

The University of New South Wales

Architecture

1989 Faculty Handbook

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Subjects, courses and any arrangements for courses including staff allocated, as stated in the Calendar or any Handbook or any other publication, announcement or advice of the University, are an expression of intent only and are not to be taken as a firm offer or undertaking. The University reserves the right to discontinue or vary such subjects, courses, arrangements or staff allocations at any time without notice.

Information in this Handbook has been brought up to date as at 8 September 1988, but may be amended without notice by the University Council.

Contents

Calendar of Dates	1 3
Foreword	7
Faculty Information	8
Some People Who Can Help You	8
Enrolment Procedures	8
Rules for Progression	9
	9
Faculty Laboratories	9
Student Clubs and Societies	10
Undergraduate Study	11
School of Architecture	11
Architecture Degree Courses	11
Bachelor of Science (Architecture)	12
Schedule of Subjects	13
Department of Industrial Arts	. 18
School of Building	18
Schedule of Subjects	19
School of Landscape Architecture	20
Schedule of Subjects	21
School of Town Planning	22
Schedule of Subjects	22
Undergraduate Study: Subject Descriptions	25
Identification of Subjects by Number	26
	27
Architectural Design Studio 27, Architectural Communication 27,	
Theory of Architecture 29, History of Architecture 30, Architecture 31, Architecture 21, Architecture 31, Ar	
Province and Construction 32. Architectural Practice 33.	
Other Required Studies 34. Other Elective Studies 34 General Education Subjects 35.	
Industrial Design	35
Building	36
Construction Stream 37, Building Science Stream 37,	
Management Stream 38, Building Economics Stream 39, Other Subjects 40.	
Town Planning	40
Core Subjects 40, Related Subjects 41,	
reaning Lesures 43, ourgests Unered ID Uner Schools 44	
Landscape Electives for Students of Architecture and Related Disciplines 46,	44
Subject Offered to Other Schools 47	
Botany	47
Mines	47

cnnecture

Geography	47	
Graduate Study	49	
Graduale chroment Procedures	49	
Summer of Conditions for the Award of a Masters Degree	49	
Graduate Courses	49	
Graduate School of the Built Environment	50	
1120/1121 Doctor of Philosophy (PhD) 50	50	
2201 Master of Architecture (MArch) 51		
22-V Mater of Clence (Acoustics) (MSC(Acoustics)) 51		
8130 Master of the Bulk Environment (Bulkling Conservation) (MBEnv) 52		
8145 Mester of Industrial Design (MID) 63 8146 Mester of Science (Industrial Design) (MID) 63		
o no maser or somme (indeme beign) (mou(indbes)) 05		
School of Architecture	55	
1130 Doctor of Philosophy (PhD) 55	•	and the second sec
2200 webset of Architectura (warch 55 6140 Master of Architectura Desian (MArchDea) 55		
2206 Master of Science (by Research) 56		
School of Building		•
140 Doctor of Philosophy (PhD) 56	56	
2210 Master of Building (MBuild) 56		
8116 Master of Project Management 86 8155 Master of Project Management 86		
s too wester of Construction wanagement (wiconstrugt) 57		
School of Landscape Architecture	57	
1160 Doctor of Philosophy (PhD) 59		
2220 Waster of Landscape Panning (MLPArch) 58		
5215 Graduate Diploma in Landscape Planning (GradDipLP) 58		
School of Town Planning	50	
150 Doctor of Phileeophy (PhD) 59	59	
2230 Master of Town Planning (by Research) (MTP) 59		
Graduate Study: Subject Descriptions		
Identification of Subject Descriptions	61	.,
	62	
	63	
Town Planning	63	
landscape Architecture	60	
Graduate School of the Built Environment	00	
	00	
Graduate Study: Conditions for the Award of Higher Degrees	71	
Doctor of Philosophy	73	
Master of Architectural Design	75	
Master of Architecture, Master of Building, Master of the Built Environment, Master of		
Landscape Architecture and Master of Town Planning	75	
Master of Project Management	77	
Master of the Built Environment (Building Conservation), Master of Industrial Design,	1.	
Master of Science (Acoustics), and Master of Science (Industrial Design)	78	
Master of Engineering and Master of Science	79	
Master of Engineering, Master of Science and Master of Surveying without supervision	80	
Master of Landscape Planning	81	
Graduate Diploma	82	
Scholershine and Drives	_	
Scholarships	85	
Undergraduate	QE	
Graduate	86	
Prizes	00	
Undergraduate		
	89	
Graduate	90 90	

