with an Honours Degree at a standard of Class II, Division 2 or higher or approved equivalent qualification.

Under the Honours Masters Rules, candidates must accumulate a total of not less than 48 credit points by the successful completion of subjects from the Schedule of Graduate Subjects, which are described below.

Entry for graduates with a Degree below a standard of Class II, Division 2

Under the Honours Masters Rules, candidates are required to accumulate 96 credit points of which at least 48 points shall be from subjects included in the Schedule of Graduate Subjects; the remaining 48 credit points however, need not be for subjects at the Postgraduate level.

The Department, however, requires that candidates who qualify for entry under these provisions enrol in the Master of Engineering Studies and gain a weighted average mark of 67.5% or higher to be admitted to the Honours Master of Engineering program.

3. HONOURS MASTER OF ENGINEERING IN TELECOMMUNICATIONS ENGINEERING**Introduction**

This course has been designed to provide students with a thorough and working knowledge of the key telecommunications disciplines and systems of the future. It will provide sufficient coursework to enable students to be able to design networks, transmission and digital signal processing systems. Students will be able to apply and develop the knowledge acquired in these courses to important research problems in advanced telecommunications.

The course is aimed at recent graduates in

Computer, Electrical or Electronic Engineering who wish to pursue a career in telecommunications, and practising engineers seeking to update their knowledge in this rapidly advancing field.

Entrance Requirements

The entrance requirements for this course are the same as that for the Honours Master of Engineering Degree.

Entry for graduates with an Honours Degree at a Standard of Class II, Division 2 or higher or approved equivalent qualification.

Under the Honours Masters Rules, candidates must accumulate a total of not less than 48 credit points by the satisfactory completion of subjects as indicated below:

- (a) ELEC952 Thesis;
 (b) three elective subjects, worth not less than 12 credit points chosen from those listed below and for which details appear under Subject Descriptions in the following pages:
 ELEC964 Integrated Service Networks
 ELEC966 Telecommunications Signal Processing
 ELEC967 Teletraffic Engineering and
 ELEC968 Transmission Systems;
 (Note: Only three elective subjects will be offered in any one year. With the approval of the Departmental Head, one elective may be replaced by a suitable equivalent subject offered by another department.)

Entry for graduates with a degree below a standard of Class II, Division 2.

The Department requires that candidates who qualify for entry under these provisions enrol in the Master of Engineering Studies and gain a weighted average mark of 67.5% or higher to be admitted to the Honours Master of Engineering in Telecommunications Engineering program. Having satisfied these requirements, the program of study is as set out above.

4. MASTER OF ENGINEERING STUDIES

The Rules governing the Master of Engineering Studies are detailed in the section called General Information within this Calendar.

Under the Masters Rules, candidates must accumulate a total of not less than 48 credit points by the satisfactory completion of

subjects, approved by the Head of Department, as indicated below:

- (a) six subjects, worth six credit points each, from the List of Postgraduate Subjects, listed below and for which details appear under Subject Descriptions in the following pages:

ELEC911	Choppers and Inverters
ELEC912	AC Converters
ELEC915	Advanced Logic Design
ELEC922	Industrial Design
ELEC924	Power Systems
ELEC925	Computer Applications in Power Systems
ELEC926	Machine Transients
ELEC928	Variable Speed Drives
ELEC932	Computer Hardware Architecture
ELEC933	Real-time Computing
ELEC943	Computer Controlled Systems
ELEC944	Identification and Optimal Control
ELEC955	Advanced Laboratory
ELEC960	Telecommunication Systems
ELEC961	Digital Signal Processing
ELEC962	Analysis and Transmission of Signals
ELEC963	Advanced Digital Signal Processing
ELEC965	Telecommunications Network Management
ELEC969	Computer Communications
ELEC970	Special Topics in Engineering
ELEC973	Advanced Robotics and Sensory Systems; and
(b) ELEC953	Report.

With the approval of the Head of Department, up to three of the above six credit point subjects listed in (a) may be replaced by suitable equivalent subjects offered by other Departments.

5. GRADUATE CERTIFICATE IN ENGINEERING (TELECOMMUNICATIONS)

The Rules governing the Graduate Certificate in Engineering are detailed in the section called General Information within this Calendar.

For the Graduate Certificate in Engineering (Telecommunications), candidates enrol in the following subjects:

ELEC861	Telecommunications Systems
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ELEC862	Transmission Systems
ELEC863	Telecommunication Signal Processing
ELEC864	Telecommunication System Management.

Details of these subjects are presented in the Subject Descriptions below. It should be noted that these subjects are to be delivered by mixed mode techniques, including television broadcasts as the Graduate Certificate in Engineering (Telecommunications) is offered as a distance learning course.

SUBJECT DESCRIPTIONS

Assessment

All subjects offered by the Department of Electrical and Computer Engineering are normally assessed by means of a final examination. In addition, set project work, library assignments, seminar presentations, laboratory reports and tutorial problems undertaken by the student throughout the session may also be taken into account.

Lecturers in the individual subjects will provide details at the beginning of each session. As a general rule, the assessment for a subject is such that not less than 80% of the assessable material is identifiably the student's own work.

Subject Co-ordinators

Whilst a Subject Co-ordinator has been given for each subject, it should be noted that the Co-ordinator this year may not be as printed. For all subjects, students will be given Subject Information Sheets in the first week of lectures with details of the Subject Co-ordinators, Lecturers, Demonstrators, Assessment, etc.

ELEC861 Telecommunications Systems

Autumn or Spring session; 6 credit points (42 hrs of lectures and tutorials, delivered by mixed mode techniques, including television broadcasts).
 Assessment: see statement at beginning of Subject Descriptions.

Introduction to communications systems, including analogue and digital transmission systems, ISDN, cellular mobile radios and satellite communications. Time and frequency domain analysis of linear systems and deterministic signals (Fourier Transform; convolution and correlation; continuous and discrete time linear systems). Analogue modulation systems and spectra (amplitude, frequency and phase modulation).
 Co-ordinator: Professor G J Anido.

ELEC862 Transmission Systems

Autumn or Spring session; 6 credit points (42 hrs of lectures and tutorials, delivered by mixed mode techniques, including television broadcasts).
 Assessment: see statement at beginning of Subject Descriptions.

Wave propagation in cables, waveguides and atmosphere, radiation and antennas.
 Co-ordinator: Professor G J Anido.

ELEC863 Telecommunication Signal Processing

Autumn or Spring session; 6 credit points (42 hrs of lectures and tutorials, delivered by mixed mode techniques, including television broadcasts).

Assessment: see statement at beginning of Subject Descriptions.

Band-limited signals, sampling theorem, aliasing. Finite and infinite impulse response digital filter structures and frequency response, design methods for digital filters. The discrete Fourier Transform; Fast Fourier Transform algorithms. Linear prediction and its application to reduced bandwidth transmission of signals.
 Co-ordinator: Professor G J Anido.

ELEC864 Telecommunication System Management

Autumn or Spring session; 6 credit points (42 hrs of lectures and tutorials, delivered by mixed mode techniques, including television broadcasts).

Assessment: see statement at beginning of Subject Descriptions.

Aims of private and public communications systems; Local Area Networks (LANs) and Simple Network Management Protocol (SNMP); Narrowband versus broadband communications; Integration of voice, data and video in national and global networks; General management issues, such as cost control and business development in telecommunications systems, both public and private; International standards; Dimensioning telecommunications systems. Regulatory structure and international networking.
 Co-ordinator: Professor G J Anido.

ELEC911 Choppers and Inverters

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Assessment: see statement at beginning of Subject Descriptions.

Power transistors, MOSFETs and diodes; commutation, snubbing, drive and protection; waveform control and filtering; choppers, inverters, switched mode power supplies. Current research developments.
 Co-ordinator: Associate Professor V J Gosbell.

ELEC912 AC Converters

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Assessment: see statement at beginning of Subject Descriptions.

Diode, SCR, Triac; their characteristics and protection. AC to DC conversion; single-phase and three-phase, single-quadrant, two-quadrant and four-quadrant phase controlled converters, applications. AC to AC conversion; AC voltage controllers, single-phase and three-phase cycloconverters, applications. Harmonics in phase controlled systems. Current research developments.
 Co-ordinator: Associate Professor V J Gosbell.

ELEC915 Advanced Logic Design

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Assessment: see statement at beginning of Subject Descriptions.

MOS transistor behaviour and inverter circuits. CMOS inverter analysis. The CMOS process and design rules. Pass transistors and transmission gates. Combinatorial logic in CMOS. Flip-flops. Sequential logic. Standard cells. Gate arrays. Programmable logic devices. Design tools. Silicon compilation. Application to telecommunications systems. Current research developments.
 Co-ordinator: Professor G J Anido.

ELEC922 Industrial Design

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Assessment: see statement at beginning of Subject Descriptions.

This subject will cover selected topics from design techniques for electrical equipment, such as electric motors, transformers, reactors, contactors, insulators, busbars, etc. Topics to be covered will include magnetic and electric circuits, electric fields in insulators, thermal systems, mechanical constraints, audible noise and skin effect. Current research developments.
 Co-ordinator: Associate Professor V J Gosbell.

ELEC924 Power Systems

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Assessment: see statement at beginning of Subject Descriptions.

Power system components, layout, frequency control, voltage control, fault analysis, stability, protection. Current research developments.
 Co-ordinator: Associate Professor V J Gosbell.

ELEC925 Computer Applications in Power Systems

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Assessment: see statement at beginning of Subject Descriptions.

On-line and off-line applications of computers to the following areas: power system analysis, digital protection, centralised and distributed control of active and reactive power. Current research developments.
 Co-ordinator: Associate Professor V J Gosbell.

ELEC926 Machine Transients

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Assessment: see statement at beginning of Subject Descriptions.

Generalised machine theory, space phasors, transient performance and control of machines. Current research developments.
 Co-ordinator: Associate Professor V J Gosbell.

ELEC928 Variable Speed Drives

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Assessment: see statement at beginning of Subject Descriptions.

Characteristics of AC and DC machines and converters. Principles of speed control; control algorithms. Current research developments.
 Co-ordinator: Associate Professor V J Gosbell.

ELEC932 Computer Hardware Architecture

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Assessment: see statement at beginning of Subject Descriptions.

Memory organisation and management, including cache memory; input/output systems; DMA and interrupts; I/O processors; pipeline processors, multiprocessors, complex instruction set processors; and reduced instruction set processors. Micro-programming; micro-processors; and micro-computer hardware (bus system, multiplex bus system organisation); and interface design. Programming of micro-computers with

reference to appropriate micro-computers. Micro-computer applications. Current research developments.

Reference Books:

Hennessey, JL, *Computer Architecture: A Quantitative Approach*, Morgan Kaufman.
Murray, WD, *Computer and Digital System Architecture*, Prentice-Hall.
Pollard, LH, *Computer Design and Architecture*, Prentice-Hall.
Co-ordinator: Professor G J Anido.

ELEC933 Real-time Computing

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Assessment: see statement at beginning of Subject Descriptions.

Real-time issues, including time handling, objects and adding time to objects. Real-time system life cycle, structured design approach, Petri-net models, verification and validation of real-time software, real-time operating systems, operating system implementation. Current research developments.

Textbook:

Touler, S and Agrawala, A, *Real-time System Design*, McGraw-Hill Computer Science Services, 1990.

Co-ordinator: Professor G J Anido.

ELEC943 Computer Controlled Systems

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Assessment: see statement at beginning of Subject Descriptions.

Discrete-time observations; control and feedback; digital regulator design; and digital tracking system design. Digital control of continuous-time systems; and step varying systems. Current research developments.

Reference Book:

Hostetler, G H, *Digital Control System Design*, Holt, Rinehart and Winston, Inc, 1988.

Co-ordinator: Professor C D Cook.

ELEC944 Identification and Optimal Control

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Co-requisite: ELEC943.

Assessment: see statement at beginning of Subject Descriptions.

Fundamentals of system identification. Parameter estimation algorithms, including least squares and stochastic least squares; maximum likelihood; and recursive least squares algorithm. Introduction to optimal control; linear quadrature optimal control; linear quadratic Gaussian control and Kalman filtering. Current research developments.

Co-ordinator: Professor C D Cook.

ELEC951 Thesis

Autumn or Spring or Double session; 48 credit points per year.

ELEC952 Thesis

Autumn or Spring or Double session; 36 credit points.

ELEC953 Report

Autumn or Spring session (A); 12 credit points. Co-requisite: 36 credit points 900-level.

Assessment: see statement at beginning of Subject Descriptions.

Projects may involve a hardware project,

including the design and construction of experimental apparatus; a software project, including the development of software; or an extensive literature survey; or a combination of any of these. Where possible the projects are related to the research programs of the Department and are chosen to develop the student's initiative. Each student is required to deliver an oral seminar and to prepare a final thesis on the result of the work undertaken.

Textbooks:

AGPS, *Style Manual for Authors, Editors and Printers*, (4th ed), Australian Government Printing Service, 1988.

Blicq, *Technically - Write!*, Prentice-Hall.

Co-ordinator: Professor C D Cook.

ELEC955 Advanced Laboratory

Autumn or Spring session; 6 credit points (84 hours of practical).

Assessment: see statement at beginning of Subject Descriptions.

Aim:

The aim of this subject is to provide students with an opportunity to apply and verify theory in areas associated with the postgraduate programs through laboratory experiments and computer studies.

Content:

Students will be expected to design, perform, analyse and write reports on projects selected to illustrate practical issues selected from the two postgraduate programs.

Objectives:

On successfully completing this subject, the student should be able to:

- (i) understand the theory underpinning the projects;
- (ii) design and perform experiments and computer studies to illustrate theory;
- (iii) write reports covering the theoretical background, justification and description of the experimental procedure, analysis of results and conclusions arising from the experiments; and
- (iv) show initiative and ability in solving engineering problems and producing practical results with minimum supervision.

Co-ordinator: Dr F Naghdy.

ELEC960 Telecommunication Systems

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Assessment: see statement at beginning of Subject Descriptions.

Strand A: Introduction to teletraffic engineering; Queueing theory; Delay and loss systems; Elementary and intermediate queues; Little's theorem; Throughput and congestion; Erlang distribution and blocking probability; Markov chain analysis; Mixed voice and data queueing systems.

Strand B: Network engineering; Optimal capacity allocation; Direct and alternate routing; Overflow traffic; Telephone networks and switching systems; Step-by-step, X-bar, electronic and digital switching. Time and space switching; Blocking probability and availability; Current research developments.

Co-ordinator: Professor G J Anido.

ELEC961 Digital Signal Processing
Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Assessment: see statement at beginning of Subject Descriptions.

Band-limited signals, sampling theorem, aliasing; finite- and infinite- impulse-response digital filter structures and frequency response, design methods for digital filters; the discrete Fourier transform; Fast Fourier Transform algorithms; current research developments.

Co-ordinator: Professor G J Anido.

ELEC962 Analysis and Transmission of Signals

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Assessment: see statement at beginning of Subject Descriptions.

High frequency signal propagation in transmission lines, waveguides and atmosphere, radiation and antennas, fibre optics, filters; current research developments.

Textbook: to be advised.

Co-ordinator: Professor G J Anido.

ELEC963 Advanced Digital Signal Processing

Spring session; 6 credit points (42 hrs lectures, tutorials and practical work).

Pre-requisite: ELEC961.

Assessment: see statement at beginning of Subject Descriptions.

Aim:

The aim of this subject is to provide a thorough understanding of the theory and application of advanced digital signal processing techniques.

Content:

Theory: topics covered include: multirate processing, spectral estimation and least squares methods. Applications: topics may cover adaptive signal processing, speech processing and image processing.

Objectives:

On successfully completing this subject, the student should be able to:

- (i) analyse and understand advanced digital signal processing algorithms;
- (ii) implement digital signal processing techniques in new applications;
- (iii) understand both theoretical and applications related problems of adaptive, speech and image processing systems; and
- (iv) apply advanced digital signal processing solutions to problems in research or industrial environments.

Textbook: to be advised.

Co-ordinator: Professor G J Anido.

ELEC964 Integrated Service Networks

Autumn or Spring session; 4 credit points (42 hrs lectures and tutorials).

Assessment: see statement at beginning of Subject Descriptions.

Characteristics of telecommunication traffic voice, data and video. Packet and Circuit Switching. Narrowband ISDN Networks. Broadband ISDN networks. LAN and MAN networks.

Textbooks:

For the ISDN part of the subject:

Dicenet, G, *Design and Prospects for the ISDN*, Norwood, MA, Artech House, 1987.

For the LAN and MAN part of the subject: Tanenbaum, A S, *Computer Networks*, 2nd ed, Englewood Cliffs, N J, Prentice-Hall, 1988.

Co-ordinator: Professor G J Anido.

ELEC965 Telecommunications Network Management

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs practical and 14 hrs tutorials).

Assessment: see statement at beginning of Subject Descriptions.

Preamble:

ELEC965 is one of a number of elective subjects available within the Postgraduate Program in Computer and Telecommunications Engineering. The aims of this subject are to provide students with an understanding of the technical issues of telecommunications management, current management systems and their future evolution, to provide practical hands-on experience of network configuration and management systems for a selection of voice and data networks and to make students aware of economic, management and political issues in telecommunications management.

Content:

Topics covered will include: aims of private and public communications systems; Local Area Networks (LANs) and Simple Network Management Protocol (SNMP); narrowband versus broadband communications; integration of voice, data and video in national and global networks; general management issues, such as cost control and business development, in telecommunication systems, both public and private; international standards; dimensioning telecommunication systems; regulatory structure and international interworking issues and current research areas.

Objectives:

On successfully completing this subject, the student should be able to:

- (i) demonstrate an understanding of the technical issues involved in telecommunications management;
- (ii) explain strategic management issues, including the options created by emerging technologies;
- (iii) undertake practical experimentation in network configuration; and
- (iv) write technical reports on practical and project work undertaken.

Textbook: to be advised.

Co-ordinator: Professor G J Anido.

ELEC966 Telecommunications Signal Processing

Autumn or Spring session; 4 credit points (42 hrs lectures and tutorials).

Assessment: see statement at beginning of Subject Descriptions.

The subject covers the hardware, the software and the algorithms needed for DSP implementation of communications systems building blocks. Particular emphasis is placed on coding algorithms for voice and images and on adaptive filtering techniques as applied to equalisation and echo cancellation. Extracting the Information Contained in the Samples of an Analog Signal. Analysis of Discrete Systems. DSP Hardware. FIR Filter Design. IIR Filter Design. Advanced Topics in Filter Design. Detection, Estimation, Wiener

Filtering. Spectral Estimation. Speech Coding Algorithms. Image Coding. Adaptive Signal Processing. Communications Signal Processing. Case Study: DSP modem. The implementation of a complete DSP modem will be reviewed (V29). DSP Implementation of Fast Transforms.

Textbooks:

Feher, K, *Advanced Digital Communications, Systems and Signal Processing Techniques*, Prentice Hall, 1987.

Bateman, A and Yates, K W, *Digital Signal Processing Design*, Pitman, 1988.

Widrow, B and Stearns, S, *Adaptive Signal Processing*, Prentice Hall, 1985.

De Fatta, D, *Digital Signal Processing*, Wiley 1988.

Co-ordinator: Professor G J Anido.

ELEC967 Teletraffic Engineering

Autumn or Spring session; 4 credit points (42 hrs lectures and tutorials).

Assessment: see statement at beginning of Subject Descriptions.

The subject is designed to give students the fundamental and advanced knowledge of teletraffic analysis, monitoring and measurements in voice and data systems and networks. It provides clear insight into the analytical and practical aspects of traffic behaviour of links and switches. The case examples, based on the real traffic data collected on national and international links, allow students to practice analysis of systems performance and to compare the results with those obtained from theoretical models. The students after the completion of this subject will be able to use traffic theory for provisioning of systems/networks, for performance analysis of existing and planned systems and for more advanced traffic studies.

Introduction to Teletraffic Engineering. Review of relevant mathematics. Basic Queuing Models. Basic Teletraffic Theory. Basic Methods of Traffic Measurement. Traffic in non-loss systems. Delay/Throughput analysis in Data Networks. Network Planning and Management. Simulation.

Textbooks:

Cooper, R B, *Introduction to Queuing Theory*, 2nd ed, Elsevier, 1981.

Kleinrock, L, *Queuing Systems*, Vols 1 & 2, J Wiley, 1974.

Co-ordinator: Professor G J Anido.

ELEC968 Transmission Systems

Autumn or Spring session; 4 credit points (42 hrs lectures and tutorials).

Assessment: see statement at beginning of Subject Descriptions.

The subject covers all aspects of digital transmission systems at an advanced level: modulation, coding, synchronization, and multiple access. Case studies of optical and satellite links demonstrate how the effects of performance degradations are incorporated into the link budget. Analog Transmission. Baseband Digital Transmission. Digital Carrier Modulation. Binary Carrier Modulation. Synchro-nization. Effect of Timing Error. Sensitivity of various modulation types to carrier phase and timing errors. Introduction to Channel Coding. Cyclic Codes. Convolutional Codes. Link Budgets. Optical Link Case Study. Satellite Link Case Study. Spread spectrum and Multiple Access.

Textbooks:

Sklar, *Digital Transmission*, Prentice Hall, 1988.

Feher, K, *Advanced Digital Communications Systems*, Prentice Hall, 1987.

Clark and Cain, *Error Correcting Codes*, Wiley, 1986.

Co-ordinator: Professor G J Anido.

ELEC969 Computer Communications

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Not to count with CSCI955

Assessment: see statement at beginning of Subject Descriptions.

Coding, error detection and correction, serial communications, packet switching, protocols, modems, computer networks. Current research developments.

Co-ordinator: Professor G J Anido.

ELEC970 Advanced Topics in Engineering

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Assessment: see statement at beginning of Subject Descriptions.

Aim:

The aim of this subject is to enable students to further their knowledge and abilities in topics selected from the advanced technical subject areas in the relevant postgraduate program areas.

Content:

Selected topics within the fields of computer and telecommunications engineering or automation and power engineering.

Objectives:

On successfully completing this subject, the student should be able to:

- (i) develop theoretical understanding of the topics presented;
- (ii) demonstrate this understanding by solving problems in the topic areas presented; and
- (iii) undertake a literature search and present a written critical evaluation of a selected advanced technical topic.

Co-ordinator: Professor C D Cook.

ELEC973 Advanced Robotics and Sensory Systems

Autumn or Spring session; 6 credit points (56 hrs of lectures and tutorials/seminars).

Not to count with CSCI956 or MECH950.

Assessment: see statement at beginning of Subject Descriptions.

Robotic manipulation, direct kinematics, inverse kinematics, workspace analysis and trajectory planning, differential motion and statics, manipulator dynamics, robot control. Robotic sensors, including tactile and vision, task planning, robotics in automated manufacturing. Current research developments.

Textbook: to be advised.

Co-ordinator: Professor C D Cook.