Calendar of Dates

1989

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Session 1 (67 teaching days)

	27 February to 23 March	26 February to 12 April
Recess	24 March to 2 April	13 April to 22 April
	3 April to 8 June	23 April to 7 June
Study Recess	9 June to 14 June	8 June to 13 June
Midyear Recess	1 July to 23 July	30 June to 22 July
Examinations	15 June to 30 June	14 June to 29 June

Session 2 (67 teaching days)

	24 July to 22 September	23 July to 21 September
Recess	23 September to 2 October	22 September to 1 October
	3 October to 1 November	2 October to 31 October
Study Recess	2 November to 7 November	1 November to 6 November
Examinations	8 November to 24 November	7 November to 23 November
Vacation Weeks	27 March to 2 April	16 April to 22 April
Common to Australian	3 July to 9 July	2 July to 8 July
Universities	25 September to 1 October	24 September to 30 September

Important Dates for 1989

Jan	uary	
M	2	New year's Day - Public Holiday
F	6	Last day for acceptance of applications by the Admissions Section for transfer to another undergraduate course within the University.
W	18	Last day for applications for review of results of assessment.
Th	26	Australia Day - Public Holiday
т	31	Enrolment period begins for new undergraduate students and undergraduate students repeating first year.
Feb	ruary	
М	6	Re-enrolment period begins for second and later year undergraduate and graduate students enrolled in formal courses.
F	24	Students should consult the 1989 Re-enrolment Procedures booklet for details. Last day for students to discontinue 1989 enrolment.
м	27	Last day for acceptance of enrolment by new and re-enrolling students. Late fee payable thereafter if enrolment approved. Session 1 begins - all courses except Medicine III, IV and V.
Mai	ch	
F	10	Last day applications are accepted from students who enrol in additional Session 1 or whole year subjects.
F	24	Good Friday - Public Holiday
		Mid-Session Recess begins
м	27	Easter Monday - Public Holiday

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Apr			
Su	2	Mid-Session Recess ends	
F	21	Last day for students to discontinue without failure subjects which extend over Session 1 only	
Т	25	Anzac Day - Public Holiday	
May	1		
Т	2	Confirmation of Enrolment forms despatched to all students	
T	9	Publication of Provisional Timetable for June examinations	
Th	11	Last day for acceptance of corrected Confirmation of Enrolment forms	
W	17	Last day for students to advise of examination clashes	
Т	30	Publication of timetable for June examinations	
Jun	θ		
Th	8	Session 1 ends	
F	9-14	Study Recess	
М	12	Queen's Birthday - Public Holiday	
Th	15	Examinations begin	
F	30	Examinations end	
July	,		
Μ	10	Assessment results mailed to students	
Т	11	Assessment results displayed on University noticeboards	
Su	23	Midyeer Recess ends	
M	24	Session 2 begins	
M	31	Last day for applications for review of July assessment results	
Aug	ust		
F	4	Last day applications are accepted from students to enrol in additional Session 2 subjects	
C	tombor	Last day for students to discontinue without failure subjects which extend over the whole academic year	
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Ŧ	10	Last day for suberts to discontinue without failure subjects which extend over Session 2 only Confirmation of Enrolment former cant to all at identic	
e	22	Mid Session Decode bogine	
ть	28	I set day for accontance of corrected Confirmation of Enclosed format	
F	20	Closing date for applications to the Linkowsition and Collegion Administra Contra	
Octo	ober		
M	2	Mid-Session Recess ends	
2		Eight Hour Day - Public Holiday	
т	3	Publication of provisional examination timetable for November examinations	
w	11	Last day for students to advise of examination timetable clashes	
Т	24	Publication of timetable for November examinations	
Nov	ember		
W	1	Session 2 ends	
Th	2-7	Study Recess	
W	8	Examinations begin	
F	24	Examinations end	
Dec	ember		
F	8	Assessment results mailed to students	
Μ	11	Assessment results displayed on University noticeboards	

Staff

Comprises School of Architecture, including Department of Industrial Arts; Schools of Building, Landscape Architecture, Town Planning; and Graduate School of the Built Environment.

Dean Professor A.R. Toakley

Chairman Associate Professor R.E. Apperly

Senior Administrative Officer Brian John Neweli, BCom N.S.W.

Professional Officers

Roderick Craig McGregor, BSc N.S.W. Richard Rosenberger, BE *Timisoara*, MIEAust

School of Architecture

Professor of Architecture and Head of School Paul Stanhope Reid, BArch Auck., MArch Mich., ARAIA

Professor of Architecture Vacant

Professor of Architecture Vacant

Visiting Professor Laszlo Peter Kollar, MArch PhD N.S.W., ASTIC

Associate Professors

Richard Eric Apperty, BArch Syd., MArch N.S.W., ARAIA

John Albyn Ballinger, BArch Adel., FRAIA Russell Callam Jack, MArch N.S.W., ASTIC, FRAIA Peter Thomas Oppenheim, BArch Cape T., MArch PhD N.S.W. Nancy Claire Ruck, BArch N.Z., MBdgSc Syd., PhD N.S.W., FIES, FRAIA, ANZIA Kenneth James Wyatt, BE Qld., MBdgSc Syd., MIEAust

Senior Lecturers

Victor Martin Berk, BArch Dipadmin N.S.W. John Richard Cocke, BArch Syd., LLB MSc(Building) N.S.W., FRAIA Paul Alan Johnson, BArch Syd., DipCD PhD N.S.W., FRAIA Bruce Herbert Judd, BArch PhD Syd., ARAIA Geoffrey Kenneth Le Sueur, BArch GradDip N.S.W., ARAIA Nicholas Marinov, DipArch Prague, MArch N.S.W. Alan Ogg, BE N.S.W., MArch Penn. Richard Patrick Parlour, BSc Lond., PhD N.S.W., DipEng Lough. Peter Reginald Proudfoot, BArch Syd., MArch Penn, PhD N.S.W., Rome Scholar, ARAIA Vinzenz Franz-Josei Sedlak, DipIngArch T.U. Graz, MPhil Sur. Barry Vivian Woltaston, BArch Syd., MArch N.S.W., FRAIA

Lecturers

Chris LeRoy Bell, BA(Arch) Calif. Robert John Bryant, BArch N.S.W., MTCP Syd., ASTIC, DipEnvStud Macq., MRAPI, ARAIA Geoffrey Lindsay Dwyer, FRAIA Richard Grantly Fitzhardinge, DipArch Kingston on Thames Poly., MArch Calif., ARIBA, ARAIA Stanislaus Fung BSc(Arch) N.S.W. Elizabeth Ann Howard, BArch Syd., BA Macq. Desley Olwyn Luscombe, BSc(Arch) BArch N.S.W. Susan Helen McLain BSc(Arch) BArch N.S.W. Peter Murray, BArch N.S.W., MTCP Syd., DipEnvStud Macq., ARAIA James David Plume, MArch Syd. Harry Anthony Stephens, BArch DipLD N.S.W., FRAIA Kwong Hon Tang, BArch H.K., MArch Melb. Philip Manning Taylor BArch N.S.W., FRAIA

Tutor Stephen Peter, BArch DipArchComp Syd.

Administrative Assistant Harold Percy Chambers, BA *S.Pac.*

Department of Industrial Arts

Senior Lecturer and Acting Head of Department William Richard Lawson, BSc PhD N.S.W., MAP&S, MAIHR

Senior Lecturer Donald McArthur Godden, MSc N.S.W.

School of Building

Associate Professor and Head of School

Roger Mark Anthony Miller, BBuild N.S.W., SM CE M.I.T., FAIB, MACS

Professor of Building

Arthur Raymond Toakley, BCE BA MEngSc Melb., PhD Manc., CEng, FIEAust, FAIB

Senior Lecturers

David Nevil Hassall, BE MBdgSc Syd., MIEAust Graham Edward Levido, BBuild MSc(Building) N.S.W, MAIB Marton Marosszekey, BE N'*cle(N.S.W.)*, MEngSc N.S.W., MIEAust, MAIB Karl Goran Runeson, BA MBuild N.S.W., MAIB

Thomas Edward Uher, BBuild MSc(Building) N.S.W., MAIB

Lecturers

Ojars Indulis Greste, BE ME *N.S.W.*, DEng *Calif.* Clyde Donald Smythe, MBuild *N.S.W.*, ASTC, MAIB Robert Vaughan Zikmann, BSc(Build) *Pret.*, MDP (Build.Proj.Mngt) S.A., MISABSP