INFORMATION AND COMMUNICATION TECHNOLOGY

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Information and Communication Technology by Coursework and/or Research
3. Master of Information and Communication Technology
4. Graduate Certificate in Information and Communication Technology

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master of Information and Communication Technology degree by research and the Doctor of Philosophy degree:

Health Informatics

Smart Cards
Information Privacy and Security
Risk Analysis and Management

Telecommunications

Management
Policy
Regulation
International Communications
Network Planning
Industry Development

Information Technology

Education Delivery
Information Privacy and Security
Infrastructure
Management of Change
Computer Mediated Communication

SCHEDULE OF GRADUATE SUBJECTS

Number	Subject	Credit Points
<i>Part A</i>		
IACT911	Telecommunications in Australia	6
IACT912	International Communications	6
IACT913	Policy Issues in Information Technology	6
IACT915	Carrier Regulation in Telecommunications	6
IACT916	Organisational Issues in Information Technology	6
IACT917	The Information Market	6
IACT918	Telecommunications Management	6
IACT919	On-line Information Services	6
IACT920	Globalisation in Informatics	6
IACT922	Case Studies in Information Technology Applications	6
IACT923	IT and Small Business	6
IACT924	Advanced Telecommunications Network Planning	6
IACT925	IT and Asian Economies	6
IACT926	The Impact of IT on Education & Training	6
IACT930	Special Topics	6
IACT950	Research Report	12
IACT960	Minor Thesis	36
IACT970	Major Thesis	48
<i>Part B</i>		
CSCI948*	Theory and Tools of Database Design	6
CSCI954*	Artificial Intelligence	6
CSCI955*	Computer Networks	6
CSCI957*	Advanced Topics in Database Management	6
CSCI964*	Neural Computing	6
CSCI962*	Logic and Databases	6
STS 945	Technology and Economics	6
STS946	Management of Technological Change	6

Any 900 level BUSS subject, subject to approval by the relevant Heads of Departments.
No candidate may select more than 18 credit points from Part B.

* These subjects have pre-requisites.
All subjects may not be available every year.

SCHEDULE OF SUBJECTS FOR GRADUATE CERTIFICATE

<i>Core Subjects</i>		
Number	Subject	Credit Points
IACT913	Policy Issues in Information Technology	6
IACT916	Organisational Issues in Information Technology	6
IACT918	Telecommunications Management	6
IACT919	On-line Information Services	6
<i>Elective Subjects</i>		
Number	Subject	Credit Points
IACT911	Telecommunications in Australia	6
IACT912	International Communications	6
IACT915	Carrier Regulation in Telecommunication	6
IACT917	The Information Market	6
IACT920	Globalisation in Informatics	6
IACT922	Case Studies in Information Technology Applications	6
IACT923	IT and Small Business	6
IACT924	Advanced Telecommunications Network Planning	6
IACT925	IT and Asian Economies	6
IACT926	The Impact of IT on Education & Training	6
IACT930	Special Topics	6

All subjects may not be available every year.

A candidate must satisfactorily complete at least 12 credit points from the core subjects.

COURSE REQUIREMENTS**1. DOCTOR OF PHILOSOPHY**

Candidates for this degree enrol in IACT970.

2. HONOURS MASTER OF INFORMATION AND COMMUNICATION TECHNOLOGY

The degree of Honours Master of Information and Communication Technology shall be subject to the University Course Rules for the award of the degree of Honours Master, together with the following conditions:

- (1) Entry to the Honours Master of Information and Communication Technology will be on the recommendation of the Head of the Department of Information and Communication Technology. Candidates would normally have:
 - (a) a Bachelor of Information and Communication Technology (Hons) at a standard of Class II, Division 2 or better (or equivalent) *or*
 - (b) a Master of Information and Communication Technology (or equivalent)
- (2) The Master of Information and Communication Technology (Hons) degree will normally occupy one year of full-time study or part-time equivalent, and requires satisfactory completion of one of the following options:
 - (a) IACT970, *or*
 - (b) IACT960 and 900 level subjects with the value of at least 12 credit points selected from the Schedule of Graduate Subjects, Department of Information and Communication Technology. Candidates in this option may not enrol in any subjects from Part B of the Schedule.

- (3) Each candidate shall have a supervisor appointed on the recommendation of the Head of Department of Information and Communication Technology.

3. MASTER OF INFORMATION AND COMMUNICATION TECHNOLOGY

The purpose of this degree is to provide graduates working in the area of information technology and telecommunications with a deeper understanding of the organisational, economic and policy issues essential to the effective management of information technology.

The degree of Master of Information and Communication Technology shall be subject to the University Course Rules for the award of the degree of Master, together with the following conditions:

- (1) Entry to the Master of Information and Communication Technology will be on the recommendation of the Head of the Department of Information and Communication Technology. Candidates would normally have:
 - (a) the Graduate Certificate in Information and Communication Technology (with an average of a credit grade or better over all subjects); *or*
 - (b) a degree related to one of the following areas: computing; engineering; communication studies; information studies and management; *or*
 - (c) an appropriate balance between a University degree and relevant professional experience in information and/or communication technology.

In addition, applicants must have at least one year of relevant professional experience in information and/or communication technology.

- (2) The Master of Information and Communication Technology degree will normally occupy one year of full-time study or part-time equivalent, and requires satisfactory completion of: 900 level subjects to the value of at least 48 credit points (excluding the subjects IACT960 and IACT970), selected from the Schedule of Graduate Subjects, Department of Information and Communication Technology.

4. GRADUATE CERTIFICATE IN INFORMATION AND COMMUNICATION TECHNOLOGY

This one year part-time course is designed for graduates from a recognised tertiary institution. The objective of the Graduate Certificate is to provide a introductory study of the concepts of information and communication technology. The course will cover the issues which arise in the implementation and application of information technology. It addresses the challenge of educating managers and executives about the organisational, economic, regulatory and social problems that must be solved as highly complex technological systems are implemented.

The Graduate Certificate in Information and Communication Technology shall be subject to the University Rules for the award of Graduate Certificate together with the following conditions:

- (1) Applicants for the Graduate Certificate in Information and Communication Technology must have been admitted to the degree of Bachelor in the University or other approved institution. In special circumstances an applicant holding other academic or professional qualifications and with relevant work experience and/or employer support may be admitted as a candidate.

- (2) Candidates must satisfactorily complete at least 24 credit points from the Schedule of Subjects for the Graduate Certificate, of which at least 12 credit points are from the list of Core Subjects.
- (3) Students qualifying for the Graduate Certificate in Information and Communication Technology who have achieved an average of a credit grade or better over all subjects, will be able to proceed to the Master of Information and Communication Technology. They will receive advanced standing of 24 credit points. The completion of the Masters will then require the satisfactory completion of a further 24 credit points as specified in the schedule for that course.
- (4) Prior to the conferring of a Master of Information and Communication Technology upon a candidate who holds a Graduate Certificate in Information and Communication Technology of this University, the candidate shall surrender the testamur and all rights relating to the graduate certificate.

SUBJECT DESCRIPTIONS

Not all 900 level subjects will be offered every year. Intending candidates should consult with academic advisers in the Department (or the University Timetable) for further advice.

Textbooks

Textbooks will be advised where appropriate otherwise comprehensive reading lists will be provided in the first lecture of each subject.

IACT911 Telecommunication in Australia

Autumn or Spring session; 6 credit points (3 contact hrs).
Assessment: 2 essays x 3,000 words 60%, tutorial assignments 40%.

In recent years there has been a period of rapid technological innovation, industry restructuring and regulatory change in Australian telecommunications. This subject analyses the emergence of political, economic and technological change in telecommunications over the last decade. The development of government policy towards the telecommunications carriers from the Davidson Report to the present is examined. The role of large user organisations in pressing for change and their use of overseas models of deregulation and privatisation will be studied. The combined effect of these forces on the future structure, ownership and use of the Australian network will be scrutinised.
Co-ordinator: Dr R Joseph.

IACT912 International Communications

Autumn or Spring session; 6 credit points (3 contact hrs).
Assessment: 2 essays x 3,000 words 60%, tutorial assignments 40%.

The growth in international information flows has brought conflict between global marketplaces and national economic and

political priorities. This subject will examine the forces pressing for the removal of national policies that inhibit the flow of information across geographical borders. The attempts of nation states to maintain technological autonomy and political sovereignty will also be studied. In particular, the issues of trans-border data flows and the imbalance between the North and South will be critically reviewed. The implications for international bodies such as Intelsat and the International Telecommunication Union will be analysed.
Co-ordinator: Dr R Joseph.

IACT913 Policy Issues in Information Technology

Autumn or Spring session; 6 credit points (3 contact hrs).
Assessment: 2 essays x 3,000 words 60%, tutorial assignments 40%.

The emergence of information in electronic form as a key source of value in highly developed economies has prompted governments to develop national policies that establish a framework for the growth of services in this area. Approaches taken by governments to this question in Australia, the USA, UK and Japan will be contrasted. Issues that will be analysed include national information technology policies, information technology and the organisation of work and legal aspects of information technology.
Co-ordinator: Dr R Joseph.

IACT915 Carrier Regulation in Telecommunications

Autumn or Spring session; 6 credit points (3 contact hrs).
Assessment: 2 essays x 1,500 words 70%, tutorial assignments 30%.

Historical emergence of the role of governments in the regulation of telecommunications; the European and the North American experience.; public ownership of communications infra-structure versus private.; monopoly versus competitive carriage; global pressures toward re-regulation; separation of basic and value-added services and the third-party traffic issue.
Co-ordinator: to be advised.

IACT916 Organisational Issues in Information Technology

Autumn or Spring session; 6 credit points (3 contact hrs).
Assessment: 3 essays 75%, seminars 15%, tutorials 10%.

Effect on organisational information flows of growth in size and complexity; the management and technological response; information technology as a catalyst in codifying work procedures and creating new organisational structures; hierarchical versus horizontal approaches to information management; implications of broadband networks for traffic integration.
Co-ordinator: Mr A Dean.

IACT917 The Information Market

Autumn or Spring session; 6 credit points (3 contact hrs).
Assessment: 2 x 3,000 word essays 60%, seminars/tutorials 40%.

In its investigation of the information market, this subject examines the

ownership and exploitation of information as a source of social, political and economic power. Legal protection for information as an economic good (for example as patents, copyright and other forms of intellectual property) is also explored. The development of an information infrastructure with the spread of computer networks is facilitating the emergence of a global information marketplace. An important focus in this subject is the effect of information and communication technologies on the economics of information delivery.
Co-ordinator: Ms C Alcock.

IACT918 Telecommunications Management

Autumn or Spring session; 6 credit points (3 contact hrs).
Assessment: 1 examination 50%, 2 x 1,500 word essays 30%, seminars 20%.

Role of telecommunications in corporate strategy: cost control versus business development; regulatory and strategic issues in the use of private and public networks; service options in Local Area Networks (LANs); private automatic branch exchanges and public exchanges; narrowband versus broadband in intra-office communications; integration of voice, data and video in national and global networks.
Co-ordinator: Ms R Lindley.

IACT919 Online Information Services

Autumn or Spring session; 6 credit points (3 contact hrs).
Assessment: 1x3000 word essay 30%, 1 report 30%, seminars/tutorials 40%.

This subject examines the emergence of electronic information supermarkets and the changes in ownership that have taken place within the online information industry as mass media conglomerates have entered the field. Other aspects covered include: the role of government in the development of online databases and networks; the creation of "value-added" products through re-formatting, marketing and electronic delivery of information; the future of public information sources such as libraries and government data collection and publication agencies in a changing online environment; and the potential of network developments such as AARNet, the Internet, and NREN in the delivery of online information resources. Some practical experience in the use of electronic information services is provided including Australian and international databases and computer networks.
Co-ordinator: Ms C Alcock.

IACT920 Globalisation in Informatics

Autumn or Spring session; 6 credit points (3 contact hrs).
Assessment: 1 examination 40%, 1 report 40%, seminars 20%.

Topics covered will be: dominance of transnational suppliers in global markets for computing and telecommunications; geographic diversity and division of labour in research and development; cost structures and strategic issues in choice of manufacturing locations; vertical versus horizontal integration; cross-ownership and the emergence of pre-competitive strategic alliances.
Co-ordinator: to be advised.

IACT922 Case Studies in Information Technology Applications

Autumn or Spring session; 6 credit points (3 hrs per wk).

Assessment: 2 written reports 70%, seminar presentations 30%.

Topics covered will include: innovative uses of information technology to create new services and systems e.g., electronic banking, international currency trading; centralised mainframe computing versus distributed intelligence; technology options for high-speed data networks; video-conferencing as a travel substitute; public information retrieval systems e.g., videotex.
Co-ordinator: Professor J Cooper.

IACT923 IT and Small Business

Autumn or Spring session, 6 credit points (3 contact hrs).

Assessment: written assignments 85%, seminar 15%.

This subject will study the relationship between small business and IT, the management of IT in small business and the impact of IT on small business with regard to a number of critical areas such as productivity, staff development, accessibility of technology, business size and activity, change management, research and development.

Co-ordinator: Mr A Dean.

IACT924 Advanced Telecommunications Network Planning

Autumn or Spring session; 6 credit points (3 contact hrs).

Assessment: essay 20%, seminar presentation 20%, tutorial paper 10%, and case study 50%.

The process of developing a telecommunications network plan is becoming a more difficult task with the rapid diversification and advances in the technological and design options available. This subject investigates Telecommunications Network Planning in greater depth, providing details of the operation of a telecommunications network as a complex, interrelated set of operations. It examines the scope of the network operations plan from the user's perspective. Topics will include: (1) the need for forward network planning; (2) traffic flow control and forecasting; (3) network security; (4) long range planning considerations; (5) dimensioning; and, (6) project management techniques that are relevant to the telecommunications network planning and implementation process.

Case Study

Students will be required to critically analyse the telecommunications network plan for a large corporation.

Co-ordinator: Ms R Lindley.

IACT 925 Information Technology And The Asian Economies

Spring or Autumn Session; 6 credit points (3 hrs per week).

Assessment: group Research Project 40%, 2 essays 30% each.

Textbooks: Prescribed readings on measurement of the information sector (e.g., Machlup and Porat); problems of developing countries (e.g., Todaro); and IT and telecommunications development (selected readings).

Co-ordinator: to be advised.

Content:

The subject will examine the significance of information technology and telecommunications in the diverse economies of Asia. The contribution of the information sector in creating wealth and jobs will be examined, having regard to differences in population density, political organisation, infrastructure development, rate of technology transfer, and trading agreements. The activities of large multinational computing, telecommunications and media conglomerates will receive special treatment. Factors that inhibit the uptake of information and telecommunication technology will be analysed, together with sources and conditions of foreign capital for infrastructural development and foreign assistance in technical training. Throughout the course, the relationship of Australia with the countries under study will be examined.

Objectives:

On completion of this subject, students should be able to:

- 1) discuss the economies of Asian nations in general terms;
- 2) explain the various methods of measuring the contribution of information/telecommunication products and services to a national economy;
- 3) analyse the role of information technology and telecommunications in the development of the Asian economies;
- 4) discuss the activities of multinational corporations in relation to Asian governments and indigenous IT industries;
- 5) evaluate the importance of bilateral and multilateral trading agreements for development of the information sector in each country;
- 6) outline the implications for each country of global networking and information sharing;
- 7) assess the role of Australia with regard to information and telecommunications technology in the Asian economies - as aid donor, partner in infrastructural and skill development, and commercial trader.

IACT926 The Impact of IT on Education and Training

Spring or Autumn session; 6 credit points (3-4 hrs per week).

Assessment: written assignments (seminar, projects, case studies, essays)

Content:

The subject will examine the changing composition of the work force and relate this to the introduction and application of IT. An examination of the trends in Australia, and internationally, with respect to increasing credentialism, life-long learning and other education and training issues will be undertaken. Study of the appropriate use of techniques and technologies of education, including

expansion of distance education, will form another component of the subject.

Objectives:

After successful completion of this subject students should be able to:

- 1) explain the role of IT in the trends relating to the composition of the Australian work force;
- 2) isolate the major issues associated with the use (and impact of same) of IT and compile suggestions about how commerce and industry can respond to the need for knowledge and skill development;
- 3) report on the major trends in education/training in Australia (and to a lesser extent overseas) as they relate to skill and knowledge development and use of IT;
- 4) list and explain a range of techniques and technologies used in developing knowledge and skills including those applicable to distance education;
- 5) analyse and report on national (and/or state) plans for the continuing development of skills and knowledge.

Co-ordinator: Mr A Dean

IACT930 Special Topics

Autumn or Spring session; 6 credit points (3 hrs per wk).

Assessment: to be advised.

Topics will be selected from areas of interest of staff members or visiting staff members to the Department. These will include topics in the application of information and communication technology. Noting that IT is a rapidly changing area, this subject will allow for the inclusion in the MInfoTech degree topics at the forefront of the discipline.

Co-ordinator: Professor J Cooper.

IACT950 Research Report

Annual; 12 credit points.

This subject involves undertaking a project. Where possible the projects are related to the research interests of the Department and/or staff and are chosen to develop the student's research skills. Each student is required to deliver an oral seminar and to prepare a final thesis on the result of the work undertaken.

IACT960 Minor Thesis

Annual; 36 credit points.

This subject will be externally accessed.

IACT970 Major Thesis

Annual; 48 credit points per year of enrolment.

MATHEMATICS

COURSES OFFERED

The following postgraduate courses are available:

1. Doctor of Philosophy
2. Honours Master of Science by either Research or both Coursework and Research
3. Master of Mathematics

POSTGRADUATE PROGRAMS

Engineering & Industrial Mathematics
Pure Mathematics

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master of Science degree by research and the Doctor of Philosophy degree:

Combinatorial designs
Continuum mechanics
Fluid mechanics
Functional analysis
Hadamard matrices
Industrial applications of mathematics
Logic
Measure theory
Non-linear boundary value problems
Non-linear partial differential equations
Numerical wave modelling
Oceanography
Quantum mechanics
Set theory
Solid and fracture mechanics
Topological Groups
Topology

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN ENGINEERING & INDUSTRIAL MATHEMATICS

leading to the degree of Honours Master of Science or Master of Mathematics.

Number	Subject	Credit Points
<i>Core</i>		
<i>Either</i>		
MATH991	Project	12
<i>or</i>		
MATH992	Minor Thesis	36
<i>Electives</i>		
MATH902	Solution of Differential Equations by One-Parameter Groups	6
MATH911	Coastal Dynamics	6
MATH912	Mathematics of Microwave Heating	6
MATH913	Fluid Mechanics and Wave Theory	6
MATH914	Analytical Dynamics	6
MATH915	Applied Nonlinear Partial Differential Equations	6
MATH916	Heat Conduction and Moving Boundary Problems	6
MATH917	Advanced Numerical Analysis	6
MATH918	Computational Fluid Mechanics	6
MATH971	Advanced Topics in Applied Mathematics A	6
MATH972	Advanced Topics in Applied Mathematics B	6
MATH980	Preliminary Topics in Mathematics A	6
MATH981	Preliminary Topics in Mathematics B	6

For further details, see *Course Requirements* below.

POSTGRADUATE PROGRAMS IN PURE MATHEMATICS

leading to the degree of Honours Master of Science or Master of Mathematics.

Number	Subject	Credit Points
Program A - Analysis		
<i>Core</i>		
<i>Either</i>		
MATH991	Project	12
<i>or</i>		
MATH992	Minor Thesis	36
<i>Electives</i>		
MATH904	Stability for Partial Differential Equations	6
MATH905	Functional Analysis and Control Theory	6
MATH921	Advanced Functional Analysis	6
MATH923	Measure and Integration	6
MATH924	Distributions	6
MATH928	Advanced Measure Theory	6
MATH973	Advanced Topics in Pure Mathematics A	6
MATH974	Advanced Topics in Pure Mathematics B	6
MATH980	Preliminary Topics in Mathematics A	6
MATH981	Preliminary Topics in Mathematics B	6
Program B - Foundations of Mathematics		
<i>Core</i>		
<i>Either</i>		
MATH991	Project	12
<i>or</i>		
MATH992	Minor Thesis	36
<i>Electives</i>		
MATH903	Mean Periodic Functions	6
MATH925	Topics in Algebra	6
MATH926	Logic and Set Theory	6
MATH927	Combinatory Logic	6
MATH929	General Topology	6
MATH973	Advanced Topics in Pure Mathematics A	6
MATH974	Advanced Topics in Pure Mathematics B	6
MATH980	Preliminary Topics in Mathematics A	6
MATH981	Preliminary Topics in Mathematics B	6

For further details, see *Course Requirements* below.**COURSE REQUIREMENTS****1. DOCTOR OF PHILOSOPHY**

Candidates for this degree enrol in MATH993.

2. HONOURS MASTER OF SCIENCE

The degree of Honours Master of Science shall be subject to the University Course Rules for the award of the degree of Honours Master together with the following conditions.

- (1) A candidate shall undertake research, or a course of graduate studies and research, normally chosen from one of the postgraduate programs offered by the Department of Mathematics.
- (2) Entry to the Honours Master of Science will normally be from an Honours bachelor degree in Mathematics at a standard of Class II, Division 2 or higher. Entry may also be approved for candidates with the qualification of Master of Mathematics on the recommendation of the Head of the Department of Mathematics.
- (3) The Honours Master of Science will normally occupy two sessions of full-time study or four sessions of part-time study, and requires satisfactory

- completion of 900 level subjects to the value of at least 48 credit points chosen from one of the postgraduate programs offered by the Department of Mathematics including either:
- (a) the subject MATH993 (48 credit points), *or*
 - (b) the subject MATH992 (36 credit points) and other 900 level subjects to the value of at least 12 credit points approved by the Head of Department. In exceptional circumstances, and subject to approval of the Head of the Department, subjects with the value of at most 6 credit points from the program may be replaced by any other 900 level subjects with value of at least 6 credit points.
 - (4) The registration of a candidate will be subject to termination if that candidate fails subjects to the total value of 18 or more credit points.
 - (5) Each candidate shall have a supervisor appointed on the recommendation of the Head of the Department of Mathematics.
 - (6) Before the award of Honours Master of Science is conferred on a candidate who holds a testamur of the University of Wollongong for the degree of Master of Mathematics, the candidate shall surrender the testamur and the corresponding rights to the degree of Master of Mathematics.

3. MASTER OF MATHEMATICS

The degree of Master of Mathematics shall be subject to the University Course Rules for the award of the degree of Master together with the following conditions.

- (1) A candidate shall undertake a course of graduate studies and research, normally chosen from the graduate subjects offered by the Department of Mathematics.
- (2) Entry to the Master of Mathematics will normally be from a pass degree with an appropriate 3 year sequence in Mathematics, or, subject to the approval of Council on the recommendation of the Head of Department, from a degree or diploma containing substantial study in an appropriate discipline.
- (3) The Master of Mathematics will normally occupy two sessions of full-time study or four sessions of part-time study, and requires satisfactory completion of 900 level subjects to the value of at least 48 credit points, including the subject MATH991 (12 credit points) and other 900 level subjects to the value of at least 36 credit points approved by the Head of Department. In exceptional circumstances, and subject to approval of the Head of the Department, subjects with the value of at most 12 credit points, other than MATH991, may be replaced by other 900 level subjects with value

of at least 12 credit points offered by departments other than the Department of Mathematics.

- (4) The registration of a candidate will be subject to termination if that candidate fails subjects to the total value of 18 or more credit points.
- (5) Each candidate shall have a supervisor appointed on the recommendation of the Head of the Department of Mathematics.

SUBJECT DESCRIPTIONS

Subjects

For further details, see the postgraduate coursework co-ordinator: Associate Professor J Hill.

Textbooks

Students will be advised on the appropriate texts for each subject in the first lecture of the subject. In all cases, the lecturer should be consulted before textbooks are purchased.

Credit Points

All subjects listed below, with the exception of MATH991, MATH992 and MATH993, have a credit point value of 6.

Contact Hours

All subjects listed below involve at least one contact hour per week for both sessions, or its equivalent.

Method of Assessment

All 900-level subjects will be assessed by final examinations, or final examinations and limited assignments.

MATH902 Solution of Differential Equations by One - Parameter Groups

Assessment: examination 75%, assignments 25%.

One-parameter groups and Lie series, linear ordinary differential equations, first and second order ordinary differential equations, linear and non-linear partial differential equations.

Co-ordinator: Associate Professor J Hill.

MATH903 Mean Periodic Functions

Assessment: examination 75%, assignments 25%.

An introduction to L. Schwartz's theory of mean periodic functions using the transform of J P Kahane. Applications to differential equations.

Co-ordinator: Associate Professor P Laird.

MATH904 Stability for Partial Differential Equations

Assessment: essay 15%, examination 60%, assignment 25%.

Pre-Requisite: MATH305.

This subject is concerned with parabolic and elliptic partial differential equations. The main topic is the stability of solutions under changes in initial values or other parameters connected with the equations. Some of the tools that will be used are an analysis of the spectrum for elliptic operators and the Linearization Principle.

Co-ordinator: Dr V Belov / Dr G Williams.

MATH905 Functional Analysis and Control Theory

Assessment: examination 75%, assignments 25%.

Pre-Requisite: MATH305, MATH222.

This subject introduces several function spaces and then examines how they can be used in the theory of partial differential equations and control theory. Some of the topics considered will be the existence and uniqueness of solutions for hyperbolic and parabolic partial differential equations and the exact controllability for systems governed by the wave equation.

Co-ordinator: Dr V Belov / Dr G Williams.

MATH911 Coastal Dynamics

Assessment: examination 75%, assignments 25%.

Generation and propagation of continental shelf waves of high and low frequency in homogeneous and non-homogeneous oceans, response of the ocean over a shelf to atmospheric disturbances, detection and measurement of shelf waves, dissipative influences, standing edge waves and their relation to beach geomorphology, modelling of physical marine systems.

Co-ordinator: Associate Professor D Clarke.

MATH912 Mathematics of Microwave Heating

Assessment: examination 75%, assignments 25%.

Electrostatics, Gauss' law, magnetic fields, induction, Maxwell's equations, the damped wave equation, the forced heat equation, solutions of microwave heating for constant conductivity, temperature dependent conductivity, hotspots.

Co-ordinator: Dr T Marchant.

MATH913 Fluid Mechanics and Wave Theory

Assessment: examination 75%, assignments 25%.

Hyperbolic partial differential equations, conservation laws, shallow water equations, dispersive waves, soliton theory, gas dynamics, shock waves, flow past bodies, conformal mapping, aerofoil theory.

Co-ordinator: Dr T Marchant.

MATH914 Analytical Dynamics

Assessment: examination 75%, assignments 25%.

Lagrangian and Hamiltonian formulations, symmetry and conservation laws. Regular and chaotic motion. Strange attractors.

Co-ordinator: Professor P Broadbridge.

MATH915 Applied Nonlinear Partial Differential Equations

Assessment: examination 75%, assignments 25%.

Fluid flow in porous media. Exact solution of related nonlinear boundary value problems. Introduction to inverse scattering transforms and soliton equations. Tests for integrability of a nonlinear equation. Chaotic flows.

Co-ordinator: Professor P Broadbridge.

MATH916 Heat Conduction and Moving Boundary Problems

Assessment: examination 75%, assignments 25%.

Solutions of the heat equation, semi-infinite

media, solution by Fourier series, solutions by heat-balance, classical moving boundary problems, large Stefan number expansions, integral formulation, bounds, integral equations, polynomial approximations, boundary fixing series solutions.

Co-ordinator: Associate Professor J Hill.

MATH917 Advanced Numerical Analysis

Assessment: examination 75%, assignments 25%.

Solution of Ordinary and Partial Differential Equations. Integration including multiple integration. Solution of Integral Equations. The algebraic eigenvalue problem.

Co-ordinator: to be advised.

MATH918 Computational Fluid Mechanics

Assessment: examination 75%, assignments 25%.

Finite-difference and finite element methods applied to incompressible inviscid flow problems and incompressible viscous flow problems. Introduction to Boundary-element technique and its application to potential flows. The relationship between these numerical approaches will also be discussed.

Co-ordinator: Dr S Zhu.

MATH921 Advanced Functional Analysis

Assessment: examination 75%, assignments 25%.

Normed spaces, Banach spaces, linear operators, applications of the theory of linear operators to other areas of analysis such as Fourier analysis, quadrature formulae and integral equations.

Co-ordinator: Associate Professor R Nilsen.

MATH923 Measure and Integration

Assessment: examination 75%, assignments 25%.

Lebesgue measure and more general measures, measurable functions, Lebesgue integration and its properties, behaviour of integrals under taking limits, product integrals.

Co-ordinator: Associate Professor R Nilsen / Dr G Williams.

MATH924 Distributions

Assessment: examination 75%, assignments 25%.

Mikusinski's theory of convolution quotients and an introduction to L. Schwartz's theory of distributions. Properties of the space of continuous functions of a single real variable (equipped with a suitable topology) and dual space.

Co-ordinator: Associate Professor P Laird.

MATH925 Topics in Algebra

Assessment: examination 75%, assignments 25%.

Partially ordered sets, lattices, modular lattices, Boolean Algebras and Boolean rings, orthomodular lattices.

Co-ordinator: Dr F Prokop.

MATH926 Logic and Set Theory

Assessment: examination 75%, assignments 25%.

Axiomatic propositional and predicate logic,

nonclassical logics, applications to circuit theory and logic programming, introduction to Axiomatic Set Theory.

Co-ordinator: Associate Professor M Bunder.

MATH927 Combinatory Logic

Assessment: examination 75%, assignments 25%.

Pre-Requisite: MATH926.

Introduction to Pure and Illature combinatory logic, relation to lambda-conversion, functionality, application to propositional and predicate calculus.

Co-ordinator: Associate Professor M Bunder.

MATH928 Advanced Measure Theory

Assessment: examination 75%, assignments 25%.

Pre-Requisite: MATH923.

Construction of outer, measures, Hausdorff measures, signed measures, Radon-Nikodym theorem, differentiation of measures.

Co-ordinator: Dr G Williams.

MATH929 General Topology

Assessment: examination 75%, assignments 25%.

Prerequisite: MATH222.

This subject is a systematic discussion of topological spaces and associated concepts which are of fundamental importance in various areas of mathematics. The topics covered will include topologies, bases and subbases for topologies, separation properties of topologies, product and quotient topologies, and connectedness and compactness. Depending upon students' interests and backgrounds, excursions into the following or other areas are possible: topological groups, programming language semantics, elementary algebraic topology, dimension theory and cardinal invariants.

Co-ordinator: Dr P Nickolas.

MATH971 Advanced Topics in Applied Mathematics A

Assessment: examination 75%, assignments 25%.

Topics will be selected from the areas of interest of staff members or visiting staff members of the department.

Co-ordinator: Head of Department.

MATH972 Advanced Topics in Applied Mathematics B

Assessment: examination 75%, assignments 25%.

Topics will be selected from the areas of interest of staff members or visiting staff members of the department.

Co-ordinator: Head of Department.

MATH973 Advanced Topics in Pure Mathematics A

Assessment: examination 75%, assignments 25%.

Topics will be selected from the areas of interest of staff members or visiting staff members of the department. These may include topics in Analysis, Algebra, Logic or Number Theory.

Co-ordinator: Head of Department.

MATH974 Advanced Topics in Pure Mathematics B

Assessment: examination 75%, assignments 25%.

Topics will be selected from the areas of interest of staff members or visiting staff members of the department. These may include topics in Analysis, Algebra, Logic or Number Theory.

Co-ordinator: Head of Department.

MATH980 Preliminary Topics in Mathematics A

A selection of topics will be available from time to time to serve as preliminary material in the Master of Mathematics.

Co-ordinator: Head of Department.

MATH981 Preliminary Topics in Mathematics B

A selection of topics will be available from time to time to serve as preliminary material in the Master of Mathematics.

Co-ordinator: Head of Department.

MATH991 Project

12 credit points.

MATH992 Minor Thesis

36 credit points.

MATH993 Thesis

48 credit points per year.

FACULTY OF
LAW

FACULTY OF LAW

FACULTY OFFICE

Dean: Professor Helen Gamble

Associate Dean: Associate Professor Colin Thomson

Sub Dean: Ms Patricia Blazey-Ayoub

Dean's Assistant: Ms Felicia Martin

Executive Officer: Ms Wendy Raikes

(042) 21 3194

Administrative Assistant: Ms Maria Agnew

(042) 21 3456

RESEARCH COURSES AVAILABLE

The Faculty offers Honours Master of Laws, Honours Master of Arts, Honours Master of Commerce, Honours Master of Laws (Natural Resources Law), Honours Master of Natural Resources Law, Honours Master of Laws (Court Management), Honours Master of Court Management and the Doctor of Philosophy degrees by research.

POSTGRADUATE PROGRAMS

Postgraduate programs are available in the Faculty in the following areas:

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Natural Resources Law	217

FULL TIME STAFF

Dean

Professor Helen E C Gamble, LLB LLM ANU, Barrister and Solicitor ACT, Barrister NSW

Associate Dean

Associate Professor Colin J H Thomson, BA LLM Syd, Solicitor NSW, Barrister and Solicitor ACT

Sub-Dean

Patricia J Blazey-Ayoub, SRN Lon, BA LLB Macq, LLM Syd, Solicitor NSW

Executive Officer

Wendy Raikes, BA, MMgt, MAITEA

Administrative Assistants

Maria Agnew
Shelley Johnson
Felicia Martin
Frances Sullivan, BA, MAITEA

Professors

M David Farrier, LLB Lond, LLM Col, DipCrim Camb, Barrister NSW
John Goldring, BA LLB Syd, LLM Col, Barrister NSW, Barrister and Solicitor ACT and PNG
B Martin Tsamenyi, LLB Ghana, MintL PhD ANU

Associate Professors

Kenneth W Hale, BA LLB Qld, LLM Syd, Barrister NSW and High Court
Robin P Handley, LLB Warw, LLM ANU, Solicitor NSW, England and Wales, Barrister and Solicitor ACT and High Court
Ainslie Lamb, LLB Melb, GDipSoc La Trobe, GDipFamLaw Monash, MEd Melb

Adjunct Professor

Lindsay J Curtis, BSc LLB Melb, Barrister and Solicitor ACT and PNG

Honorary Professorial Fellows

G Leroy Certoma, BA LLB(Hons)Syd, Dott in Giur Firenze, Solicitor NSW
Peter Hopkins, BEc, LLB(Hons) ANU
Beverley Hoskinson-Green, LLB NSW, LLM(Hons) Harvard
Jillian Segal, BA LLB NSW, LLM Harvard
Shane Simpson, LLB LLM Auckland
John Whitehouse, BA LLB Syd, BSc Macq, DipLegalScience UTS

Senior Lecturers

Charles Y C Chew, MA Syd, DipEd NE, BLegS Macq, Barrister and Solicitor VIC, Solicitor NSW
Damien Considine, BA LLB UNSW, LLM Syd, Solicitor and Attorney NSW and High Court
Jane G Innes, BEc LLM Syd, Solicitor NSW, Barrister and Solicitor ACT and Vic

Lecturers

Margaret Bond, BSW LLB UNSW, Solicitor NSW
Andrew D Frazer, BA LLB Syd, PhD ANU
D Scott Grattan, BA LLB Macq, Solicitor NSW
Andrew H H Kelly, BTP LLB, UNSW, Grad Dip Leg Prac UTS, Solicitor NSW
Luke McNamara, BA LLB UNSW, LLM Manit
Sandra Mercado, BA LLM Syd, Barrister NSW

Thomas Musgrave, BA Winds, LLB BCL McGill, LLM Melb, PhD Syd, Solicitor and Barrister Supreme Court Ontario
Natalie P Stoianoff, BSc LLB MAppSc UNSW, Solicitor NSW
Penelope Watson, BA Tas, LLB UNSW, LLM Syd, Solicitor NSW

Research Director

Richard Mohr, BA PhD UNSW

Honorary Fellows

William Dalley, BA LLB Syd, Barrister ACT and NSW
Liane Degville, BA Qld, LLB Adelaide, LLM Keio, Tokyo
Danny Lagopodis, BLegS Macq, BCom MStudAcc, Solicitor NSW
Ian McCall, Solicitor NSW
William McKinnon Macquarie, Solicitor NSW

LAW LIBRARY

Librarian

Elizabeth White, BA GDipLib & Information Science (CSU)

Library Staff

Gay Antonopoulous, BA Wisconsin, AALLA
Cheryl Brindle-Jones, BA CSU
Vicki Dodd, BSc Macq, Dip IM-Lib NSW
Annette Meldrum
Sandi Wooton

FACULTY VISITING

COMMITTEE

The Honourable Judge R O Blanch, Chief Judge, District Court
Ms Patricia Bergin, Barrister, Sydney
Ms Marion Brown, Guardianship Board
Ms Sharyn Ch'ang, Legal Counsel, IBM Australia
Mr Stephen Gates, Partner, Clayton Utz, Sydney
Mr Laurie Glanfield, Director-General, Attorney General's Department of NSW
Mr Peter Hidden, QC, Sydney
The Honourable Dr Robert M Hope, QC, Chancellor, University of Wollongong (ex-officio)
Ms Gai McDowell, Director of Wollongong Office, Director of Public Prosecutions
The Honourable Daryl Melham, MP, Chair House of Representatives Standing Committee on Legal and Constitutional Affairs
Ms Nancy Milne, Phillips Fox, Sydney
Ms Hilary Penfold, First Parliamentary Counsel
His Honour Judge Joseph Phelan, District Court of NSW
Mr Mark Richardson, Deputy Chief Executive Officer, Law Society of NSW
The Honourable Ms Helen Sham-Ho, MLC
Mr Richard St John, Secretary and General Counsel, BHP
Ms Sue Tongue, Deputy President, Australian Law Reform Commission
Justice William Windeyer, RFD, Supreme Court of NSW

LAW**COURSES OFFERED**

The Faculty offers the following postgraduate diplomas and degrees:

1. Doctor of Philosophy
2. Honours Master of Laws by Research
3. Honours Master of Arts by Research
4. Honours Master of Commerce by Research
5. Honours Master of Laws (Natural Resources Law) by Research
6. Honours Master of Natural Resources Law by Research
7. Honours Master of Laws (Court Management) by Research
8. Honours Master of Court Management by Research
9. Honours Master of Arts by Coursework
10. Honours Master of Commerce by Coursework
11. Master of Laws (Court Management)
12. Master of Court Management
13. Master of Laws (Natural Resources Law) by Coursework
14. Master of Natural Resources Law by Coursework
15. Graduate Diploma in Law
16. Graduate Diploma in Law (Court Policy and Administration)
17. Graduate Diploma in Natural Resources Law

CURRENT RESEARCH AREAS

Supervision in research in the following areas is likely to be available to candidates undertaking research degrees:

Administrative law
 Anti-discrimination law
 Commercial and finance law
 Company law
 Comparative law
 Constitutional law
 Consumer protection law
 Contract law
 Court policy and administration
 Criminal law
 Cross-cultural legal issues
 Dispute Resolution
 Environmental and planning law
 Family law and welfare policy
 Feminism and law
 Industrial relations law
 Information technology law
 Insurance law
 Intellectual property law
 International law
 Jurisprudence
 Law and literature
 Law relating to evidence, remedies and court procedure
 Law relating to the sea
 Natural resources law
 Property law
 Refugee law
 Regulation of economic activity
 Taxation law and practice
 Torts.

SCHEDULE OF PROGRAMS
**HONOURS MASTER OF ARTS BY COURSEWORK and
 HONOURS MASTER OF COMMERCE BY COURSEWORK**

Number	Subject	Credit Points
LAW902	Research Project A	6
LAW903	Research Project B	12
LAW904	Research Project C	8
LAW905	Research Project D	8
LAW951	Taxation Policy and Practice	6
LAW953	Studies in Taxation	6
LAW963	Jurisprudence	6
LAW964	Studies in Business Law	6
LAW965	Studies in Administrative Law	6
LAW966	Studies in Industrial Law	6
LAW967	Studies in Trade Practices and Consumer Law	6
LAW968	Issues in the Philosophy of Law	6
LAW987	Special Topic in Law - A	6
LAW988	Special Topic in Law - B	6
LAW993	Research Essay	12

MASTER OF LAWS (COURT MANAGEMENT) and MASTER OF COURT MANAGEMENT

Name	Subject	Credit Points
LAW801	Court Management I - Principles of Judicial Administration	6
LAW802	Court Management II - Processes of Dispute Resolution	6
LAW803	Court Management III - Case Management	6
LAW901	Research in Court Management	36
BUSS903	Business Data Processing Systems	6
MGMT911	Organisational Behaviour	6
ACCY850	Public Sector Financial Management and Controls	6

MASTER OF LAWS (NATURAL RESOURCES LAW)* and MASTER OF NATURAL RESOURCES LAW*

Number	Subject	Credit Points
LLB930	Research Project in Natural Resources Law	24

*Candidates must complete the requirements for the Graduate Diploma in Natural Resources Law as well as the above subject.

GRADUATE DIPLOMA IN LAW

Number	Subject	Credit Points
LAW810	Law in Society	8
LAW811	Law of Contracts	8

Candidates will also complete subjects to a value of at least 32 credit points selected from the Legal Studies Schedule set out in the *Undergraduate Calendar*.

GRADUATE DIPLOMA IN LAW (COURT POLICY AND ADMINISTRATION)

Number	Subject	Credit Points
LAW801	Court Management I - Principles of Judicial Administration	6
LAW802	Court Management II - Processes of Dispute Resolution	6
LAW803	Court Management III - Case Management	6
LAW804	Court Management IV - Current Issues in Judicial Administration	12

Candidates will also complete BUSS903; MGMT911; ACCY850 - refer to the Faculty of Commerce section.

GRADUATE DIPLOMA IN NATURAL RESOURCES LAW

Number	Subject	Credit Points
<i>Compulsory subjects:</i>		
LLB910	Introduction to Law	8
LLB911	Introduction to Natural Resources Law	8
LLB913	Resources Decision Making	8
<i>Options - at least 3 chosen from those offered which may include:</i>		
LLB914	Mining Law	8
LLB915	Commercial Aspects of Resources Development	8
LLB916	Energy Law I	8
LLB917	Energy Law II	8
LLB918	Law of Land & Nature Conservation	8
LLB919	Water Resources Law	8
LLB920	Local Government & Natural Resources	8
STS929*	Studies in Resources and Environmental Policy	8

*STS929 is offered by the Department of Science and Technology Studies.

GRADUATE DIPLOMA IN COMMERCE (MANAGEMENT) and MASTER OF BUSINESS ADMINISTRATION

Number	Subject	Credit Points
LAW960	Legal Studies for Professionals	6
LAW961	Selected Legal Topics in Management	6
LAW969	Occupational Health and Safety Law	6

COURSE REQUIREMENTS

Session of Offer

Subjects for the Graduate Diplomas and Masters courses will be offered, subject to availability of staff, in a mode and session to be determined by the Dean. There may be special requirements in the courses leading to the Graduate Diploma in Law (Court Policy and Administration) and the Graduate Diploma in Natural Resources Law. Please consult the relevant sections below.

Seminars

Generally a three hour weekly seminar is held for each 800 or 900 level subject. Subjects for the Graduate Diploma in Law (Court Policy and Administration) and the Graduate Diploma in Natural Resources Law will be offered on a mixed mode basis with an intensive residential face to face teaching component. Students enrolled in the Graduate Diploma in Law may enrol in subjects at 100 - 300 level, which may require different patterns of attendance.

These subjects are listed in the *Undergraduate Calendar*.

Assessment

The assessment for 800 or 900 level subjects may be based on seminar contribution, essays and examinations. The subject program for each subject will specify the seminar times and the method of assessment.

Textbooks

There are usually no prescribed textbooks. Reading is required from a wide variety of references, including books and journal articles. Specific recommendations may be obtained from the Faculty of Law.

1. DOCTOR OF PHILOSOPHY
2. HONOURS MASTER OF LAWS BY RESEARCH
3. HONOURS MASTER OF ARTS BY RESEARCH
4. HONOURS MASTER OF COMMERCE BY RESEARCH

These courses are open to students with a degree with Honours Class II or equivalent (in the case of the Honours Master of Laws by Research, the first degree must be a degree in law). Students who do not possess such a degree may be permitted to demonstrate capacity for research by first completing LAW999 Special Research Paper in Law. The requirement of the degree is the satisfactory completion of a thesis to the value of 48 credit points (LAW998 Major Thesis) in accordance with Attachment C to the Course Rules.

5. HONOURS MASTER OF LAWS (NATURAL RESOURCES LAW)
6. HONOURS MASTER OF NATURAL RESOURCES LAW

These courses are designed for students to write a research dissertation in the area of Natural Resources Law and Policy, (in the case of the Honours Master of Laws

(Natural Resources Law), the first degree must be a degree in Law). The requirement of the degree is the satisfactory completion of a thesis to the value of 48 credit points (LAW 998 Major Thesis).

7. HONOURS MASTER OF LAWS (COURT MANAGEMENT)
8. HONOURS MASTER OF COURT MANAGEMENT

A thesis on any topic within an area of expertise of the Faculty of Law, including Court Policy and Administration. (In the case of the Honours Master of Laws (Court Management), the first degree must be a degree in Law). Attendance at the residential sessions conducted for the coursework degrees and Graduate Diploma in Law (Court Policy and Administration) is encouraged but completion of those course requirements is not required. The course comprises (LAW998 Major Thesis) 48 credit points.

9. HONOURS MASTER OF ARTS BY COURSEWORK
10. HONOURS MASTER OF COMMERCE BY COURSEWORK

These courses are open to persons who hold a degree including some studies in law or legal studies. The course requirements are: (a) where the candidate has completed a degree with Honours Class II, completion of law subjects at 900 level (other than LAW960, LAW 961 and LAW 969) to the value of 48 credit points; or (b) completion of law subjects at 900 level to the value of 96 credit points

11. MASTER OF LAWS (COURT MANAGEMENT)
12. MASTER OF COURT MANAGEMENT

The Master of Laws (Court Management) is open to candidates who hold a recognised degree in Law, while the Master of Court Management is open to students with a recognised degree in any field, or the Graduate Diploma in Law (Court Policy and Administration) obtained at a satisfactory level. It is anticipated that such graduates would have had experience in court management or judicial/tribunal roles. Both Masters degrees are pursued through coursework and thesis over 3 years part-time. The course requires 5 weeks residential attendance on the Wollongong campus.