Visiting Fellow

John Malcolm Hutcheson, MC, BE Syd., BCom Qld., MBA PhD N.S.W., FCIS, FIEAust, AAPI, FID, FIArbA, AAUQ, LGE, FAIB, FAIM, FSLE, FCDA, FASA, CPA

School of Landscape Architecture

Professor of Landecape Architecture and Head of School William Hendrix; PhD MLA Mass., BLA Ohio State, APA

Associate Professor

Finn Christopher Thorvaldson, BArch N.S.W., MLA Mich., ARAIA, AAILA

Senior Lecturer Helen Beatrice Armstrong, BSc Syd., MLArch GradDip N.S.W., AAILA

Lecturers Craig Anthony Burton, BArch GradDip N.S.W., MA Syd., DipEnvStud Macq., ARAIA, AAILA Douglas Crawford, BArch Melb., GradDip MSc N.S.W., MRAIPR Ingrid Raina Mather, BLArch N.S.W., AAILA Donald Guy Sigsby, MLA Mich., AAILA

School of Town Planning

Professor of Town Planning and Head of School Hans Leo Westerman, ME Delft, FRAPI, MIEAust

Associate Professor

Elias David Duek-Cohen, BArch Liv., MA Oxf., DipTP Lond., FRAPI, MRTPI, ARIBA

Senior Lecturers

Stephen Harris, BTP N.S.W., FRAPI Peter Ashton Murphy, BA *Syd.*, PhD *Macq.* Robert Bolles Zehner, BA Amh., MA PhD *Mich.*, MASA

Lecturers Richard Earl Lloyd, BSc *Calif.Poly.State*, PhD *Calif.* Danny Barry Wiggins, BTP PhD *N.S.W.*, MRAPI

Graduate School of the Built Environment

Professor of Architecture and Head of School

John Christopher Haskell, DipTP Lond., MArch Natal, Rome Scholar FRSA

Associate Professor

Anita Barbara Lawrence, MArch N.S.W., FRAIA, MAAS

Senior Lecturers

John Kyle Redmond, BA DiplD(Eng) C.S.A.D., MA R.C.A., FRSA, FDIA Peter Leggett Reynolds, BArch PhD N.S.W.

Lecturer

Catherine Mary De Lorenzo, BA DipEd Syd.

Honorary Visiting Fellows

Sydney Állison Baggs, MArch DipLD PhD N.S.W., ASTC, FRAIA, AAILA, ARIBA Robert Charles Lewis Irving, MArch N.S.W., ARMTC, FRAIA

Building Research Centre

Director Marton Marosszekey

Deputy Director Graham Edward Levido

Senior Research Assistant Deo Prasad, BArch Auck., MArch N.S.W., ARAIA

Postgraduate Scholars Michael Chew, BBuild N.S.W. Chung Min Ng, BE *Monash* David Wang, BSc(Bldg.Const) *Shanghai*

Consultant Perry Forsythe - - - -

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Foreword

From the earliest times people have tolled to modify their environment to satisfy the physical and spiritual aspirations of their lives. In each great culture there is evidence of these aspirations being fulfilled in buildings of greater wonder, cities and towns that reflect social, political and technological circumstances, and landscapes that are of lasting significance.

Today all of those concerned with the quality of our environment are faced with issues of growing complexity. These complexities arise from increased communication facilities, technological developments and social and political aspirations and needs.

The professions working in the fields of the man-made and built environments will be required to evolve in the context of a rapidly developing technology solutions to the problems of an increasing population and the demands of people for an improvement in their quality of life.

The Faculty's purpose is to provide an academic climate that is conducive to the pursuit of knowledge, the search for truth, and the advancement of the quality of the man-made and built environments.

The Faculty offers courses that are designed to provide an education and qualification to practise the professions of architecture, building, landscape architecture and town planning. It provides opportunities for graduate and professional development studies, and for research in an across the fields of the man-made and built environments.

Faculty Information

Some People Who Can Help You

If you require advice about enrolment, degree requirements, progression within courses, or any other general faculty matters, contact:

Mr Brien Newell, Senior Administrative Officer, Faculty of Architecture

Room 510, Architecture Building, Extension 4794.

For information and advice about subject content and requirements contact the appropriate person below:

Professor Paul Reid, School of Architecture Room 100, Architecture Building, Extension 4780.

Professor William Hendrix, School of Landscape Architecture Room 208, Old Main Building, Extension 4844.