All Masters degrees may be completed on a full-time or part-time basis.

Seminars

Each session begins with a residential workshop of 4-5 days during which lectures, workshops and discussions are provided on the subjects to be completed that session. The subjects are completed off campus through reading and assignments.

Assessment

Assessment is based on workshop contribution, essays and other exercises.

Textbooks

Most of the required reading is prepared by the Faculty and made available to the students during the residential at the beginning of each session.

13. MASTER OF LAWS (NATURAL RESOURCES LAW)
14. MASTER OF NATURAL RESOURCES LAW

These courses build on the course for the Graduate Diploma in Natural Resources Law (see below). The course leading to the degree of Master of Laws (Natural Resources Law) is open to candidates who hold a degree in law. Other candidates are eligible for the course leading to the degree of Master of Natural Resources Law. The courses allow further specialisation through the completion of a supervised research paper. To qualify for the degree, a candidate must complete the requirements for the Graduate Diploma in Natural Resources Law and a research paper valued at 24 credit points.

15. GRADUATE DIPLOMA IN LAW

The course is intended for those who wish to study law at postgraduate level without embarking on a law degree. Subject to prerequisites, students may choose a course to suit their needs from the range offered by the Faculty. These subjects are listed in the Legal Studies Schedule in the *Undergraduate Calendar*. A candidate must complete subjects to a value of at least 48 credit points including LAW810 and LAW811.

16. GRADUATE DIPLOMA IN LAW (COURT POLICY AND ADMINISTRATION)

The course is designed for those working in court management, whether in a policy, administrative or judicial capacity. It is a part time course extending over 2 years and requiring 4 weeks residential attendance on the Wollongong Campus. Subjects in the course are from four disciplines - law, accountancy, business systems and management. The 7 law subjects, including 3 skills subjects, are described below. Refer to the relevant section of the Faculty of Commerce section for information on ACCY850 Public Sector Financial Management and Controls, BUS5903 Business Data Processing Systems and MGMT911 Organisational Behaviour.

17. GRADUATE DIPLOMA IN NATURAL RESOURCES LAW

This course (available on both a full-time and part-time basis) is intended both for those who have no prior legal education but want a focused introduction to law through a study of natural resources law, and for those with a prior legal education who wish to specialise in the field of natural resources law. The course is made up of three compulsory subjects (Introduction to Law; Introduction to Natural Resources Law; Resources Decision-Making) and three subjects chosen from a range of options (offered on the basis of demand and teaching

resources). One of the elective subjects (STS929 Studies in Resources and Environmental Policy) is taught by the Department of Science and Technology Studies. Those who have studied law previously may be exempted from some compulsory subjects and allowed to study additional optional subjects.

Subjects will be offered on a mixed mode basis, combining intensive residential schools with directed reading and writing.

Assessment may be based on assignments, participation in class discussions, examinations and research essays.

SUBJECT DESCRIPTIONS

LAW801 Court Management I - Principles of Judicial Administration

Autumn session; 6 credit points.

Fundamental principles of judicial administration - the role of courts and their relationship with the legislative and executive arms of government. The subject will cover the following matters: the historical development of courts in England and Australia; the nature of the judicial function of government; the distinctions between courts and tribunals; the relationships between the Parliament, the Executive and the Judiciary; accountability for the judicial system in responsible government. Taught in lectures and workshops during residential in February and through supervised research and analytical reading throughout Autumn session.

LAW802 Court Management II - Processes of Dispute Resolution

Spring session; 6 credit points.

Concepts of adjudication, arbitration, conciliation and mediation as dispute resolution procedures; the nature of the litigation process; relationship of arbitration, conciliation and mediation to litigation; involvement of courts in procedures other than litigation; evaluation of effectiveness of dispute resolution procedures. Taught during residential in July and through home exercises and assignments between July-November.

LAW803 Court Management III - Case Management

Autumn session; 6 credit points.

Taught during residential in February and through home exercises and assignments between March-June. Examines principles and practical applications of case flow management in reducing delay and providing efficient management of courts. Considers methods of undertaking and evaluating case flow management programs.

LAW804 Court Management IV - Current Issues in Judicial Administration

Double (A) session; 12 credit points.

Research project commenced in Skills II (see below) undertaken throughout the year (March-November) to produce a report of 10,000 words on original research into aspects of judicial administration in a court system with which the student is familiar. Topics might include: financing the courts;

current relations between the executive and the judiciary in court management; the appointment, removal and conditions of service of judicial officers; the managerialist approach to court and tribunal administration; the effectiveness of case management systems; setting performance standards in a court system. Project supervised by a member of the Faculty or someone selected by the Faculty as suitably qualified to direct the research. The project is to use the techniques learnt in BUSS903.

Skills I Research Techniques and Critical Analysis

Autumn session.

Preparation for LAW 801, LAW 802 and LAW 803. Reading and analysis exercises to assist understanding of legal materials used in other law subjects.

Skills II Research Methods

Spring and Autumn sessions.

Introduction to social research and evaluation techniques as preparation and support for the LAW804 project.

LAW810 Law in Society

Autumn session; 8 credit points.

Pre-requisite: none.

Remark: Not to count with LAW100 or LAW160 or LLB100.

Assessment: essays, class participation, assignments, examination.

An overall perspective on the Australian legal system and its role in the Australian social order; and introduction to the sources of authority of legal rules, the nature of legal institutions and practices, legal materials, reasoning and terminology. Aspects of substantive law will be used to illustrate general principles.

LAW811 Law of Contracts

Spring session; 8 credit points.

Pre-requisite: LAW810 or LAW 160 or LAW100.

Remark: Not to count with LAW210 or LAW161 or LLB210.

Assessment: essays, class participation, assignments, examination.

The development of the modern law of contracts illustrating how scholars and lawyers have derived general principles of law from decisions about specific relationships; express and implied contracts; formation of contracts; the doctrine of privity of contract and statutory modifications; contractual terms and conditions; performance and breach; capacity to make contracts.

LAW901 Research in Court Management

Double session; 36 credit points.

Pre-requisite: LAW 801, LAW 802.

Assessment: research paper.

This research paper is to be submitted in the form of either: (a) a management-oriented report detailing methods, findings, and implications; or (b) a paper suitable for journal publication.

LAW902 Research Project A

Autumn, Spring or Summer session; 6 credit points.

Pre-requisite: LAW100 or LAW160 or LAW810 and LAW210 or LAW161 or LAW811 if specialising in Commercial Law.

Assessment: 8,000 word dissertation.

The student shall propose a research project for approval by the Dean.

LAW903 Research Project B

Autumn, Spring or Double (A) session; 12 credit points.

Pre-requisite: LAW100 or LAW160 or LAW810 and LAW210 or LAW161 or LAW811 if specialising in Commercial Law.

Assessment: 12,000 word dissertation.

The student shall propose a research project for approval by the Dean.

LAW904 Research Project C

Autumn or Spring session; 8 credit points.

Pre-requisite: LAW 100 or LAW160 or LAW810 and LAW210 or LAW161 or LAW811 if specialising in Commercial Law.

Assessment: 10,000 word dissertation.

The student shall propose a research project for approval by the Dean.

LAW905 Research Project D

Autumn, Spring or Double (A) session; 8 credit points.

Pre-requisite: LAW100 or LAW160 or LAW810 and LAW210 or LAW161 or LAW811 if specialising in Commercial Law.

Assessment: 10,000 word dissertation.

The student shall propose a research project for approval by the Dean.

LAW951 Taxation Policy and Practice

Session: to be advised; 6 credit points.

Remark: Not to count with LAW352.

An examination of the revenue laws including income tax, sales tax, property tax, stamp duty and payroll tax.

LAW953 Studies in Taxation

Session: to be advised; 6 credit points.

The statutory and common law foundations of the Federal Income tax system. Common law concepts of income and capital and statutory modifications and interpretations of these concepts. Legal and accounting approaches to taxable income. Tax and estate planning concepts. Tax avoidance and evasion. Tax incidence and equity. An examination of tax policies, provisions and problems relating to special entities - and special provision areas, such as primary producers, mining and petroleum industries, non-residence, foreign-controlled companies and royalty provisions. International aspects of Australian income tax including double tax agreements.

LAW960 Legal Studies for Professionals

Spring session; 6 credit points.

This subject is offered in a series of modules. The first module, lasting for approximately 6 weeks, and completed by all students, introduces the constitutional structure of the Australian federal system, sources of law, the common law system, the hierarchy of the courts, the doctrine of precedent, how to understand case reports, statutory interpretation and how to understand an act of parliament. Other modules have been designed for students enrolled in various postgraduate courses. The Public Health module includes an introduction to the law relating to the regulation of Australian health care, criminal and civil issues in the provision of health care, mental health law,

employment and occupational health and safety obligations of health care institutions. Other modules may be added to cater for the needs of particular courses.

LAW961 Selected Legal Topics in Management

Session: to be advised; 6 credit points.

Selected legal topics in management. The selection will be made by the Dean, taking into account the expertise of academic staff, including visiting staff and the interest of students.

LAW963 Jurisprudence

Session: to be advised; 6 credit points.

A study of theories on the nature and purpose of law.

LAW964 Studies in Business Law

Session: to be advised; 6 credit points.

A detailed examination of the law relating to selected aspects of business organisation, including the law relating to the nature and formation of partnership, mergers and takeovers, insider trading and securities.

LAW965 Studies in Administrative Law

Session: to be advised; 6 credit points.

A detailed examination of the legal problems raised for individual citizens in the exercise of Governmental or other public powers. Particular topics include delegated legislation, ministerial responsibility, statutory corporations and administrative tribunals. Crown proceedings; and the statutory and common law procedures which may be invoked to counter allegations of maladministration or illegality including the Administrative Appeals Tribunals, judicial review and ombudsmen.

LAW966 Studies in Industrial Law

Session: to be advised; 6 credit points.

A detailed examination of the law (including some comparative law) relating to selected aspects of employment relationships including industrial accidents, job security, registration and control of trade unions, picketing, the right to work and closed shop agreements, and conciliation and arbitration and collective bargaining.

LAW967 Studies in Trade Practices and Consumer Law

Session: to be advised; 6 credit points.

A detailed examination of restrictive practices and the development of the law to counter them including the role of the Commonwealth and New South Wales agencies which administer the relevant Acts.

LAW968 Issues in the Philosophy of Law

Spring session; 6 credit points.

Pre-requisite: LAW160 or LAW100.

A critical examination of a selection of the following topics:

(i) The nature and purpose of law; (ii) The logic of legal reasoning; law and textual analysis; legal causation, probability, evidence and standards of proof; (iii) The defeasibility of practical reason; causal explanations and reasons explanations; action, intention and will; agency, control and responsibility; the nature of justification and excuse; (iv) The justification of

punishment; the moral limits of the criminal law; conscience and the law; morality and defences to murder; contemporary moral issues of legal interest (eg informed consent, reproduction technology, euthanasia); concepts of property. Issues selected will be discussed in the context of particular areas of law. The emphasis will be on philosophical issues in Criminal Law.

LAW969 Occupational Health and Safety Law

Session: to be advised; 6 credit points.

The subject deals with the interpretation and application of the NSW OHS Act.

LAW987 Special Topic in Law - A

Session: to be advised; 6 credit points.

LAW988 Special Topic in Law - B

Session: to be advised; 6 credit points.

A special topic to be selected from any area of commercial law. The selection will be made by the Sub-Dean taking into account the expertise of academic staff, including visiting staff, and the interest of students.

LAW993 Research Essay

Session: to be advised; 12 credit points.

Information may be obtained from the Sub-Dean regarding the research essay.

LAW998 Major Thesis

Double session (A); 48 credit points (contact as required).

Pre-requisite: permission of the Dean.

Assessment: thesis.

Content as arranged.

LAW999 Special Research Paper in Law

Double session (A); 48 credit points (contact as required).

Pre-requisite: Permission of the Dean.

Assessment: research essay.

Content as arranged.

LLB910 Introduction to Law

Autumn session; 8 credit points.

This subject is offered on a mixed mode basis with a one week residential face to face teaching component.

Assessment: a selection from assignments, class participation, examination and research essay.

Introduction to the legal system; Commonwealth/State Division of powers; introduction to the law of contract, tort, criminal and administrative law; the distinction between contractual and proprietary interests.

Textbooks:

Specially prepared course materials.

Objectives:

The objective of this subject is to introduce you to the relevant legal concepts and principles which will serve as building blocks for substantive subjects in natural resources law.

At the end of this course, students will be able to:

- describe the sources of law and understand the relationship between them;
- describe the hypothetical operation of the doctrine of precedent and explain its significance in practice;
- read and understand complex pieces of legislation;
- explain the meaning of legal concepts

relevant to natural resources law in the fields of torts law, administrative law, criminal law, constitutional law, international law, contract law, the law of property and the law relating to corporate structures.

LLB911 Introduction to Natural Resources Law

Autumn session; 8 credit points.

This subject is offered on a mixed mode basis with a one week residential face to face teaching component.

Co-requisite: LLB910.

Assessment: a selection from assignments, class participation, examination and research essay.

Ownership of natural resources; the implications of the Commonwealth/State division of legislative powers for natural resources regulation; the historical development and structure of natural resources law; overlaps between regulatory authorities; forward planning and development control; environmental impact assessment law; the law relating to pollution and waste disposal.

Textbooks:

Specially prepared course materials.

Objectives:

The objective of this subject is to introduce you to fundamental concepts and themes within natural resources law, providing the building blocks required to pursue more specialised study in law and policy relating to specific natural resources, to be covered in optional subjects. Some issues are common to all areas of natural resources law, although the precise approach taken varies, allowing us to compare across different resources. The issues include questions of ownership, the application of techniques of environmental planning and assessment, the control of pollution and organisational structures for resource exploration and development. After completing this subject, students will be able:

- to explain the formal constitutional division of power between the Commonwealth and State Parliaments and to contrast this with the division of responsibility in practice;
- to understand the extent to which governments benefit from natural resource development through the levying of taxes, royalties and rent;
- to understand the way in which the environmental planning system regulates access to natural resources and interacts with more specific regulatory regimes;
- to read and understand complex environmental planning instruments;
- to explain and critically evaluate the systems of environmental impact assessment applying at Commonwealth and State levels and to explain the interrelationship between them;
- to critically evaluate the role of diverse forms of regulation of access to and management of natural resources, including regulation through criminal law, fiscal instruments, public participation in environmental decision-making and regulation through civil law;
- to understand the role played by international law in dealing with natural resources.

LLB913 Resources Decision-Making

Autumn session or Double (A) session; 8 credit points.

This subject is offered on a mixed mode basis with a one week residential face to face teaching component.

Co-requisite: LLB910 and LLB911.

Assessment: a selection from assignments, class participation, examination and research essay.

Bureaucratic decision making processes; cost-benefit analysis; risk assessment; environmental impact assessment; public participation in decision-making processes; the role of the courts and adversarial methods of dispute resolution; public inquiries and other alternative forms of dispute resolution; scientific and legal forms of proof.

Textbooks:

Specially prepared course materials.

Objectives:

The objective of this subject is to conduct an in-depth study of:

- methods of decision-making used by government, private firms and others in the area of resource management;
- the ways others, including environmentalists, scientists, economists and consumers, can influence those decisions.

After completing this subject, students will be able:

- to explain and critique various forms of assessment used by governments and firms to evaluate proposed projects in terms of their potential environmental and social impacts;
- to critically evaluate the role economics can play in resource decision-making by identifying the underlying assumptions in economic theory and the advantages and limitations to the practical application of that theory to resource decisions;
- to understand the dynamics and nature of environmental controversies and the use of various mechanisms for resolution of such controversies, including public inquiries and dispute resolution;
- to appreciate the importance of scientific uncertainty in resources decision making, particularly in terms of regulation;
- to critically analyse the way that different groups in society, including environmentalists, consumers and technologists contribute to resource decisions.

LLB914 Mining Law

Spring session according to demand; 8 credit points.

This subject is offered on a mixed mode basis with a one week residential face to face teaching component.

Pre-requisite: LLB910 and LLB911.

Assessment: a selection from assignments, class participation, examination and research essay.

Ownership of minerals; the distinction between mining and extractive industry; exploration and mining titles under the mining and coal mining legislation; the relationship between mining legislation and environmental planning and assessment legislation; industrial health and safety law and the mining industry.

Textbooks:

Specially prepared course materials.

Objectives:

The objective of this subject is to introduce you to fundamental concepts and themes on

mining law. The course covers the following topics: The historical and constitutional aspects of Australian mining legislation; the legal concepts of minerals and mining; issues of ownership of minerals; structuring minerals ownership in Australia; mining tenements; the administrative and judicial role of the Mining Warden; occupational health and safety laws; environmental planning and impact assessment of mining operations; the interaction between planning law and mining law; environmental liability arising from mining operations; the implications of the Mabo decision for mining and petroleum and the international law aspects of seabed mining.

After completing this subject, students will be able to:

- comprehend the legal framework for mining operations;
- understand the broad policy issues behind mining legislation;
- relate these policy issues to specific aspects of mining law;
- understand the concept and species of mining tenements under the Mining Act 1992 (NSW);
- understand and evaluate the major environmental law questions that relate to mining operations from the practical and policy perspectives;
- understand the relevant rules of international law dealing with sea-bed mining and the likely implications of sea-bed mining for land-based mining in Australia.

LLB915 Commercial Aspects of Resources Development

Spring session according to demand; 8 credit points.

This subject is offered on a mixed mode basis with a one week residential face to face teaching component.

Pre-requisite: LLB910 and LLB911.

Assessment: a selection from assignments, class participation, examination and research essay.

Legal structures for resources projects (joint ventures, etc); financing resources projects (including investment regulation; taxation and stamp duty); legal aspects of resource marketing.

Textbooks:

Specially prepared course materials.

LLB916 Energy Law I

Spring session according to demand; 8 credit points.

This subject is offered on a mixed mode basis with a one week residential face to face teaching component.

Pre-requisite: LLB910 and LLB911.

Assessment: a selection from assignments, class participation, examination and research essay.

The law relating to oil and gas exploration, production and transportation, including onshore and offshore exploration and production titles, royalties, pipelines and oil pollution. The law relating to the mining and use of uranium.

Textbooks:

Specially prepared course materials.

LLB917 Energy Law II

Spring session according to demand; 8 credit points.

This subject is offered on a mixed mode basis with a one week residential face to face teaching component.

Pre-requisite: LLB910 and LLB911.

Assessment: a selection from assignments, class participation, examination and research essay.

The law relating to electricity generation and transmission, including monopolisation and privatisation, the relationship between transmission and supply authorities, pollution control, pricing arrangements and cogeneration. The law relating to renewable energy resources, including rights of access to wind and sun.

Textbooks:

Specially prepared course materials.

LLB918 Law of Land and Nature Conservation

Spring session according to demand; 8 credit points.

This subject is offered on a mixed mode basis with a one week residential face to face teaching component.

Pre-requisite: LLB910 and LLB911.

Assessment: a selection from assignments, class participation, examination and research essay.

The law relating to the use and conservation of native vegetation, including special conservation areas, forestry in State forests and on privately owned land, agricultural land clearing, the law relating to the protection and exploitation of native fauna, including habitat conservation, regulation of commercial exploitation and endangered species legislation. The law relating to land degradation.

Textbooks:

Specially prepared course materials.

Objectives:

The objectives of this subject are:

- to provide an introduction to land management and nature conservation law and policy at the International, Australian and State levels;
- to provide an understanding of the principles and theoretical basis of land management and nature conservation; and
- to provide a practical understanding of the role of law in the context of land management and nature conservation.

After completing this subject, students will be able to:

- understand Australia's international legal obligations with respect to nature conservation and evaluate the domestic constitutional problems of the implementing these obligations;
- appreciate the role of the Commonwealth in land management and nature conservation;
- critically analyse the various policy approaches available for land management and nature conservation;
- explain and evaluate the legal and policy issues in relation to wildlife management, the conservation of endangered species, the setting aside of specially protected areas and places of world heritage value, and the management of forestry resources;
- understand the concept of biodiversity and critically assess current action at Commonwealth and State levels in conserving biodiversity;
- appreciate the legal and policy issues involved in the conservation management of public and private lands.

LLB919 Water Resources Law

Spring session according to demand; 8 credit points.

This subject is offered on a mixed mode basis

with a one week residential face to face teaching component.

Pre-requisite: LLB910 and LLB911.

Assessment: a selection from assignments, class participation, examination and research essay.

The law relating to the allocation of inland waters, including the licensing system and water rights, irrigation, domestic supply, regulation of activities on flood plains and extractive industries in watercourses, catchment management and the control of diffuse pollution. The law relating to marine living resources, including international aspects, the Commonwealth/State division of powers, marine reserves and the regulation of commercial exploitation.

Textbooks:

Specially prepared course materials.

Objectives:

The objective of this subject is to conduct an in-depth study of:

- the law and policy relating to the use of water from rivers for farming and domestic purposes, with particular reference to New South Wales;
- the law and policy relating to fisheries management, at the international, Commonwealth and State levels.

After completing this subject, students will be able:

- to explain the different legal approaches taken in different jurisdictions to regulating the allocation of water from rivers, in particular, the doctrine of prior appropriation, the riparian system, and permit-based systems;
- to explain the detailed features of the current permit-based system for allocating water in New South Wales, as contained in the Water Act 1912 and developed through policy initiatives taken by the Department of Water Resources, and to understand why the changes to the existing law proposed by the Department of Water Resources are necessary;
- to understand the way in which the provisions of the Environmental Planning and Assessment Act 1979 interact with the Water Act 1912;
- to understand the management problems which arise when rivers intersect more than one jurisdiction, and to critically evaluate the way in which these have been addressed in relation to the Murray-Darling Basin;
- to appreciate the intimate relationships which exist between land degradation and water resource management, and water extraction/use and water pollution;
- to critically analyse the complex institutional structure under which water catchments are currently managed in New South Wales and critically evaluate proposals for reform;
- to understand and explain the legal regime of fisheries at the international level and how that regime impacts on fisheries law and policy making at the domestic level;
- to evaluate the competing policy issues in modern fisheries utilisation and management at the domestic level;
- to explain and critically evaluate the use of fiscal instruments, such as tradeable permits and quotas, as alternatives to command and control regulation in relation to fisheries management and management of rivers.

LLB920 Local Government and Natural Resources

Autumn session according to demand: 8 credit points.

This subject is offered on a mixed mode basis with a one week residential face to face teaching component.

Pre-requisite: LLB910 and LLB911.

Assessment: a selection from assignments, class participation, examination and research essay.

The development of local government in Australia. The law relating to the constitution, functions and powers of local government in terms of the ability of local government to control the development and conservation of natural resources. Relations between local and higher levels of Government. The law relating to environmental planning and assessment by local government authorities.

Textbooks:

Specially prepared course materials.

Objectives:

On successfully completing this subject students will be able to:

- demonstrate a critical appreciation of the role of local government in the decision making process concerning the development and conservation of natural resources;
- they will be able to describe and analyse the legal framework in which local government operates throughout Australia;
- they will be able to understand the implications of local government law, administration and practice for natural resources policy.

LLB930 Research Project in Natural Resources Law

Summer, Autumn or Spring session; 24 credit points (contact as required).

Pre-requisite: 24 credit points at 900 level.

Assessment: research essay.

Content as arranged.

FACULTY OF
SCIENCE

FACULTY OF SCIENCE

FACULTY OFFICE

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Sub Dean: Associate Professor John Ellis

Faculty Officer: Ms Pat Macquarie

(042) 21 3481

Administrative Assistant: Ms Christine M Peacock

(042) 21 3530

MEMBER UNITS

The Faculty of Science is made up of the following Units:

Department of Biological Sciences

Department of Chemistry

School of Geosciences comprising Geography and Geology

Department of Physics

Environmental Science Unit

RESEARCH COURSES AVAILABLE

The Faculty offers Honours Master of Science and Doctor of Philosophy degrees by research. In addition, the Honours Master of Arts is offered in the Department of Geography.

POSTGRADUATE PROGRAMS

Postgraduate coursework programs are available in the Faculty in the following areas:

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Melb, HonDSc *N'cle (NSW)*, HonDSc,
ABSM, CEng, FAA, FTS, MAusIMM,
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Dr Thomas Jon East, BA(Hons) PhD *Qld*,
Senior Research Scientist, Bureau of
Resource Sciences, Department of
Primary Industries.

BIOLOGICAL SCIENCES

COURSES OFFERED

The following postgraduate degrees and diplomas are available:

1. Doctor of Philosophy
2. Honours Master of Science by Research
3. Honours Master of Science in Biotechnology
4. Master of Science (Biotechnology)
5. Graduate Diploma in Science (Biological Sciences)

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Doctor of Philosophy and the Honours Master of Science:

Animal physiology

Environmental physiology of higher vertebrates
 Metabolic physiology and thermoregulation
 Thyroid and adrenal function in higher vertebrates
 Ecological energetics
 Evolution of endothermy
 Physiological development in birds and marsupials
 Dietary fats and their effects on body function

Plant biochemistry

Photosynthesis: studies on the carbon fixing enzyme rubisco, and its activation
 Turgor-volume regulation: regulation of glycerol synthesis by osmotic pressure in the salinity-resistant alga *Dunaliella*
 DNA amplification and analysis: application of molecular biology techniques to species identification in algae
 Bioluminescence: applications to enzyme mechanisms and analysis

Cell and cancer biology

Tissue injury during inflammation
 Cellular responses to oxidative stress
 Monocyte migration into inflammatory foci
 Cancer invasion and metastasis
 Cell-surface and receptor-bound proteases
 Biological roles of plasminogen activator inhibitors
 Mechanisms of chemotherapeutic-induced apoptosis
 Mechanisms of lipid transport at the cell membrane
 Cell surface events in apoptosis

Immunobiology and vaccine development

Mechanism of somatic hypermutation in antibody variable region genes
 Mechanisms of rapid 'directional' molecular evolution
 Mechanism of acquired paternal transmission in mice
 Mechanisms of adjuvant action
 Development of acellular and live oral recombinant vaccines against the whooping cough bacterium, *Bordetella pertussis*
 Molecular and genetic analysis of *Bordetella bronchiseptica*
 Development of recombinant oral and intranasal vaccine delivery systems for the stimulation of immunity against the porcine pathogens *Erysipelothrix rhusopathiae* and *Mycoplasma Hypopneumoniae*
 Development of techniques to enhance the sensitivity of immunoassays

Ecology and population genetics

Mating systems and population genetics of native plants
 Pollination systems of native plants
 Responses of plant and animal populations to bushfires
 Impact of herbivores on plant communities
 Plant succession and recolonization of disturbed land
 Seed and fruit dispersal by animals
 Avian ecology
 Invertebrate biodiversity
 Conservation biology

Marine ecology and genetics

Evolutionary consequences of varying patterns of reproduction and dispersal, self-recognition and aggressive interactions in marine invertebrates
 Conservation of marine ecosystems
 Chemical ecology: the relative importance of natural products as mediators of interactions between organisms, particularly compounds that play a role in preventing fouling of marine invertebrates. Larval ecology: pelagic and early benthic stages as determinants of subsequent patterns of invertebrate distribution and abundance

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAMS IN BIOTECHNOLOGY

leading to the Master of Science and the Honours Master of Science.

Number	Subject	Credit Points
(i) Graduate Diploma in Science (Biological Sciences)¹		
<i>Leading to the MSc (Biotechnology)</i>		
BIOL320	Molecular Cell Biology	8
BIOL321	Cellular and Molecular Immunology	8
CHEM320	Biological Chemistry	8
MATH252	Statistics for the Natural Sciences	6
BIOL303	Biotechnology: Applied Molecular and Cell Biology	8
MGMT308	Introduction to Management for Professionals A	6

(ii) Master of Science (Biotechnology)¹

Core subjects - Autumn Session

BIOL920	Biotechnology - Cells, Proteins and Antibodies	12
BIOL921	Biotechnology - Nucleic Acids	12

Options¹ - Spring Session

At least 24 credit points from the following - selected in consultation with the Co-ordinator of Biotechnology: Dr M Walker

BIOL910	Advanced Topics in Biology A: Literature Research Project	16
BIOL916 ²	Plant and Agricultural Biotechnology	6
BIOL917 ²	Aquatic and Environmental Biotechnology	6
BIOL918 ²	Diagnostic Biotechnology	8
BIOL991	Biotechnology Research Project	24

(iii) Honours Master of Science (Biotechnology)

The Honours Master of Science (Biotechnology) is a research-based degree, examined principally by thesis. For further information, contact the Co-ordinator of Biotechnology, Dr M Walker.

¹ Other appropriate subjects from the graduate or 300-level schedule may be taken with the permission of the Departmental Head.

² Not all of these subjects will necessarily be offered in any one year.

OTHER POSTGRADUATE SUBJECTS

Number	Subject	Credit Points
BIOL910	Advanced Topics in Biology A	16
BIOL911	Advanced Topics in Biology B	16
BIOL999	Major Thesis	48

COURSE REQUIREMENTS

1. DOCTOR OF PHILOSOPHY

Candidates for this degree enrol in BIOL999 (Major Thesis) and undertake a research project in one of the areas listed above. Enrolment may be full-time or part-time. Intending students should first contact the Head of the Department of Biological Sciences.

2. HONOURS MASTER OF SCIENCE

The objective of this degree is to provide a grounding in experimental biological research. Graduates entering the degree who hold a Bachelor degree with Honours at a standard of Class II, Division 2 or higher are required to complete the 48 credit point BIOL999 Major Thesis. Students entering the degree with qualifications below Honours Class II, Division 2 must complete subjects which aggregate to not less than 96 credit points.

These will consist of at least 48 credit points including, normally, BIOL910 Advanced Topics in Biology A and BIOL911 Advanced

Topics in Biology B, plus at least 16 credit points from 300-level Biology subjects specified by the Departmental Head. The remaining 48 credit points will be obtained by completing the subject BIOL999 Major Thesis.

3. HONOURS MASTER OF SCIENCE (BIOTECHNOLOGY)

This program will cover the latest theory and procedures in Cellular and Molecular Biology and their application to Biotechnology. A specific research project in some aspect of Biotechnology is required. This degree is recommended for those students who wish to follow a career in research.

Entry into the course normally requires a Bachelors degree with Honours at a standard of Class II, Division 2 or above, in an appropriate discipline, or a Master of Science (Biotechnology) completed at an appropriate standard. For further information, consult research interests of particular staff members and contact the Co-ordinator of Biotechnology, Dr Mark Walker.

4. MASTER OF SCIENCE (BIOTECHNOLOGY)

The Master of Science (Biotechnology) will produce graduates with up-to-date knowledge and technological expertise in specific areas of Cell and Molecular Biology, which are the basis for modern biotechnological research and development. Coursework to a value of at least 48 credit points is required.

Entry into the course normally requires a Bachelors degree with Honours at a standard of Class II, Division 2 or above in an appropriate discipline, or an appropriate Graduate Diploma in Science (Biological Sciences) completed at a satisfactory standard.

5. GRADUATE DIPLOMA IN SCIENCE (BIOLOGICAL SCIENCES)

The purpose of the Graduate Diploma (Biological Sciences) is to provide graduates who have insufficient background in parts of Biological Sciences with the skills and knowledge necessary to enable them to proceed with further study.

Successful completion of appropriate subjects with a value of at least 48 credit points is required, the subjects being chosen from the undergraduate schedules of subjects as set out in the Undergraduate Calendar. At least 24 credit points must be from 300-level or 400-level Biology subjects. The selection of subjects will be approved by the Departmental Head. Approved subjects which lead to the Master of Science (Biotechnology) course are listed below.

SUBJECT DESCRIPTIONS

BIOL910 Advanced Topics in Biology A: Literature Research Project

Autumn and/or Spring session; 16 credit points (directed reading and analysis of published papers).

Assessment: substantial literature review report and seminar.

Under the supervision of staff nominated by the Head of Department, the student will survey the biological literature and present a written report and a seminar on a topic chosen by the supervisory staff.

Co-ordinator: Associate Professor AJ Hulbert.

BIOL911 Advanced Topics in Biology B: Laboratory Research Project

Autumn and/or Spring session; 16 credit points (directed reading and field or laboratory experimental work).

Assessment: substantial project report and seminar.

Under the supervision of staff nominated by the Departmental Head the student will undertake a laboratory or field-based project and present a written report and a seminar on a topic chosen by the supervising staff.

Co-ordinator: Associate Professor AJ Hulbert.

BIOL916 Plant and Agricultural Biotechnology

Spring session; 6 credit points (20 hrs of lectures and tutorials plus practical work).

Pre-requisite: BIOL920, 921.

Assessment: seminars, project, examination.

Plant tissue culture - protoplast induction and regeneration, callus culture, suspension culture. Clonal propagation. Molecular biology of pathogen-plant interactions; microbial-plant symbiotic interactions; biological control of plant pathogens; detection of pathogens. Genetic engineering of plants. Algal culture and algal manipulation. The subject will provide the scientific background behind the listed topics, relevant practical knowledge and an understanding of their applications in developed and developing countries.

Textbook: Journal Articles.

Co-ordinator: Associate Professor R Lilley.

BIOL917 Aquatic and Environmental Biotechnology

Spring session; 6 credit points (20 hrs of lectures and tutorials plus practical work).

Pre-requisite: BIOL920, 921.

Assessment: seminars, project, examination.

Aquatic microbiology; Screening for useful chemicals from aquatic organisms; Biological degradation of aquatic pollutants including hydrocarbons and chlorinated compounds; Biological treatment processes to remove heavy metals from effluents and ores; Biodegradation and biodeterioration of

organic and inorganic compounds including waste treatment. The subject will provide the scientific background behind the listed topics, relevant practical knowledge and an understanding of their applications in developed and developing countries.

Textbook: Journal Articles.

Co-ordinator: to be advised.

BIOL918 Diagnostic Biotechnology

Spring session; 8 credit points (24 hrs of lectures and tutorials plus practical work).

Pre-requisites: BIOL920, 921.

Assessment: seminars, project, examination.

Production of diagnostic probes based on DNA and antibody technology for the diagnosis of diseases of humans, plants and animals, including diseases in aquaculture systems. Utilisation of such probes to detect specific pathogens in tissue samples and environmental samples, including soil, water and effluents. Collection and preservation of samples. DNA restriction analysis, oligonucleotide mapping and specific antigen detection in identifying micro-organisms. Basic epidemiology. ELISA and immuno-diagnosis. The subject will provide the scientific background behind the listed topics, relevant practical knowledge and an understanding of their applications in developed and developing countries.

Textbook: Journal Articles.

Co-ordinator: Dr MJ Walker.

BIOL920: Biotechnology: Cells, Proteins and Antibodies

Autumn session; 12 credit points (42 hrs lecture/tutorials plus practical work).

Pre-requisites: appropriate experience, or BIOL 320 and BIOL321.

Assessment: major essay, quiz, tutorial papers, poster, seminar, written examination.

Production, purification, modification and characterisation of recombinant proteins and immunoglobulins. Scale-up protein purification techniques. Monoclonal antibody technology. Protein and peptide antigens. Novel immunisation strategies. Detection of Ig subclasses. Antibody type, structure and function. Conjugation of antibodies. ELISA, RIA, immunoblotting, immunoprecipitation, immunostaining and immunoaffinity chromatography. Epitope mapping strategies and "mimotope" design. Antibody engineering. Catalytic antibodies. Potential clinical therapeutics. Ethical and social issues.

Co-ordinator: Dr MR Wilson.

BIOL921: Biotechnology: Nucleic Acids

Autumn session; 12 credit points (42 hr lecture/tutorials plus practical work).

Pre-requisites: appropriate experience, or BIOL 320 and BIOL321.

Assessment: major essay, quiz, tutorial paper report, poster, seminar, written examination.

Strategies for cloning of prokaryote and eukaryote genes using plasmid, cosmid, bacteriophage and transposon vector systems. Production and purification of recombinant proteins in bacterial, yeast, plant and animal systems. Extraction of nucleic acids from prokaryotic and eucaryotic organisms. Consideration of the various labelling techniques for DNA and the use of labelled DNA probes. Effect of

RNA secondary structure on expression of recombinant proteins. Transposon mutagenesis. Ribozymes and "gene shears". Vaccine development. Gene therapy and diagnosis of human genetic diseases. Ethical and social implications.

Co-ordinator: Dr MJ Walker.

BIOL991 Biotechnology Research Project

Autumn, Spring and Summer sessions; 24 credit points.

Pre-requisite: BIOL920, 921.

Assessment: written dissertation, seminar.

The student will undertake a research project on a topic in Biotechnology and present a research report and seminar on a topic chosen by the supervising staff. The research can be undertaken in collaboration with industry or another recognised institution.

Co-ordinator: Dr MR Wilson.

BIOL999 Major Thesis

48 credit points per year.

Assessment: major thesis.

This research to be chosen from the current research areas within the Department listed above. Topic to be arranged in consultation with relevant staff and approved by Department Head and Graduate Faculty.

CHEMISTRY

COURSES OFFERED

The following postgraduate degrees and diploma are available:

1. Doctor of Philosophy
2. Honours Master of Science by Research
3. Master of Science
4. Graduate Diploma in Science

POSTGRADUATE PROGRAM

Chemistry

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master of Science degree by research and the Doctor of Philosophy degree:

Atmospheric trace gas analysis using Fourier transform infrared spectroscopy
 Atmospheric reaction mechanisms
 Photochemistry caused by ozone depletion
 Environmental chemistry, especially the development of new methods for the analysis and treatment of industrial wastes and trace toxins
 Studies of heavy metal levels in the environment and investigations of the mechanism of toxic action
 Geochemical transport of metals, including uranium and thorium
 Electroanalytical chemistry, especially the development of chemically modified electrodes and electrochemical detectors for liquid chromatography
 Application of electrochemically-produced polymers in corrosion protection, biotechnology, catalysis, and as analytical sensors
 Development of microcomputer controlled on-site analysis systems
 Transport and equilibrium properties of liquids and solutions
 Kinetics of extraction processes involved in the food and beverage industries
 Structural studies of organic, organometallic, and inorganic compounds using EI, CI and FAB mass spectrometry
 Activation of CO and hydrocarbons by metal coordination - synthesis and mechanistic aspects
 Reactions of metal carbonyl clusters and their relation to catalytic processes
 Co-ordination chemistry of ruthenium
 Asymmetric synthesis using organometallic complexes
 Metal-protein and metal-DNA interactions, and model studies
 New methods for organic synthesis and asymmetric synthesis
 Organic synthesis of natural products and their biological chemistry
 Medicinal chemistry involving the design, synthesis and evaluation of new compounds with specific biological activity
 Synthesis and properties of new heterocyclic molecules
 The mechanism of senile cataract formation in man
 Novel methods for peptide synthesis and modification using organometallic reagents
 Protein modification by endogenous chemicals;
 Structure/function of proteins and peptides using high-field NMR spectroscopy and other analytical techniques
 Studies on the mass spectrometry of biological molecules such as peptides and nucleic acids
 Design, synthesis and evaluation of DNA-interactive anti-tumour agents

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN CHEMISTRY

leading to the Master of Science.

Number	Subject	Credit Points
CHEM910	Selected Topics in Chemistry A	16
CHEM915	Advanced Chemistry Laboratory Project	16
CHEM918	Chemistry Report	16
CHEM919	Advanced Topics in Chemistry	16

For further details, see *Course Requirements* below.

GRADUATE DIPLOMA IN SCIENCE

Subjects to the value of 48 credit points chosen from the following list in consultation with the Head of the Department of Chemistry. The Departmental Head may also nominate other subject(s) deemed appropriate.

Number	Subject	Credit Points
CHEM215	Food Chemistry	6
CHEM311	Inorganic Chemistry III	8
CHEM314	Instrumental Analysis	8
CHEM320	Biological Chemistry	8
CHEM321	Organic Chemistry III	8
CHEM323	Physical Chemistry III	8
CHEM327	Environmental Chemistry and Chemical Toxicology	8
CHEM340	Chemistry Laboratory Project	8
CHEM910	Selected Topics in Chemistry A	16
CHEM911	Selected Topics in Chemistry B	8
CHEM918	Chemistry Report	16

COURSE REQUIREMENTS

1. DOCTOR OF PHILOSOPHY

Candidates for this degree enrol in CHEM920 and undertake a research project in one of the current research areas listed above.

2. HONOURS MASTER OF SCIENCE

Introduction and Objectives

There have been many rapid advances in Chemistry, particularly in chemical instrumentation, over the past decade. Many techniques and applications are now in common use which did not even exist five years ago. There is therefore a need for Chemistry graduates, especially those of some standing, to become aware of, and proficient in, at least some of these new developments. The proposed courses are intended to provide for the specific needs and interests of applicants from both industry and education, as well as for students wishing to obtain experience in a modern research program.

Structure of the Course

The course will be made up of subjects selected from those described below, in accordance with the Honours Masters Degree Rules.

There are two paths to the degree:

- (1) by research only, for students entering with a degree of Honours Class II, Division 2 standard or above. They will do the 48 credit point CHEM920;
- (2) by a combination of research and coursework, for students entering with a degree below Honours Class II, Division 2 standard. They will do a research project (CHEM920) plus three of the following subjects: CHEM910 Selected Topics in Chemistry, CHEM915 Advanced Chemistry Laboratory Project, CHEM918 Chemistry Report, and CHEM919 Advanced Topics in Chemistry, described below. That is, they will take subjects to a value of 96 credit points.

Entry to the Course

Entry is subject to the approval of the Board of Research and Postgraduate Studies on the advice of the Departmental Head.

Selection of Subjects

Students must consult the Departmental Head for approval of their proposed choice of subjects.

Pre-requisites

The minimum pre-requisite for all subjects is that the student must have graduated with at least 24 credit points of 300-level Chemistry subjects.

3. MASTER OF SCIENCE

Introduction and Objectives

The objectives of this course are similar to those of the Honours Master of Science above. It is designed for applicants from industry and education and for students

who wish to proceed beyond the 3 year pass degree but for whom the research component of the Honours degree is inappropriate.

Structure

This is a 48 credit point coursework degree in which students do three of the following subjects CHEM910, CHEM915, CHEM918 and CHEM919, in accordance with the Pass Master Degree Rules.

Entry to the Course

Students must consult the Departmental Head for approval of overall entry and for the choice of subjects in CHEM915, CHEM918 and CHEM919.

Pre-requisites

The minimum pre-requisite is that the student must have graduated with at least 24 credit points of 300-level Chemistry subjects.

4. GRADUATE DIPLOMA IN SCIENCE

Introduction and Objectives

This one year Graduate Diploma is designed principally as a Masters Qualifying course for students who have an inadequate preparation for direct entry into our MSc degree programs. It will be found useful by international students and by students either without a full major in Chemistry at undergraduate level or who completed their first degree some years ago.

Entry to the Course

Students must consult with the Departmental Head for approval of overall entry. The particular combination of subjects to be taken by each student will be decided after discussion with the Head and will take into account the student's specific background and needs.

SUBJECT DESCRIPTIONS

CHEM910 Selected Topics in Chemistry A

Double session (A); 16 credit points (56 hrs lectures, 56 hrs tutorials).

Compulsory for all students undertaking an MSc in Chemistry by coursework, except for students who have passed CHEM411 or completed the subject in a Graduate Diploma in Science (Chemistry).

Not to count with CHEM411 or CHEM911.

Assessment: written examinations 80%, two essays 20%.

Eight topics (each 7 lectures/7 tutorials) chosen from: Organic and inorganic Geochemistry and their effects on the Environment; Synthesis of Biologically Important Compounds; Plant Secondary Metabolism; The Bioinorganic Chemistry of Iron; Inorganic Reaction Mechanisms; Catalysis with Organometallic Compounds; Physical Mass Spectrometry; Analysis of Atmospheric Particles; Computers in Chemistry; Gas Lasers; Advanced NMR Techniques; and others topics added as required.

Textbooks:

A reading list will be provided at the beginning of the session.

Co-ordinator: Professor J Bremner.

CHEM911 Selected Topics in Chemistry B

Autumn or Spring session; 8 credit points (28 hrs lectures, 28 hrs tutorials).

Assessment: written examination 90%, essay 10%.

Four topics (each 7 lectures/7 tutorials) chosen from: Organic and inorganic Geochemistry and its effects on the Environment; Synthesis of biologically important compounds; Plant secondary metabolism; The Bioinorganic Chemistry of Iron; Inorganic Reaction Mechanisms; Catalysis with Organometallic Compounds; Physical Mass Spectrometry; Analysis of Atmospheric Particles; Computers in Chemistry; Gas Lasers; Advanced NMR Techniques; and other topics added as required.

Textbooks:

A reading list will be provided at the beginning of the session.

Co-ordinator: Professor J Bremner.

CHEM915 Advanced Chemistry Laboratory Project

Autumn and/or Spring session; 16 credit points (168 hrs laboratory work).

Assessment: substantial report 90% and seminar 10%.

Under the supervision of staff appointed by the Departmental Head the student will undertake a laboratory project and present a written report and a seminar on a topic chosen by the supervising staff.

Co-ordinator: Professor J Bremner.

CHEM918 Chemistry Report

Double session (A); 16 credit points (112 hrs tutorials).

Assessment: substantial report 90% and seminar 10%.

Under the supervision of staff appointed by the Departmental Head students will survey the chemical literature and prepare a report on a topic chosen by the supervising staff.

Co-ordinator: Professor J Bremner.