Mr Clyde Smythe, School of Building Room 409, Architecture Building, Extension 4821.

Professor Hans Westerman, School of Town Planning Room 205, Old Main Building, Extension 4837.

Professor John Haskell, Graduate School of the Built Environment Room 212, Sir Robert Webster Building, Extension 4848.

Faculty of Architecture Enrolment Procedures

Architecture Degree Course

All students re-enrolling in Architecture courses in 1989 should obtain a copy of the free booklet *Architecture Enrolment Procedures 1989* available from the School Office. This booklet provides detailed information on enrolment procedures and enrolment timetable.

Town Planning Degree Course

Before proceeding on practical experience, Town Planning students are required to obtain instruction relating to enrolment procedure from the School of Town Planning office. This particularly applies to students in Years 3 and 4.

Bachelor of Building Degree Course

The Building course is offered on a credit point semester system basis and students are required to enrol for the full year (two semesters) on the dates and at the times shown in the booklet Building Enrolment Procedures 1989.

Students are required to complete 70 days of practical experience as part of their course. They may elect to fulfill this requirement by working during vacation periods or to work full time in industry for one semester. Building students who elect to take their industrial program in Session 1 in any year are required to enrol at the beginning of that year.

Enrolment for Session 2 subjects is a preliminary enrolment and accepted subject to the student having obtained the appropriate prerequisites before commencement of that session.

Rules for Progression

Progression in courses offered in the Faculty of Architecture is generally dependent on the successful completion of prerequisites and/or co-requisites for subjects as listed in the schedules of subjects for each course.

Where the academic record of students is not of a satisfactory standard, the Head of School may recommend a restricted program. This applies to all undergraduate courses offered by the Faculty.

Library Facilities

Although any of the university libraries may meet specific needs, the staff and students of the Faculty of Architecture are served mainly by the Physical Sciences Library and the Studio Collection housed in the Faculty of Architecture. There is also some material still contained in the undergraduate collection located in the Library tower.

The Physical Sciences Library

This library, which is situated on Levels 6 and 7 of the Library tower, caters for the information needs of staff, graduate and undergraduate students in the areas of pure and applied science, engineering and architecture. The library's collection of books, serials and microfilms bears the prefix 'P' and details of each item are included in the microfiche monograph and serials catalogues. In addition, there is a map collection on Level 6. Journals with the prefix 'PJ' may not be borrowed.

Trained staff are available at all times to assist readers with their enquiries.

The Studio Collection contains a small collection of reference, course--related and general interest material. This material is not for loan but in the majority of cases loan copies are held in the Physical Sciences Library or in the undergraduate collection. The Studio Collection is open from 8:30am to 6:00pm during session and from 9:00am to 5:00pm during vacation, and a librarian is available to provide reference services and assist with readers' enquiries for several hours each day.

Students may also wish to use the undergraduate collection for associated reading.

Physical Sciences Librarian Marian Bate

Undergraduate Services

- The undergraduate collection caters for the needs of students in Years 1 and 2 and other groups where large numbers require mass teaching. Levels 3 and 4.
- The Open Reserve section, houses books and other material which are required reading. Level 2.
- The Audio-Visual section, contains cassette tapes, mainly of lectures and other spoken word material. The Audio-Visual section has wired study carrels and cassette players for student use. Level 3.
- The Reader Education program provides orientation tours and introductory library research method lectures to students.

Faculty Laboratories

Research Laboratories

The Faculty controls research laboratories situated on campus at Kensington and at the University of New South Wales Research Station, King Street, Randwick. The laboratories have sections equipped for work on environment and climate, materials, model testing, services, lighting and acoustics. Extensive testing and research equipment and workshop facilities are available, including a wind-rain machine, an artificial sky and sun, a structural modeling facility and a structural testing bay. The equipment and facilities of the laboratories are continually being expanded.

Research work and testing programs carried out in the laboratories include:

Study of the performance of bricks and brickwork.

Condensation behaviour of double-glazed windows.

Transfer of heat and moisture through wall elements.

Vibration characteristics of large prestressed concrete structures.

Penetration of moisture into and through concrete.

Development of methods of extending the use of solar energy in domestic architecture.

Development of form-finding techniques and fabrication methods for folded-surface structures.

Study of noise transmission in buildings.

Investigation of traffic noise measurement, analysis and prediction.

The effectiveness of artificial luminous environments.