CHEM919 Advanced Topics in Chemistry

Double session (A); 16 credit points (56 hrs lectures, 56 hrs tutorials).

Assessment: written examinations 90%, essays 10%.

Advanced lecture topics drawn from organic chemistry, inorganic chemistry, physical chemistry and analytical chemistry. The material available in any given year will reflect student interest and the availability of staff.

Co-ordinator: Professor J Bremner.

CHEM920 Chemistry Research Project

48 credit points per year.

Assessment: major thesis.

Topic to be arranged in consultation with the Departmental Head and approved by the Board of Research and Postgraduate Studies.

Co-ordinator: Professor J Bremner.

ENVIRONMENTAL SCIENCE

COURSES OFFERED

The following postgraduate degrees are available:

1. Doctor of Philosophy
2. Honours Master of Environmental Science by Research and Coursework

POSTGRADUATE PROGRAM

Environmental Science

CURRENT RESEARCH AREAS

The following areas of research are available to candidates:

Responses of plant and animal populations to bushfires
 Plant succession and recolonisation of disturbed land
 Conservation genetics of native plants and animals
 Marine ecology and genetics
 Effects of pollution on aquatic organisms
 Atmospheric reaction mechanisms
 Environmental chemistry, especially the development of new methods for the analysis and treatment of industrial wastes and trace toxins
 Studies of heavy metals levels in the Illawarra region and investigations of the mechanism of toxic action
 Coastal marine pollution
 Soil genesis and management
 Integrated watershed management studies
 Coastal and fluvial geomorphology
 Environmental prehistory
 Environmental impact
 Remote sensing applications
 Biogeography
 Palynology
 Economic and environmental geology
 Sedimentology of terrestrial and shallow marine sequences

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN ENVIRONMENTAL SCIENCE

leading to the Honours Master of Environmental Science.

Number	Subject	Credit Points
Category (a) subjects for all candidates:		
ENVI930	Thesis	24
ENVI920	The Scientific Basis of Environmental Management	8
ENVI921	Environmental Planning	8
STS929	Studies in Resource and Environmental Policy	8
Additional subjects for Category (b) candidates only:		
<i>At least 24 credit points of</i>		
MGMT310	Introduction to Management for Professionals B	8
LAW380	Law for Environmental Managers	8
ENVI385	Environmental Engineering	8
STS300	The Environmental Context	8
Plus		
<i>Two of</i>		
ENVI910	Directed Studies in Pollution Chemistry	12
ENVI911	Directed Studies in Ecology	12
ENVI912	Directed Studies in Land Resources	12
ENVI913	Directed Studies in Earth Sciences	12

For further details, see *Course Requirements* below.

COURSE REQUIREMENTS

1. DOCTOR OF PHILOSOPHY

This course is open to students with an honours degree at a minimum standard of Class II, Division 2 in a relevant discipline.

Candidates for this degree enrol in ENVI999.

2. HONOURS MASTER OF ENVIRONMENTAL SCIENCE

This degree combines research and coursework to provide:

- (a) continuing education for Bachelor of Environmental Science graduates;
- (b) Environmental Science education for Science or Engineering graduates or

professional employees in the environmental science area, with no undergraduate background in environmental science.

Candidates in category (a) with a strong educational background in environmental science are required to complete 48 credit points comprising a 24 credit point thesis and 24 credit points of coursework which consists of three special single session

tutorial/seminar subjects on the evaluation and management of a range of environmental problems.

Candidates in category (b) with little formal education in environmental science would be required to complete 96 credit points, i.e. 48 credit points of core subjects and research plus a further 48 credit points of coursework which would be selected with the approval of the Dean of Science from the additional subjects for Category (b) students listed above.

Candidates would normally be advised to select the subjects in which they do not have previous qualifications or experience in order to broaden their understanding of environmental issues.

This course structure facilitates the tailoring of coursework to suit the individual requirements of candidates with differing undergraduate qualifications and employment experience.

Entry Requirements

Admission is granted with the approval of the Dean of the Faculty of Science to candidates who would normally be required to have completed an undergraduate degree in Science or Engineering, or equivalent tertiary qualifications and/or professional experience.

SUBJECT DESCRIPTIONS

ENVI910 Directed Studies in Pollution Chemistry

Spring session; 12 credit points (112 hrs comprising 56 hrs lectures/tutorials, 28 hrs practical, 28 hrs case study).

Pre-requisite: 100-level Chemistry and CHEM214 or equivalent. (The subject incorporates CHEM327, which is taken concurrently).

Assessment: final examination, practicals, essay/case study report, seminar.

The chemistry of water and air pollution. Toxins in the environment. Sources, sinks and transport processes, methods for quantitative measurement and control.

Co-ordinator: Associate Professor J Ellis.

ENVI911 Directed Studies in Ecology

Autumn or Double (A) session; 12 credit points (106 hrs comprising 28 hrs lectures, 28 hrs tutorials, and 2 major case-study projects).

Assessment: tutorial assignments, seminars, final examination, major case study report (can be done in either session).

Introduction to Biology. Diversity of organisms - microbes to mammals. Principles of ecology - productivity, energy and nutrient flow, population growth and interactions. Principles of evolution - genetic material, mutations, inheritance, microevolution, speciation. Human population growth. Direct and indirect impacts of humans on ecosystems. Management and conservation biology.

Textbooks:

Gilbertson, DD Kent, M and Pyatt, FB, *Practical Ecology*, Hutchinson, London, 1985.

Co-ordinator: Professor RJ Whelan.

ENVI912 Directed Studies in Land Resources

Double session (A); 12 credit points (56 hrs lectures, 56 hrs seminars/laboratory and field work).

Assessment: examination, two essays, two research projects.

This subject will examine coastal, river, water and soil managements focussing on human induced changes to these natural systems. Emphasis will be given to geomorphological processes, remote sensing of land and biological resources.

Co-ordinator: Associate Professor G Nanson.

ENVI913 Directed Studies in Earth Sciences

Double session (A); 12 credit points (up to 42 hrs lectures, seminars, up to 4 days field work, at least 40 hrs case study project).

Assessment: reports, seminars, final examination.

Topics include the relationship of mining operations to communities; downstream pollution problems; mineralogical composition and types of associated dusts; composition of mine waters and stack emissions, the reclamation of mine sites; effects of mine subsidence; the composition, uses and disposal of waste residues; environmental impact studies. One major project.

Co-ordinator: Dr BE Chenhall.

ENVI920 The Scientific Basis of Environmental Management

Spring session; 8 credit points (28 hrs lectures, 28 hrs seminar, up to four days fieldwork).

Assessment: final examination, 2 essays, 1 research report.

This course covers topics designed to give students a comprehensive overview of the scientific basis of environmental management. The course will adopt a multi-disciplinary approach to the scientific understanding of how major ecosystems work and show how an appreciation of such knowledge leads to the development of appropriate management strategies for these systems. While there will be some emphasis on the Australian situation, much of the material is applicable in any country. The systems to be covered include estuaries, reefs, coastal wetlands, forests (tropical and temperate), large and small catchment areas, semi-arid areas. In addition the science of the management of hazardous wastes (including radioactive materials) will be discussed. Case studies from Australia, South East Asia and the Pacific Islands will be included. As part of the course, students will complete a project carried out in teams to facilitate the development of interdisciplinary skills and an appreciation of the benefits of teamwork in addressing environmental management issues.

Co-ordinator: Dr M Ferland.

ENVI921 Environmental Planning

Autumn session; 8 credit points (28 hrs lectures, 28 hrs seminar, up to four days field work).

Assessment: final examination, 2 essays, 1 research report.

This course presents material necessary for a comprehensive overview of the status and development of environmental planning in government and industry. In the course students will be introduced to the principles of environmental planning. This will be followed by presentations from staff from a wide range of organisations involved in

environmental planning such that the mechanisms, difficulties and benefits of current planning activities in Australia are explained. While the emphasis is on the Australian situation, reference to activities in other countries will be included, in addition to aspects of the global situation regarding environmental planning.

Co-ordinator: Professor J Morrison.

STS929 Resource and Environmental Policy

Autumn session; 8 credit points (4 hrs lecture/seminars per wk).

Assessment: 1 major research essay of 4000 words, 1 minor essay of 1500 words, seminar performance, plus class exercises.

This subject will provide advanced study of the social, economic and political processes through which environmental policy is negotiated and instituted. The subject will be thematic, choosing one or more particular areas of technological development and its environmental impact as a case study. (The areas will be chosen in any given year on the basis of their contemporary relevance.) Theoretical perspectives which will be developed in this context may include the politics and sociology of scientific controversy, global, national and regional developments in environmental regulation, theories of state regulation and intervention, and the choice and negotiation of different environmental strategies. Students will be expected to read extensively and critically, to engage in coherent and documented argument and to approach the problems considered by utilising insights from a number of different theoretical perspectives.

Textbooks:

The study program will rely on extensive library study in journals and books, supplemented by case study material assembled for the subject.

Co-ordinator: Professor J Falk.

ENVI930 Thesis

Double session (A); 24 credit points.

Assessment: written dissertation and seminar presentation.

A research topic in an area of environmental science will be selected by each candidate after consultation with the degree co-ordinator. The thesis will be supervised by staff from the appropriate department or departments.

Co-ordinator: Professor J Morrison.

ENVI999 Major Thesis

48 credit points per year.

Assessment: major thesis.

The major thesis takes the form of a supervised research project on a topic approved by the Professor of Environmental Science and the Graduate Faculty.

Co-ordinator: Professor J Morrison.

GEOGRAPHY

COURSES OFFERED

The following postgraduate degrees and diploma are available:

1. Doctor of Philosophy
2. Honours Master of Science by Research or Coursework
3. Honours Master of Arts by Research or Coursework
4. Master of Science
5. Master of Arts
6. Graduate Diploma in Science

POSTGRADUATE PROGRAMS

Physical Geography and Environments
Human Geography and Environments

and other studies in Geography.

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master degrees by research and the Doctor of Philosophy degree:

Physical Geography

Quaternary studies
Australian prehistory
Coastal geomorphology
Fluvial geomorphology
Evolution of landforms
Environmental impact
Environmental management
Remote sensing applications
Geographical information systems
Biogeography
Palynology
Natural hazards

Human Geography

Agricultural geography
Asian Studies
Environmental management
Remote sensing applications
Geographical information systems
Natural hazards
Australian prehistory
Urban studies
Population studies
Ageing and the elderly
Health and welfare
Food, nutrition and hunger
Social theory
Economic restructuring

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN PHYSICAL GEOGRAPHY AND ENVIRONMENTS

leading to the Master of Arts or Master of Science.

Number	Subject	Credit Points
GEOG935	Research Report	8
GEOG941	Coastal Environments	8
GEOG942	Geomorphology of Rivers	8
GEOG943	Biogeography	8
GEOG945	Remote Sensing	8
GEOG948	Quaternary Studies	8
GEOG949	Landscapes and Soils	8
GEOG952	Natural Hazards	8

In consultation with the Head of the School of Geosciences, candidates select subjects which constitute a coherent program to the value of at least 48 credit points. Not all of these subjects will be offered in any year.

For further details, see Course Requirements below.

POSTGRADUATE PROGRAM IN HUMAN GEOGRAPHY AND ENVIRONMENTS

leading to the Master of Arts or Master of Science.

Number	Subject	Credit Points
GEOG935	Research Report	8
GEOG946	Geographical Information Systems	8
GEOG947	Australian Prehistory	8
GEOG951	Environmental Policy and Management	8
GEOG962	Global Economic and Social Change	8
GEOG963	Population Dynamics, Analysis and Policy	8
GEOG964	Food and Development Studies	8
GEOG965	Asian Development	8

In consultation with the Head of the School of Geosciences, candidates select subjects which constitute a coherent program to the value of at least 48 credit points. Not all of these subjects will be offered in any year.

For further details, see Course Requirements below.

COURSE REQUIREMENTS

1. DOCTOR OF PHILOSOPHY

Available to candidates with honours degrees of at least Class II Division 2 standard. Candidates for this degree enrol in GEOG999.

2. HONOURS MASTER OF SCIENCE

3. HONOURS MASTER OF ARTS

The primary aim of the Honours Masters program in Geography is to provide research training at the postgraduate level. Students are required to have at least an Honours Class II, Division 2 degree in an appropriate discipline and will be required to complete a thesis with a value of at least 48 credit points. (GEOG944)

4. MASTER OF SCIENCE

5. MASTER OF ARTS

Geography offers a program of postgraduate level subjects which leads to the degree of Master of Science or Master of Arts. The program has been devised to meet the needs of students who wish to proceed to the postgraduate level, but for whom the research orientation of the Honours Masters degree is not appropriate.

Students with a satisfactory background in Geography will be required to complete subjects with a value of 48 credit points. Other students will be required to complete postgraduate subjects with a value of 72 points. The subjects are grouped in two strands which reflect the major research strengths of the Geography program, each of which provides a structured grouping of subjects relevant to a major vocational focus. Students are encouraged to confine their choice of subjects to one of the strands. Entry to the program and the choice of subjects will be dependent upon approval by the Head of School of Geosciences.

All subjects are worth 8 credit points and will involve 6 contact hours per week.

6. GRADUATE DIPLOMA IN SCIENCE

The Graduate Diploma in Science offers graduates lacking a major strand of Geography in their degree the opportunity to acquire competence in the discipline.

Alternatively, Geography graduates may enrol in the program in order to update, broaden and/or intensify their knowledge, e.g. for teaching, or to equip themselves for work in applied fields such as environmental, urban, regional or social planning. In addition to the University's Rules for Graduate Diplomas, candidates for the Graduate Diploma in Science shall:

- i) complete Geography subjects to a value of not less than 48 credit points from those listed in the General Schedule, at least 24 credit points being for subjects at the 300-level and the remainder at 200-level, provided that, by approval of the Head of School, up to 12 credit points at 200-level may be obtained for cognate subjects offered by another Department;
- ii) not include in the diploma program subjects which, in the opinion of the Head of School, are substantially equivalent in the content to those for which credit has already been obtained towards some other degree or diploma;
- iii) have their program approved by the Head of School before enrolling;
- iv) successfully complete the graduate diploma program in not more than four academic sessions.

SUBJECT DESCRIPTIONS

GEOG935 Research Report

Autumn or Spring session; 12 credit points (2 hrs workshop per wk).

Assessment: research report.

This subject will allow the student to research in detail a problem identified in another subject within the program. Approval to enrol in this subject will only be granted to students who have demonstrated their capacity to undertake research by their performance in one or more of the other subjects in the strand.

Co-ordinator: Head of School of Geosciences.

GEOG941 Coastal Environments

Autumn or Spring session; 8 credit points (3hrs lecture/seminar; 3hrs practical/tutorial per wk; 2-3 days fieldwork).

Assessment: as appropriate from class tests, essays, research project, practical work, final examination.

This subject examines sedimentary and ecological processes on the coast. Coastal management is considered from geo-

morphological and ecological perspectives. Topics include the morphology and development of coastal landforms, particularly estuaries, deltas, chenier and beach ridge plains, beaches and dunes, and coral reefs. Emphasis is placed on interpreting Holocene morphostratigraphy and morphodynamics, reconstructing sea-level changes and the effect of sea-level changes on coastal environments, and on understanding present ecological and geomorphological processes in relation to their longer term development.

Co-ordinator: Associate Professor CD Woodroffe.

GEOG942 Geomorphology of Rivers

Autumn or Spring session; 8 credit points; (3hrs lecture/seminar; 3hrs Practical/tutorial per week; 2-3 days fieldwork).

Assessment: As appropriate from class tests, essays, research project, practical work, final examination.

Rivers play a dynamic and vital role both in shaping the earth's landforms and affecting human use of the earth's surface. This subject examines processes forming and modifying stream channels and drainage basins. Rivers are studied as natural systems within which variables adjust to each other, to natural external variables, and to human interference. Specific topics include flood hydrology, river floodplains; channel geomety, river platforms, channel erosion, sediment transport, sediment deposition and Quaternary history. Particular attention is given to human modification and management of rivers, with concentration on local urban and rural streams. Techniques include field measurements, sediment analysis and aerial photograph interpretation.

Co-ordinator: Associate Professor G Nanson.

GEOG943 Biogeography

Autumn or Spring session; 8 credit points, (3hrs lecture/seminar; 3hrs practical/tutorial per wk; 2-3 days fieldwork).

Assessment: as appropriate from class tests, essays, research project, practical work, final examination.

Biogeography is the study of the distributions of plants and animals, and their interaction both with each other and with the physical environment. The response of plant communities to variations in climate, soils and other environmental factors is examined with a view to understanding the character and

distribution of vegetation both on a global and a local scale. Plant succession and species diversity are studied in the light of traditional and contemporary theories in these fields, and particular attention is given to the unique characteristics of island communities. Present knowledge of past glacial events, continental drift and the formation of land bridges are used to interpret the distribution of land vertebrates and plants. Field work concentrates on local coastal and rainforest communities.

Co-ordinator: Associate Professor CD Woodroffe.

GEOG945 Remote Sensing

Autumn or Spring session; 8 credit points, (3hrs lecture/seminar; 3hrs practical/tutorial per wk).

Assessment: as appropriate from class tests, essays, research project, practical work, final examination.

This subject introduces the principles and techniques for measuring and interpreting the environment using visible and non-visible wavelengths in the electromagnetic spectrum. It describes the physical aspects of those wavelengths and the reflective characteristics of the earth's surface are discussed. Imagery from various sensors such as the USA operated LANDSAT and NOAA satellites; the French SPOT satellite; the Japanese Marine Observation satellite (MOS) and the European Space Agency satellite ERS-1 plus the shuttle imaging RADAR (SIR), will be used in practical exercises. Case studies of a wide range of applications will be used to illustrate the multidisciplinary scope of remote sensing. Topics include rural and urban land use inventory, vegetation and coastal mapping, mineral exploration and water quality evaluation as well as environmental change monitoring. The practical component involves the development of interpretation skills as well as practical experience in digital image analysis on PC and MAC based systems.

Co-ordinator: Dr AL O'Neill.

GEOG946 Geographic Information Systems

Autumn or Spring session; 8 credit points, (3hrs lecture/seminar; 3hrs practical/tutorial per wk).

Assessment: as appropriate from class tests, essays, research project, practical work, final examination.

This subject will provide students with an understanding of Geographic Information Systems (GIS) as well as the technical skills required to operate GIS software and analyse spatial data. There will be a strong emphasis on practical work and applications in natural resource management, urban and regional planning, pollution management, distribution of plant and animal communities, natural hazards, medical geography, economic and environmental geology and environmental impact assessment. The lecture course will include data acquisition, spatial data bases, vector and raster systems, co-ordinate systems and georeferencing, spatial analysis, digital terrain modelling, analysis of errors and accuracy standards. Practicals will involve the use of both PC and Mac based computer packages such as the Spatial Analysis System (SPANS), Environment Resource Monitoring System (ERMS), MapInfo and Genamap.

Co-ordinator: to be advised.

GEOG947 Australian Prehistory

Autumn or Spring session; 8 credit points, (3hrs lecture/seminar; 3hrs practical/tutorial per wk; 2-3 days fieldwork).

Assessment: as appropriate from class tests, essays, research project, practical work, final examination.

Aboriginal society has not only had to adjust to major environmental changes, but has had a major impact on the varied environments of the Australian continent. This subject reviews the evidence for the antiquity of the Aborigines, and provides an introduction to the techniques of dating and interpreting aboriginal cultural sites. It also reviews the evidence and the geomorphological and biogeographical techniques used for reconstructing Late Quaternary environments. The third main theme of the course is the development and variety of Aboriginal economies, and their impact on the environment; special reference will be made to the impact of fire and to the extinction of giant marsupials. Emphasis will be given to field and laboratory techniques used in the environmental impact assessment of Aboriginal sites including pollen analysis, sediment stratigraphy and analysis, artefact interpretation and analysis, and archaeological excavation techniques and analysis.

Co-ordinator: Dr L Head.

GEOG948 Quaternary Studies

Autumn or Spring session; 8 credit points; (3hrs lectures/seminar; 3hrs practical/tutorial per wk; 2-3 days fieldwork).

Assessment: as appropriate from class tests, essays, research project, practical work, final examination.

The present environment of Australia is the legacy of interactions between geological, biological and hydrological processes operating at a range of timescales, as well as human impacts within the last hundred thousand years. Understanding the changes of the Quaternary, the last two million years, is now recognised as crucial to the interpretation of our biotic and geomorphic landscapes. This subject equips students to critically examine investigative techniques and resulting interpretations. Topics include: the nature of the Quaternary record; dating methods; pollen and charcoal analysis; biotic change (including rainforest decline, savannah expansion, megafaunal extinctions and the role of fire) and geomorphic change (including evidence from lakes, rivers, dunes and coasts). While the focus is on Australia, including tropical, temperate and arid examples, a global context to Quaternary change is provided. Attention is given to the implications of a longterm perspective for present-day ecosystem management.

Co-ordinator: Dr L Head.

GEOG949 Landscapes and Soils

Autumn or Spring session; 8 credit points, (3hrs lecture/seminar; 3hrs practical/tutorial; 2-3 days fieldwork).

Assessment: as appropriate from class tests, essays, research project, practical work, final examination.

The interaction of time and place in the evolution of landscape is the prime focus of this subject. Emphasis is placed firstly on the functional interdependence of landform, vegetation and soil, and secondly

on the transformation of relationships among these phenomena arising both from natural causes and from societies' impact on their environments. Topics include: problems in interpreting the denudation of highlands; survival of ancient landscapes; development of depositional landscapes; variations among landforms-vegetation relationships; the transformation of soil-vegetation-landform assemblages over the last 40,000 years; a critical review of scientific perception of landscape. Relevant case studies will be drawn mainly from Australia, North America and Eurasia. Practical classes will focus on photographic, cartographic and field techniques of soil surveying, and on the microscopic study of soils and weathering profiles.

Co-ordinator: to be advised.

GEOG951 Environmental Policy and Management

Autumn or Spring session; 8 credit points, (3hrs lecture/seminar; 3hrs practical/tutorial; 2-3 days fieldwork).

Assessment: as appropriate from class tests, essays, research project, practical work, final examination.

This subject examines the political, institutional, economic and geographic factors which influence environmental management. It presents an analysis of these processes, and examines issues from the perspective of an environmental manager. Particular attention is given to examining current approaches to environmental decisionmaking, assessment and evaluation. Emphasis is placed on the influence of political philosophies and social value systems, including those of indigenous peoples, on environmental management. Illustrations are drawn from a wide range of environmental issues, mainly from Australia, and commonly from the interface of human and physical geography.

Co-ordinator: Dr J Formby.

GEOG952 Natural Hazards

Autumn or Spring session; 8 credit points, (3hrs lecture/seminar; 3hrs practical/tutorial; 1-2 days fieldwork).

Assessment: as appropriate from class tests, essays, research project, practical work, final examination.

Natural hazards such as tropical cyclones, coastal storms, droughts, earthquakes, volcanoes and tsunami are undergoing extensive research in terms of our understanding about their behaviour and occurrence. The increasing frequency of these events is overwhelming existing global capabilities in mitigating their impacts and responding to their effects. This subject examines recently developed concepts on hazards and assesses changing societal consequences leading into the 21st century.

Co-ordinator: Associate Professor EA Bryant.

GEOG962 Global Economic and Social Change

Autumn or Spring session; 8 credit points, (3hrs lecture/seminar; 3hrs practical/tutorial per wk; 2-3 days fieldwork).

Assessment: as appropriate from class tests, essays, research project, practical work, final examination.

This subject studies the impact of the

processes of global restructuring on the patterns and nature of international trade, labour and service transfers, and the expression of these processes in urban society and space. It is structured in 3 interrelated components focussing on: the geography of international trade, the internationalisation of labour and services, and urban transformations. An understanding of the geography of international trade is achieved. The second component will focus on international transfers of labour and services, a major mechanism in the internationalisation of the global economy. The final component deals with economic change as it is reflected in the built and social morphology of the city.

Co-ordinator: Dr G Waitt.

GEOG963 Population Dynamics, Analysis and Policy

Autumn or Spring session; 8 credit points, (3hrs lecture/seminar; 3hrs practical/tutorial per wk)
Assessment: as appropriate from class tests, essays, research project, practical work, final examination.

In all societies questions relating to population size, growth rates, composition, distribution and redistribution are important. This subject attempts to provide a basis for understanding such problems by examining, in their 'developed' and 'less developed' socio-cultural contexts, the processes which contribute to demographic change and compositional variation (fertility, mortality, migration). Attention will also be paid to population regulating policies and programs, to data sources in population studies and to some of the more important techniques used in demographic analysis. Students will receive instruction on statistical and other analytical methods for analysing population dynamics.

Co-ordinator: to be advised.

GEOG964 Food and Development Studies

Autumn or Spring session; 8 credit points, (3hrs lecture/seminar; 3hrs practical/tutorial per wk)
Assessment: as appropriate from class tests, essays, research project, practical work, final examination.

This subject seeks to increase student understanding of the processes operating from the local to international levels that result in inequalities in the distribution of food resources. It aims to introduce key aspects of and explanations for the geography of hunger, including the roles of technology, aid and corporate interests in food resources. Food security issues are analysed through the use of major theories of underdevelopment. Proposals for the alleviation of global hunger are canvassed.

Co-ordinator: to be advised.

GEOG965 Asian Development

Autumn or Spring session; 8 credit points, (3hrs lecture/seminar; 3hrs practical/tutorial per wk)
Assessment: as appropriate from class tests, essays, research project, practical work, final examination.

This subject examines the recent growth in the economies of South East and North Asia. This subject aims to examine the concept of development in Asia by addressing various case studies and theoretical perspectives. The subject not only compares mechanisms and consequences of economic development

between Asian countries, but also with other less industrialised countries.

Co-ordinator: Dr G Waitt.

GEOG944 Major Thesis

48 credit points.

The major thesis for the Honours Master degree takes the form of a supervised full-time research project on an approved topic over at least two sessions.

GEOG999 Major Thesis

48 credit points per year.

The major thesis for the Doctor of Philosophy degree takes the form of a supervised research project on an approved topic.

GEOLOGY

COURSES OFFERED

The following postgraduate degrees and diploma are available:

1. **Doctor of Philosophy**
2. **Honours Master of Science**
 - (a) Coursework
 - (b) Coursework and Research
 - (c) Research
3. **Master of Science**
4. **Graduate Diploma in Science**

POSTGRADUATE PROGRAMS

Fuels - Sedimentology
Resources - Hard Rock Geology

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master of Science degree by research and the Doctor of Philosophy degree:

Coal Geology

Sedimentology of coal measure sequences, coalification, organic petrology, coal macerals and lithotypes, thermal maturation, organic geochemistry, coal quality evaluation, coal reserve estimation, coke and carbonization;

Environmental Geology

Pollution studies of coastal and estuarine depositional systems, palaeoecology of coastal sequences, pollution associated with mining, organic and inorganic geochemistry, isotope studies, land stability, clay mineralogy, hydrogeology, waste disposal, environmental impact studies;

Geophysics

Seismic refraction and reflection studies, structural and stratigraphic interpretation of seismic sections, gravity and magnetic methods, laboratory rock physics including velocity and attenuation in reservoir rocks and coal measures. Collaboration with industry may be arranged for electrical and electromagnetic studies;

Igneous Petrology

Igneous petrology, especially geochemistry of granite and related volcanic rocks, isotope geochemistry, volcanology and the stratigraphy of volcanic sequences, mineralogy;

Metamorphic Petrology

Low grade regional metamorphism, prograde and retrograde metamorphism, serpentinites, pressure and temperature studies in metamorphic petrology, mineralogy, geochemistry, skarn deposits;

Ore Geology

Structural and stratigraphic setting of ore deposits, ore petrology, geochemistry, isotope studies, ore reserve estimation and mathematical modelling, ore genesis;

Palaeontology and Stratigraphy

Systematic descriptions of invertebrate fossils, trace fossils and fossil assemblages provide the basis for ecological and biostratigraphic studies (especially of Early and Middle Palaeozoic sequences). Sequence stratigraphic analysis and applied geophysical methods can be used to aid stratigraphic correlation and analysis;

Petroleum Geology and Oil Shales

Aspects of petroleum geology include sequence stratigraphy, sedimentology, diagenesis and porosity relationships in petroleum reservoirs, organic petrology, thermal maturation of organic matter in source and reservoir rocks, organic geochemistry of oil and gas, reserve estimations, applications of geophysical techniques to basin studies, petrography, sedimentology and geochemistry of oil shale;

Sedimentology

The sedimentology of clastic and carbonate depositional systems including sedimentary petrology, palaeocurrent and basin analysis, with special reference to terrestrial and shallow marine facies;

Structural Geology and Tectonics

Structural geology of orogenic belts and sedimentary basins; plate tectonic interpretations of orogenic belts.

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAMS IN RESOURCES - HARD ROCK GEOLOGY

Number	Subject	Credit Points
Odd Years		
GEOL901	Isotope Geochemistry	6
GEOL904	Ore Genesis	6
GEOL909	Applied Geophysics	6
GEOL918	Analytical Methods in Geology	6
GEOL922	Tectonics	6
Even Years		
GEOL906	Metamorphism	6
GEOL907	Seismic Exploration	6
GEOL914	Volcanology	6
GEOL918	Analytical Methods in Geology	6
GEOL923	Structural Geology	6
GEOL913	Advanced Topics in Geology D	6

For further details, see *Course Requirements* below.

POSTGRADUATE PROGRAM IN FUELS - SEDIMENTOLOGY

Number	Subject	Credit Points
Odd Years		
GEOL901	Isotope Geochemistry	6
GEOL902	Diagenesis	6
GEOL916	Organic Geochemistry	6
GEOL909	Applied Geophysics	6
GEOL918	Analytical Methods in Geology	6
GEOL919	Basin Setting and Analysis	6
GEOL921	Environmental Geology	6
GEOL922	Tectonics	6
Even Years		
GEOL903	Biostratigraphy	6
GEOL907	Seismic Exploration	6
GEOL917	Petroleum Geology	6
GEOL918	Analytical Methods in Geology	6
GEOL920	Organic Petrology	6
GEOL923	Structural Geology	6

For further details, see *Course Requirements* below.

Note: Advanced Topics in Geology (GEOL910-913) in areas of specialisation may be included where appropriate and will be offered in the appropriate session.

A research thesis may be taken in addition to coursework, or in place of a coursework program, as appropriate to the degree course.

GRADUATE DIPLOMA SUBJECTS

Number	Subject	Credit Points
GEOL301	Field Geology	8
GEOL302	Basin analysis and groundwater	8
GEOL303	Lithospheric processes and products	8
GEOL304	Dynamic Earth	8
GEOL305	Basin resources	8
GEOL306	Mineral exploration	8

COURSE REQUIREMENTS

1. DOCTOR OF PHILOSOPHY

Candidates for this degree enrol in GEOL999.

2. HONOURS MASTER OF SCIENCE

Introduction and Objectives

The rapid development of earth sciences has produced a need for postgraduate coursework. The courses offered by the discipline of Geology will provide further training to graduates currently employed in

industry or in education. The courses are intended to provide general rather than specialist training. Specialist training is mainly by the preparation of a research thesis, but specialist coursework training is also available.

Structure of the Course

The course will be made up of subjects selected from one of the listed postgraduate programs or a 48 credit point research thesis.

Students entering with a degree in Geology at the level of at least Honours Class II, Division 2 will take subjects to a value of 48 credit points.

Students entering with a pass degree will take subjects to a value of 96 credit points.

Entry to the Course

Entry is subject to the approval of the Head of the School of Geosciences.

Selection of Subjects

Students must consult the Head of the School of Geosciences for approval of their proposed choice of subjects.

Strands

The subject combinations in each program may be varied to take account of the candidates qualifications, objectives and study plan.

Pre-requisites

The minimum pre-requisite for all subjects is that the student must have graduated with at least 24 credit points of 300-level Geology subjects.

3. MASTER OF SCIENCE

The discipline of Geology offers a program of postgraduate level subjects which leads to the degree of Master of Science. It is designed for applicants from industry and education, and for students who wish to proceed beyond the three year pass degree but for whom the research component of the Honours degree is inappropriate. Students entering the program with a pass degree in Geology or other approved courses will be required to complete subjects with a value of 48 credit points. For other requirements see the Master degree Rules.

Entry to the course will be subject to the approval of the Head of the School of Geosciences. Students must consult the Head of School for approval of their proposed choice of subjects. Subjects will normally be selected from one of the listed postgraduate programs.

4. GRADUATE DIPLOMA IN SCIENCE

This course will provide:

- (1) a mechanism which permits practising geologists within the industry to acquire the knowledge necessary to improve their performance; and
- (2) holders of a general geology degree to specialize in an expanding field of employment.

This course can be taken as an inservice part-time course aimed at upgrading and updating professional expertise in areas of rapid development.

Admission Requirements

Applicants for admission are required to:

- (1) have a degree with a major in Geology from the University of Wollongong or an approved degree from another tertiary institution; or
- (2) have other appropriate qualifications and professional experience.

Course Structure

Students will be required to complete subjects to the value of 48 credit points. Subjects should be selected from one of the listed postgraduate programs, together with one or more appropriate 300-level geology subjects (as set out in the Undergraduate Calendar). The selection of subjects shall be approved by the Head of the School of Geosciences who may also nominate other subject(s) deemed appropriate.

SUBJECT DESCRIPTIONS**GEOL901 Isotope Geochemistry**

Autumn session; 6 credit points (up to 42 hrs of lectures/seminars/practicals/tutorials).

Assessment: as appropriate from essays, reports, seminars, final examination.

Topics include sample preparation; mass spectrometry; applications of both

radiogenic and stable isotopic systems; geochronology modelling; petrogenetic modelling.

References:

Faure, G, *Principles of Isotope Geology*, Wiley, New York, 1986.

Co-ordinator: Dr PF Carr.

GEOL902 Diagenesis

Spring session; 6 credit points (up to 42 hrs lectures/seminars/practicals/tutorials; up to 4 days field work).

Assessment: as appropriate from essays, reports, seminars, final examination.

Topics include evolution of diagenetic processes acting on clastic and carbonate sedimentary sequences; interaction between cementation, secondary porosity and permeability in the development of subsurface reservoirs. Laboratory work will include petrology of selected suites of rocks including photomicroscopy, SEM, XRD and assessment of porosity and permeability.

References:

McDonald, D A and Surdam, R C, *Clastic Diagenesis*, American Association of Petroleum Geologists Memoir 37.

Co-ordinator: Associate Professor BG Jones.

GEOL903 Biostratigraphy

Autumn session; 6 credit points (up to 42 hrs lectures/seminars/practicals/tutorials; up to 4 days field work).

Assessment: as appropriate from essays, reports, seminars, final examination.

Topics include principles of and developments in biostratigraphy; zonation, assemblages, correlation; biogeography; importance of various fossil groups; Australian and other case histories in biostratigraphy. Field work will include study and analysis of biostratigraphic aspects of a basin sequence.

Co-ordinator: Associate Professor AJ Wright.

GEOL904 Ore Genesis

Spring session; 6 credit points (up to 42 hrs of lectures/seminars/practicals/tutorials; up to 4 days field work).

Assessment: as appropriate from essays, reports, seminars, final examination.

Topics include principles of ore genesis; spatial and temporal considerations; experimental studies; plate tectonics and ore genesis; hydrothermal fluids, fluid inclusions; genesis of hydrothermal, magmatic, metasomatic, sedimentary and residual deposits.

Co-ordinator: Dr AC Hutton.

GEOL906 Metamorphism

Spring session; 6 credit points (up to 42 hrs lectures/seminars/practicals/tutorials; up to 4 days field work).

Assessment: as appropriate from essays, reports, seminars, final examination.

Topics include the genesis of metamorphic rocks; contact metamorphic and metasomatic phenomena; regional metamorphism at contrasted pressures and temperatures; and the roles of pressure, temperature, time and fluid composition in metamorphism.

Co-ordinator: Dr BE Chenhall.

GEOL907 Seismic Exploration

Spring session; 6 credit points (up to 42 hrs lectures/seminars/practicals/tutorials; up to 4 days field work).

Assessment: as appropriate from essays, reports,

seminars, final examination.

Topics include acquisition and processing of seismic data, structural interpretation of seismic sections; seismic stratigraphy; well logging and well ties; seismic modelling and reservoir evaluation; high resolution seismic reflection, in-seam seismic. Laboratory work includes interpretation of seismic data using both conventional paper records and interactive computer displays.

Co-ordinator: Dr LEA Jones.

GEOL909 Applied Geophysics

Spring session; 6 credit points (up to 42 hrs lectures/seminars/practicals/tutorials; up to 4 days field work).

Assessment: as appropriate from essays, reports, seminars, final examination.

Topics include gravity; magnetics; electrical and electromagnetic methods; well logging methods and interpretation. Laboratory work includes interpretation of synthetic and real data; field work includes use of equipment, data collection and interpretation.

Co-ordinator: Dr LEA Jones.

GEOL910 Advanced Topics in Geology A

Double session (A); 12 credit points.

Assessment: as appropriate from essays, reports, seminars, final examination.

Co-ordinator: to be advised.

GEOL911 Advanced Topics in Geology B

Double session (A); 12 credit points.

Assessment: as appropriate from essays, reports, seminars, final examination.

Co-ordinator: to be advised.

GEOL912 Advanced Topics in Geology C

Autumn or Spring session; 6 credit points.

Assessment: as appropriate from essays, reports, seminars, final examination.

Co-ordinator: to be advised.

GEOL913 Advanced Topics in Geology D

Autumn or Spring session; 6 credit points.

Assessment: as appropriate from essays, reports, seminars, final examination.

Co-ordinator: to be advised.

GEOL914 Volcanology

Autumn session; 6 credit points (up to 42 hrs lectures/seminars/practicals/tutorials; up to 4 days field work).

Assessment: as appropriate from essays, reports, seminars, final examination.

Topics include physical aspects of volcanology of both modern and ancient volcanic deposits; tectonic setting of volcanoes and the physical properties of magmas; effects on volcanic processes and deposits.

Co-ordinator: Dr PF Carr.

GEOL916 Organic Geochemistry

Autumn session; 6 credit points (up to 42 hrs lectures/seminars/practicals/tutorials; up to 4 days field work).

Assessment: as appropriate from essays, reports, seminars, final examination.

Topics include carbon compounds; kerogen and its analysis (elemental analysis (van Krevelen diagrams), pyrolysis (RockEval, pyrolysis-GC), solvent extraction, gas

chromatography, mass spectrometry); formation and analysis of petroleum, biomarkers; petrology of oil shale and source rocks; source rock and maturation concepts in petroleum geology; reflectance profiles, geothermal gradients and burial history; thermal modelling.

Co-ordinator: Dr AC Hutton.

GEOL917 Petroleum Geology

Spring session; 6 credit points (up to 42 hrs lectures/seminars/practicals/tutorials; up to 4 days field work).

Assessment: as appropriate from essays, reports, seminars, final examination.

Topics include definition and prediction of subsurface petroleum reservoirs based on sedimentological and petrological criteria; use of facies models for reservoir prediction and evaluation; reservoir dynamics - fluid migration, entrapment and extraction; drilling and extraction methods, well testing, reservoir and reserve evaluation; Australian and international petroleum reserves. Laboratory work: evaluation of petroleum reservoirs based on theoretical and real examples.

Reference:

North, F K, *Petroleum Geology*, Allen & Unwin, Boston, 1985.

Co-ordinator: Associate Professor B G Jones.

GEOL918 Analytical Methods in Geology

Autumn session; 6 credit points (up to 42 hrs of lectures/seminars/practicals/tutorials).

Assessment: as appropriate from essays, reports, seminars, final examination.

Topics include an outline of the theory and practice of modern analytical methods in petrology and determinative mineralogy; mineral separation; use of various analytical techniques including XRD, XRF, SEM, ICP and microprobe.

Reference:

Hutchison, C S, *Laboratory Handbook of Petrographic Techniques*. Wiley, New York, 1974.

Co-ordinator: Dr BE Chenhall.

GEOL919 Basin Setting and Analysis

Autumn session; 6 credit points (up to 42 hrs lectures/seminars/practicals/tutorials; up to 4 days field work).

Assessment: as appropriate from essays, reports, seminars, final examination.

Topics include tectonic development of sedimentary basins (coal, petroleum and mineral deposits in sedimentary basins); spatial relationships; analytical aspects of basin analysis including palaeocurrent analysis, sedimentary facies relationships within the basin fill, petrological parameters in sedimentary basins and mathematical analysis of basin data; coal forming environments. Field work includes comparison of facies on the cratonic and arc sides of the retroarc Sydney Basin sequence.

Reference:

Miall, A D, *Principles of Sedimentary Basin Analysis*, Springer-Verlag, New York, 1990.

Co-ordinator: Associate Professor B G Jones.

GEOL920 Organic Petrology

Spring session; 6 credit points (up to 42 hrs lectures/seminars/practicals/tutorials; up to 4 days field work).

Assessment: as appropriate from essays, reports,

seminars, final examination.

Topics include sample preparation; fluorescence and white light microscopy; macerals, microlithotypes, lithotypes; evolution of flora; formation of peat; coalification; type and rank; heat-affected coals, coke; Gondwana coals; coal petrology and associated stratigraphic, tectonic and palaeogeographic problems; minerals in coal and oil shale. Laboratory exercises include examination of Gondwana and northern hemisphere coals; field work includes examination of seams in outcrop and core.

Co-ordinator: Dr AC Hutton.

GEOL921 Environmental Geology

Spring session; 6 credit points (up to 42 hrs lectures/seminars/practicals/tutorials; up to 4 days field work).

Assessment: as appropriate from essays, reports, seminars, final examination.

Topics include the relationship of mining operations to communities; downstream pollution problems; mineralogical composition and types of associated dusts; composition of mine waters and stack emissions, the reclamation of mine sites; effects of mine subsidence; the composition, uses and disposal of waste residues; environmental impact studies; alienation of resources; conflicts of interest in mining operations. Field work includes visits to appropriate and topical field locations, extractive mineral and industrial sites.

Co-ordinator: Dr BE Chenhall.

GEOL922 Tectonics

Autumn session; 6 credit points (up to 42 hrs lectures/seminars/practicals; up to 4 days field tutorials).

Assessment: as appropriate from essays, reports, seminars, final examination.

The subject provides an overview of the dynamic Earth with analysis of plate tectonics and the tectonic development of ancient rock assemblages and orogenic systems. Aspects of tectonic theory are treated by reference to several examples of Pherozoic and Precambrian orogenic systems.

Reference:

Kearey, P, and Vine, F J, *Global Tectonics*, Blackwell Scientific Publications, 1990.

Co-ordinator: Dr C L Fergusson.

GEOL923 Structural Geology

Autumn session; 6 credit points (up to 42 hrs lectures/seminars/practicals; up to 5 days field tutorials).

Assessment: as appropriate from essays, reports, seminars, final examination.

The subject provides an overview of deformation of the Earth's crust and modern applied techniques in structural geology. The principles of stress, strain and deformation are taught and applied to the understanding of rock structures.

Reference:

Suppe, J, *Principles of Structural Geology*, Prentice-Hall, New Jersey, 1985.

Co-ordinator: Dr CL Fergusson.

GEOL950 Project A

18 credit points.

Assessment: report, seminar and essays and examinations as appropriate.

This project will consist of a field, laboratory and/or library study on some topical aspect of geology equivalent to four months of full-time study.

GEOL951 Project B

18 credit points.

Assessment: report, seminar and essays and examinations as appropriate.

This project will consist of a field, laboratory and/or library study on some topical aspect of geology equivalent to four months of full-time study.

GEOL999 Major Thesis

48 credit points per year.

PHYSICS

COURSES OFFERED

The following postgraduate degrees and diplomas are available:

1. Doctor of Philosophy
2. Honours Master of Science by Research
3. Graduate Diploma in Science

CURRENT RESEARCH AREAS

The following areas of research are available to candidates undertaking the Honours Master of Science degree by research and the Doctor of Philosophy degree:

Astronomy - visible and infrared, planetary surfaces
 Experimental nuclear physics
 Laser spectroscopy
 Medical and Radiation Physics
 Scattering of light by solids
 Solid state spectroscopy of impurities in semi-conductors
 Studies of electronic wave functions in solids

SCHEDULE OF GRADUATE SUBJECTS

Graduate Diploma Science (Physics)		
Number	Subject	Credit Points
PHYS230	Intermediate Physics	12
PHYS255	Radiation Physics	6
PHYS295	Concepts of the Modern Universe	6
PHYS235	Mechanics and Thermodynamics	6
MATH201	Multivariate and Vector Calculus*	6
MATH202	Applied Differential Equations*	6
MATH261	Mathematics IIA for Engineers	6
MATH262	Mathematics IIB for Engineers	6
PHYS305	Quantum Mechanics*	6
PHYS315	Current Topics in Physics	6
PHYS325	Electromagnetism and Plasma Physics*	6
PHYS335	Classical Mechanics*	6
PHYS345	Medical Physics	6
PHYS355	Radiation Therapy Physics	6
PHYS365	Detection of Radiation: Neutrons, Electrons and X-Rays	6
PHYS375	Nuclear & Solid State Physics	6
PHYS385	Statistical Mechanics*	6
PHYS395	Astro-, Nuclear and Solid State Physics	12
PHYS401	Theoretical Mechanics and Electromagnetism	8
PHYS441	Astro- and Nuclear Physics	8
PHYS444	Quantum Mechanics	8
PHYS446	Solid State Physics	8
PHYS452	Medical Imaging	8
PHYS453	Radiobiology & Radiation Protection	8
PHYS454	Physics of Diagnostic Radiology	8
PHYS455	Basic and Applied Pathology	8
PHYS456	Imaging Physics	8
PHYS910	Advanced Project in Physics A	6
PHYS921	Applied Physics Report	18
PHYS947	Special Topics in Physics A	6
PHYS948	The Physics of Imaging	6
PHYS960	Advanced Project in Physics B	6
PHYS997	Special Topics in Physics B	6
PHYS990	Applied Physics Project	24
* These subjects are pre and co-requisite of some of the physics subjects.		
Honours Master of Science		
PHYS910	Advanced Project in Physics A	6
PHYS946	Advanced Solid State Physics	6
PHYS947	Special Topics in Physics A	6
PHYS948	The Physics of Imaging	6
PHYS960	Advanced Project in Physics B	6
PHYS997	Special Topic in Physics B	6
PHYS999	Major Thesis	48
For further details, see <i>Course Requirements</i> below.		