Computing Facilities Laboratory

Established within the Faculty is the University Computer Graphics Facility, a laboratory for the teaching and research of computing methods with a particular emphasis on the use of computer graphics. The laboratory has the following major equipment: VAX 11/750 computer with 2 Mbytes of memory, 124 Mbytes of disk storage; Tektronix storage tube graphics terminals with hard copy and digitizing capability; a refresh-based computer graphics terminal with light pen; electrostatic printer/plotter; multi-pen small flatbed plotter; multi-pen high resolution drafting plotter and two studios of interactive terminals.

The computer is network connected to the University's central computing system, a major Cyber 171 and three VAX 11/780 computers. The laboratory equipment is optionally connected to any of these computers by an automatic switching system.

Active research is under way in the following areas:

The use of computing techniques and graphics in architectural design.

Rational computer-based documentation methods in building.

The development of management information systems for building organizations.

Analysis and development of rational approaches to landscape design and planning.

Various projects in the general areas of envrionmental and building science.

Student Clubs and Societies

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

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

Undergraduate Study

The Faculty of Architecture consists of the School of Architecture including the Department of Industrial Arts, the School of Building, the School of Landscape Architecture, the School of Town Planning and the Graduate School of the Built Environment. These schools and this department conduct undergraduate courses in the fields of architecture, industrial arts, building, landscape architecture and town planning. The courses provide education and training in the arts and sciences involved in the design and construction of buildings, in the development of citles, in landscape and in industrial arts. In addition to professional and vocational training the courses include general education subjects to provide graduates with a broad understanding of the humanities and the social sciences.

School of Architecture

Head of School Professor Paul Reid

Architecture is concerned with the design and construction of buildings which will not only satisfy the physical needs of their users but also enrich the lives of all who experience them. An architect in today's society needs to have specialized skills in order to deal with complex technological problems and opportunities, but he or she also needs an understanding of the environmental, cultural, social and legal context in which architecture is brought into being. Furthermore, present day architects must respond to an increasing public awareness of the need to conserve finite resources, not the least of which is the stock of older buildings which can still perform useful functions and add richness to the built environment. The architect's primary contribution is as a designer who recognizes and attempts to resolve all of the diverse forces which are brought to bear on the creation of a building. To perform this function, he or she must understand the roles of all people involved in the procurement of buildings and, when necessary, co-ordinate the work of specialist consultants.

Architecture Degree Courses

3260 Bachelor of Architecture Course

Bachelor of Architecture BArch

This course provides the academic education and practical experience leading to professional qualifications in architecture. It aims to equip students with the theoretical and practical knowledge, skills and techniques needed in the design and construction of buildings.

General Description of the Course

The course requires full-time attendance for five years with an additional six months practical experience taken after the end of third year. Theoretical knowledge is covered by lectures in the following seven areas:

- 1. Architectural Communication.
- 2. Theory of Architecture.
- 3. History of Architecture.
- 4. Architectural Construction.
- 5. Architectural Structures.
- 6. Environmental Control.
- 7. Architectural Practice.

Progression through the course is by Design Stages comprising Studio and Seminar components. The first three

Design Stages are of one year duration and the final four Design Stages are of one semester, or half-year duration. Admission to each Design Stage is subject to completion of a majority of the components of the preceding Design Stage and certain prerequisite Theory subjects.

In the Studios a graded sequence of exercises in the form of projects provides experience in architectural design. Each Studio is accompanied by Seminars which draw on the theoretical material and demonstrate its practical application. The architectural projects designed in the Studios thus provide the means for integrating all aspects of architecture.

In the final three sessions of the course the selection of an elective package gives students the opportunity to concentrate their study on particular aspects of architecture. Elective subjects are offered according to demand and the availability of staff and resources.

Practical Experience

Students are required to obtain six months' practical experience in an architect's office. The arrangements for this experience are to be approved by the School, and students are required to provide evidence of the scope and nature of the practical experience obtained. Students may not normally enrol in other subjects while obtaining approved practical experience.

Honours

The Bachelor of Architecture degree may be awarded with Honours based upon the quality of performance in the course and in accordance with current Faculty regulations. Honours are Class 1 or Class 2 Division 1 or Class 2 Division 2.

3265 Bachelor of Science (Architecture) Course

Bachelor of Science (Architecture) BSc(Arch)

This course provides an architectural education for those whose interests and ambitions lie outside the field of professional practice. It offers an opportunity to select subjects on the basis of a student's individual interests.