COURSE REQUIREMENTS

1. DOCTOR OF PHILOSOPHY

Candidates for this degree enrol in PHYS999.

2. HONOURS MASTER OF SCIENCE

The course will be made up of subjects selected from those described below, in accordance with the Honours Masters Degree Rules together with the following conditions:

- (1) entry to the degree program will normally be from an Honours degree in Physics or the Graduate Diploma in Science (Physics) or from a pass degree with an appropriate three year sequence in Physics;
- (2) students entering with a degree of Honours Class II, Division 2 or above in an appropriate area, will do the 48 credit point PHYS999 Major Thesis;
- (3) students entering with a degree below Honours Class II, Division 2 will do the 48 credit point PHYS999 and a 48 credit point combination of subjects chosen from the remaining Graduate Subjects below and the Bachelor Degree Schedule. These subjects will normally be chosen in consultation with and approved by the Departmental Head.

3. GRADUATE DIPLOMA IN SCIENCE

Introduction and Objectives

This one year full-time or two year part-time course is designed to provide:

- (1) a Masters Qualifying course for students who have inadequate preparation for direct entry into the Honours Masters program;
- (2) an opportunity for Science teachers who have a degree but have taken Physics to first or second year level only, to improve their understanding and horizons in Physics;
- (3) an opportunity for International students and students without a full major in Physics to update their knowledge of Physics.

Entry to the Course

Students must consult the Departmental Head for admission to the course. The particular combination of subjects to the value of 48 credit points will be chosen in consultation with the Departmental Head.

SUBJECT DESCRIPTIONS

PHYS910 Advanced Project in Physics A

Autumn session; 6 credit points (42 hrs laboratory).

Assessment: satisfactory operation and written descriptions of completed experiments.

The student will be required to design and construct several self-contained experiments at the level of those encountered in PHYS309 Advanced

Experimental Physics. The number and type shall be determined by two members of the academic staff of the Department of Physics.

Co-ordinator: Associate Professor W Zealey.

PHYS946 Advanced Solid State Physics

Double Session (A); 6 credit points.

Assessment: assigned problems, tests and sessional examinations.

Crystal Symmetries; Groups of Linear Transformation; Abstract Groups; Theory of Group Representations; Group of the Schrödinger Equation; Selection Rule Theorem; Groups of Physical Interest; Rotation Operations; Double-Valued Representations; Direct Products; Crystal Fields; Adiabatic Approximations; Bloch's Theorem; The Effective Mass Expansion; Spin-Orbit Interaction; Time-reversal Symmetry; Symmetry Properties of Wave Vectors; Band Theory; Impurities in Semiconductors.

Co-ordinator: Professor P Fisher and Dr C Zhang.

PHYS947 Special Topic in Physics A

Autumn session; 6 credit points (14 hrs seminars and 14 hrs tutorials).

Assessment: project work and seminar.

A special topic to be selected from any area of physics. The selection to be made by the Departmental Head in consultation with the Departmental Assessment Committee.

Co-ordinator: Associate Professor W Zealey.

PHYS948 The Physics of Imaging

Autumn session; 6 credit points (28 contract hrs).

Pre-requisite: Relevant academic or professional background.

Assessment: assignments and end of session paper.

Photographic processes and interpretation; Optical and infrared arrays; Image digitising systems; Radio synthesis imaging and fourier optics; Image analysis; Applications in industry, medicine and astrophysics.

Textbook:

Notes will be provided and relevant reading material will be drawn from monographs and papers.

Co-ordinator: Associate Professor W Zealey.

PHYS960 Advanced Project in Physics B

Spring session; 6 credit points (42 hrs laboratory).

Assessment: satisfactory operation and written descriptions of completed experiments.

The student will be required to design and construct several self-contained experiments at the level of those encountered in PHYS306 Projects in Physics A. The number and type shall be determined by two members of the academic staff of the Department of Physics.

Co-ordinator: Associate Professor W Zealey.

PHYS997 Special Topic in Physics B

Spring session; 6 credit points (14 hrs seminars and 14 hrs tutorials).

Assessment: as for PHYS947.

A special topic to be selected from any area of physics. The selection to be made by the

Departmental Head in consultation with the Departmental Assessment Committee.

Co-ordinator: Associate Professor W Zealey.

PHYS999 Major Thesis

Double session (A); 48 credit points per year.

The major thesis takes the form of a supervised research project on an approved topic.

CROSS FACULTY PROGRAM

CROSS FACULTY PROGRAM

POSTGRADUATE PROGRAM

Total Quality Management

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TOTAL QUALITY MANAGEMENT

COURSES OFFERED

The following courses are available:

1. Honours Master of Total Quality Management
 2. Graduate Diploma in Total Quality Management
 3. Graduate Certificate in Total Quality Management
- *PhD in TQM may be available, contact course co-ordinator.

POSTGRADUATE PROGRAM

Total Quality Management

SCHEDULE OF PROGRAMS

POSTGRADUATE PROGRAM IN TOTAL QUALITY MANAGEMENT

leading to the Honours Master of Total Quality Management, Graduate Diploma in Total Quality Management and Graduate Certificate in Total Quality Management.

Number	Subject	Credit Points
Graduate Certificate		
TQM911	Introduction to Quality Concepts	6
STAT949	Statistical Thinking	6
<i>or</i>		
ENGG921	Engineering Data Reduction and Error Analysis	6
MECH961	Quality Improvement Systems and Implementation	6
MGMT906	Managing People at Work	6
<i>or</i>		
MGMT911	Organisational Behaviour	6
Graduate Diploma		
<i>Graduate Certificate subjects plus:</i>		
STAT941	Statistical Quality Control 1	6
<i>or</i>		
ENGG922	Statistical Process Control in Manufacturing and Service Industries	6
MECH960	Industrial Quality Management	6
MGM915	Management of Change	6
TQM912	An Overview of Quality Management	6
Honours Master		
MGMT919	Human Resource Strategies and TQM	6
MECH967	International Quality Techniques	6
STAT942	Design and Analysis for Quality Control	6
<i>Plus one elective from</i>		
MGM953	Human Resource Management	6
MGMT970	Contemporary Issues in Services Quality	6
MECH965	Quality in Engineering Design	6
<i>or any other postgraduate subject approved by the Co-ordinator</i>		
<i>and</i>		
TQM913	Thesis in Quality Management	24
<i>or</i>		
<i>applicants with an outstanding achievement record at Graduate Diploma level may be admitted to:</i>		
TQM914	Thesis in Quality Management	48

COURSE REQUIREMENTS

GENERAL

Students seeking **Advanced Standing** or **Exemption** are advised to refer to the University Rules, under the General Information section of the Postgraduate Calendar.

1. HONOURS MASTER OF TOTAL QUALITY MANAGEMENT

This course will be offered on a part-time and full-time basis and will require a minimum study period of one and a half years full-time or three years part-time. Candidates will be required to complete the Graduate Diploma in Total Quality

Management and a further 48 credit points. The 48 credit points must include a 24 credit point research thesis and 4 subjects as outlined above. Alternatively applicants with outstanding entry qualifications may complete their Honours Master of TQM by thesis only through enrolling in a 48 credit point thesis (TQM914). The research thesis must be completed with supervision from one of the Faculties of Commerce, Informatics or Engineering. This research project can be industry based and tailored to the candidate's work-place requirements.

Entry Requirements:

A Graduate Diploma in Total Quality Management or an appropriate Graduate Diploma or Honours degree in the University or other approved institution. Prior to the conferring of the degree of Honours Master of Total Quality Management upon a candidate, the

candidate must surrender the testamur for the Diploma in Total Quality Management and in doing so will be deemed to have surrendered all rights pertaining to the diploma.

2. GRADUATE DIPLOMA IN TOTAL QUALITY MANAGEMENT

The candidate is required to successfully complete 48 credit points of course work as outlined in the schedule.

Entry Requirements:

Three or four year Bachelor Degree from the University or other approved institution with the qualifications of candidates applying for entrance to be assessed by the course co-ordinator(s).

3. GRADUATE CERTIFICATE IN TOTAL QUALITY MANAGEMENT

The candidate is required to successfully complete 24 credit points of course work as outlined in the schedule.

Entry Requirements:

The University may consider candidates who do not possess formal qualifications but can offer substantial professional experience in the area.

EXTERNAL COURSES

The Graduate Diploma in Total Quality Management and the Graduate Certificate in Total Quality Management are available externally through the Wollongong Graduate Consortium (PAGE), Office of Continuing Education and the Sydney Centre.

SUBJECT DESCRIPTIONS

ENGG921 Engineering Data Reduction and Error Analysis

6 credit points (3 hrs per wk).

Assessment: final examination and compulsory assignments.

Probability distributions; normal, binomial, weibull. Testing of hypothesis, error analysis, sampling techniques, experimental design, correlation and auto-correlation, introduction to maintenance analysis data and control charts.

Co-ordinator: Professor TG Rozgonyi.

ENGG922 Statistical Process Control in Manufacturing and Service Industries

6 credit points (3 hrs per wk).

Assessment: final examination and compulsory assignments.

Process capability and indices. Process stability. Specification and control limits. The seven statistical tools, X-bar charts, R-charts, P-charts, PN-charts, U-charts, C-charts, S-charts, CUSUM charts. Exponentially weighted moving average. Human behaviour requirements in SPC. Leadership requirements. Small group activities. Decision making for process improvement. Acceptance sampling. SPC case studies.

Co-ordinator: Professor TG Rozgonyi.

MECH960 Industrial Quality Management

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination, other examinations, projects, tutorials and assignments may be incorporated in the final assessment.

Topics to be covered include: process capability; statistical process control and capability case-studies; JIT (Just In Time) & Quality; team working and worker involvement (SGIA); improvement management; education and training for quality; introduction to quality of design, reliability, safety and product liability; Total Productive Maintenance v TQC; activity based costing and TQM; quality information systems and key performance indicators.

Co-ordinator: Associate Professor V Stewart.

MECH961 Quality Improvement Systems and Implementation

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination, other examinations, projects, tutorials and assignments may be incorporated in the final assessment.

Basic quality philosophy as per Feigenbaum, Juran, Deming and Crosby – emphasis on system, cost and people improvement; the economics of quality; ISO9000 Quality Systems - their role in TQM; introduction to Practical Industrial Quality Systems (PIQS) (Kaizen, Ishikawa, Improvement Methodology and tools); quality function deployment; measurement of conformance and prevention of non-conformance; team approaches to problem solving – the roles of management; suppliers and customers; implementation examples through case-studies of prominent organisations; audit procedures for TQM.

Co-ordinator: Associate Professor V Stewart.

MECH965 Quality in Engineering Design

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination, other examinations, projects, tutorials and assignments may be incorporated in the final assessment.

Design as the source of quality; The Concurrent Engineering Approach; Value engineering; Failure mode and effects analysis; Organisation for design quality; Design case studies in Taguchi methods and quality function deployment; Design standards, testing, reliability, safety maintainability, product liability, product certification; Configuration management; Contract and design reviews.

Co-ordinator: Associate Professor V Stewart.

MECH967 International Quality Techniques

Autumn or Spring session; 6 credit points (28 hrs lectures, 14 hrs tutorials).

Assessment: final examination, projects and assignments may be incorporated in the final assessment.

An international perspective on quality, with a comparison of the quality techniques employed in the major regions of the world. The historical evolution, development, application methodology and integration of these techniques within the cultural, political and industrial environment of various regions/countries are addressed, in the context of achieving World's Best Practice. Areas of commonality and difference; Techniques of emerging importance in both the manufacturing and service fields, such as self-diagnosis, benchmarking, business process reengineering, concurrent engineering, quality function deployment, and software quality management. The quality award system in use in each region will be studied and compared.

Co-ordinator: Associate Professor V Stewart.

MGMT906 Managing People at Work

6 credit points (3 hrs per wk).

Assessment: seminar(s), case studies, essay(s) and examination(s).

A study of the contemporary environment

of human resource management with particular reference to organisational strategy and human resource development, line and staff managerial roles, and the effects of institutional framework and industrial agreements on workplace management. Human behaviour and productive performance including needs and motivation, individual and group behaviour, work organisation and management. Managing organisational change in the workplace will be a particular focus of this subject.

Co-ordinator: Professor S Linstead.

MGMT911 Organisational Behaviour

6 credit points (3 hrs per wk).

Assessment: final examination and satisfactory completion of two assignments.

This subject is designed to introduce students of TQM to the basic principles and concepts underlying behaviour in organisations. Topics to be covered include individual attributes, motivation, decision-making, group structure and process, communication, leadership, conflict and organisational change. The context for the discussion of organisational behaviour recognises that TQM is an ongoing process, implemented by a management and staff aware of the central role played by organisational culture in the development of continuous improvement.

Co-ordinator: Professor S Linstead.

MGMT919 Human Resource Strategies and TQM

6 credit points (3 hrs per wk).

Assessment: seminars, essays and examination.

This subject will examine the human resource management aspects of Total Quality Management (TQM). TQM developed as a set of managerial practices, a focus on teamwork and cultural change intended to create management systems able to compete in world markets. The specific elements of TQM that relate to the management of people will be analysed in terms of their theoretical and practical implications for management. Case studies on the implementation of TQM will be discussed. Future trends in management practice and management theory arising from the developments of TQM will be assessed.

Co-ordinator: Professor M Hough.

MGMT915 Management of Change

6 credit points (3 hrs lectures/seminars per wk).

Assessment: seminars, project and examination.

Pre-requisite: MGMT906 or MGMT911.

This subject examines the process of change within an organisation. Issues under discussion will be: change models; characteristics of innovative organisations; acceptance/resistance of change; factors of change; reasons for change; intervention strategies; planning and monitoring change; sustaining change.

Co-ordinator: Dr R Jones.

MGMT953 Human Resource Management

6 credit points (3 hrs per wk).

Assessment: group presentation(s), written assignment(s), examination(s).

Job Design, Job Analysis and Training; Unionisation; Employee Involvement; Appraisal, Payment & Reward; Health &

Safety/Occupational Health; International HRM; HRM & Total Quality.

Co-ordinator: Dr G Sewell.

MGMT970 Contemporary Issues in Services Quality

6 credit points (3 hrs per wk).

Assessment: critique of academic literature, case presentations, assignments.

This course is designed to follow on from MGMT938 Managing Services Marketing. It will focus on advanced topics in service quality, customer satisfaction with services, and strategic issues relating to the marketing and relationship management in service organisations. Emphasis will be placed on reviewing contemporary readings in the academic and professional literature.

Co-ordinator: Associate Professor P Patterson.

STAT941 Statistical Quality Control 1

6 credit points.

Pre-requisite: MATH949.

Assessment: assignments and examinations.

Why control charts? Level of variability. Differences between specification limits and control limits. Deming's philosophy. Quality circles. Cause and effect diagrams. Pareto diagrams, control charts. Benefits of using control charts. Shewart charts, such as x-charts, c-charts, p-charts, R-charts, s-charts. Cumulative sum (CUSUM) control charts. Exponentially weighted moving averages. Moving average and moving range charts. Average run length of the above mentioned control charts. Comparison of charting methods. Process capability indices. Determining process capability using control charts. Some case studies.

Co-ordinator: Dr C Gulati.

STAT942 Design and Analysis for Quality Control

6 credit points.

Assessment: examination 75%, assignments 25%

Experimental design. Principles of design. Importance of randomisation. Randomised block designs. Factorial designs. Fractional factorials. Taguchi's philosophy and how it relates to experimental design. Introduction to variance components. Fixed models as opposed to random (mixed) models. Estimation of variance components. Evolutionary processes.

Co-ordinator: Dr Y Lin.

STAT949 Statistical Thinking

6 credit points.

Assessment: assignments and examinations.

The importance of variability. Why Statistics? Statistics and Quality. Exploratory data analysis. Numerical and graphical summaries. Measures of location and spread. Elementary probability. The Binomial, Poisson and Normal Distributions. The Role of the Central Limit Theorem in Statistics. The nature and purpose of statistical inference. Point estimation and confidence intervals. Concepts of hypothesis testing. Simulation techniques. Sampling methods. Elementary control charts.

Co-ordinator: Professor D Griffiths.

TQM911 Introduction to Quality Concepts

6 credit points.

This subject should be taken in the first session of study.

Assessment: one presentation, two major assignments, examination.

An overview of the concept of quality in organisational settings. The concept of a "quality audit" and how to undertake it. Issues and problems in implementing and coordinating total quality techniques in an organisational setting. The concepts and issues of design quality, planning quality and implementation quality. Students will be required to undertake an extensive case study of the success factors and challenge issues of implementing total quality into an organisation, and present a detailed, comprehensive analysis from the selected case study.

Co-ordinator: Professor M Hough.

TQM912 An Overview of Quality Management

6 credit points.

This is a capstone subject and should be taken in the final stages of the course.

Assessment: seminar and project.

Co-ordinator: Dr GJ Montagner.

TQM913 Thesis in Quality Management

24 credit points.

Assessment: seminar and project.

Co-ordinator: Dr GJ Montagner.

TQM914 Thesis in Quality Management

48 credit points.

Assessment: presentation of completed thesis.

Each candidate will be required to have a substantive research proposal approved in an aspect of total quality management, undertake a satisfactory research cycle into the approved topic, and submit a thesis of an acceptable format and standard.

Co-ordinator: Dr GJ Montagner.

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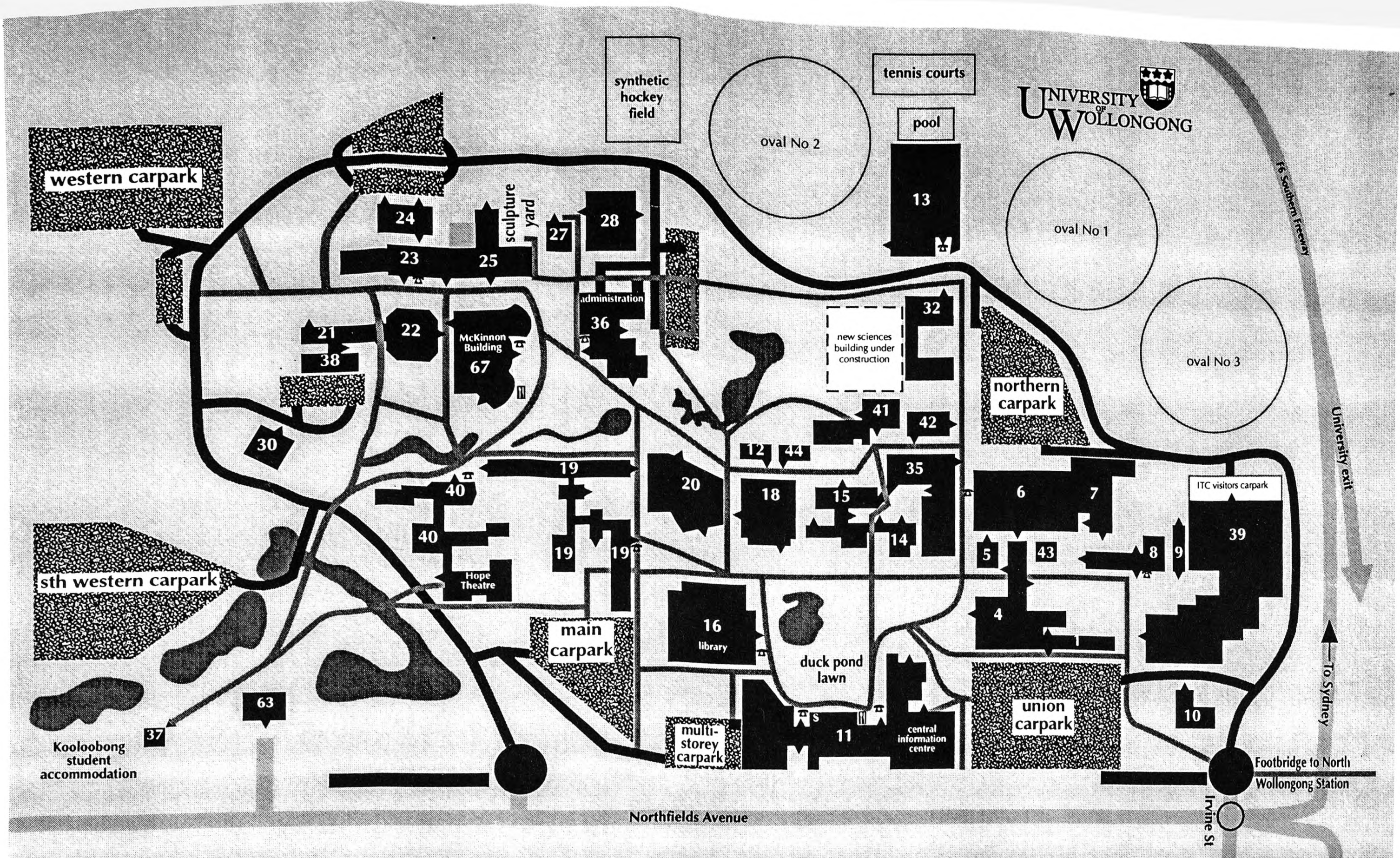
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Key

- building entrances
- parking areas
- University ring road
- ponds
- major pathways
- telephone

Key to Buildings

- | | | | | | |
|----------------------------|--|--|-------------------------------------|--------------------------------|----------------------|
| 1 materials engineering | 9 biomedical science | 18 chemistry/physics | 27 movement laboratory | 36 administration | 43 computer lab |
| 4 engineering | 10 kids uni (childcare centre) | 19 arts & health sciences | 28 gymnasium | 37 Kooloobong | 44 computer lab |
| 5 eastern classrooms | 11 union building | 20 communications centre | 29 centre for research policy | 38 health sciences | 63 University lodge |
| 6 engineering laboratories | 12 computer science | 21 education laboratories | 30 Aboriginal education centre | 39 Illawarra Technology Centre | 60 creative writing |
| 7 thermodynamics | 13 recreation & sports association | 22 journalism, education resource centre | 31 gardener's centre | 40 commerce, Hope Theatre | 67 McKinnon Building |
| 8 mechanical engineering | 14 central lecture theatre | 23 education | 32 printery, central store | 41 science | |
| | 15 Austin Keane, Informatics, geology, ITS | 25 creative arts & Long gallery | 35 informatics, biological sciences | 42 biological sciences | |
| | 16 library | | | | |

Year Bachelor of Education (Primary) Students, 1995.