General Description of the Course

The course may be completed in three years of full-time study. The first year is taken in common with BArch students. In each of the following three sessions an approved special research programme is undertaken followed by a research project in the final session. A selection of subjects is taken from those offered by the School of Architecture with the option of subjects totalling up to fifteen credit points from outside the School.

General Education subjects totalling eight credit points must be taken during the course.

Honours

The Bachelor of Science (Architecture) degree may be awarded with honours after the successful completion of a two-semester honours programme following the completion of the BSc(Arch) programme, and in accordance with current Faculty regulations. Honours are Class 1 or Class 2 Division 1 or Class 2 Division 2.

Registration and Professional Recognition

The degree of Bachelor of Architecture of the University of New South Wales is recognized by the Board of Architects of New South Wales for the purposes of legal registration. In addition, to become registered the candidate must satisfy the following requirements:

1. Produce evidence of two years' approved practical experience, at least one of which has been subsequent to completion of the course; and 2. Pass a special examination in Architectural Practice.

Graduates with two years' approved practical experience, at least one of which is subsequent to completion of the course, are eligible for Associate Membership of the Royal Australian Institute of Architects.

Students enrolled in the BSc(Arch) program (Course 3265) or the BArch program (Course 3260) are eligible to become student members of the Royal Australian Institute of Architects.

The foregoing is a general statement and students are strongly advised to obtain further particulars from the RAIA and the Board of Architects of New South Wales.

B Arch Course 3260: Schedule of Subjects

Students must pass the Design Stages, comprising Studio and Seminars in the sequence as set out below. Theory subjects must be taken in sequence within their own areas but are only tied to Design Stages by the pattern of prerequisites indicated. One seminar subject may be carried into the following Design Stage. No more than 8 elective credit points may be taken in any one Session. Electives *en* normally taken in packages as indicated, but students may submit their own special programme of elective study to the Head of School for approval. General Education electives totalling 12 credit points must be taken during the course.

Practical experience may be taken either between Design Stages 3 and 4 or between Design Stages 4 and 5.

Credit points generally indicate: (i) for one semester subjects, the number of staff/student contact hours per week, or (ii) for whole year subjects, twice the number of staff/student contact hours per week.

No.	Subject Name	Credit Points	Prerequisites
Year 1			
11.5201	Architectural Communication I	3	NI
11.5301	Theory of Architecture I	2	NII
11.5401	Introduction to Architecture	1	NI
11.5402	History of Architecture	2	Nil
11.5501	Architectural Construction I	3	Nil
11.5601	Architectural Studies I	2	Nil
11.5701	Environmental Control 1	3	Nil
Design S	itage I		
11.5101	Studio I	9	Nil
11.5203	Communication Seminar I	6	Nil
11.5304	Theory Seminar I	6	NI
11.5504	Construction Seminar I	4	Nil
11.5604	Structures Seminar I	2	Nil
		43	
Year 2			
11.5202	Architectural Communication II	2	11.5201
11.5302	Theory of Architecture II	2	11.5301
11.5403	History of Architecture II	2	11.5402
11.5502	Architectural Construction II	4	11.5501
11.5602	Architectural Studies II	2	11.5601
11.5702	Environmental Contrtol II	4	11.5701
Design S	Stage II		
11.5102	Studio II	10	
11.5204	Communication Seminar II	4	11.5101, 11.5501,
11.5305	Theory Seminar II	4	11.5601, 11.5701,
11.5505	Construction Seminar II	3	three from
11.5605	Structures Seminar II	2	11.5203, 115304
11.5704	Environmental Control Seminar I	1	11.5504, 11.5604
	General Studies Electives	4	NH
		44	

NO.	Subject Name	Credit Points	Prerequisites	
Year 3				
11.5303	Theory of Architecture III	2	11 5302	
11.5404	History of Architecture III	2	11 5403	,
11.5503	Architectural Construction III	2	11,5502	
11.5603	Architectural Structures III	2	11 5602	
11.5703	Environmental Control III	4	11 5702	
36.411	Town Planning	2	11.5102	
Design S	itage III			
11.5103	Studio III	10 7	11.5102, 11.5502,	
11.5205	Communication Seminar III	2	11.5602, 11.5702,	
11.5306	Theory Seminar III	4	four from	
11.5506	Construction Seminar III	3	11.5204, 11.5305,	
11.5606	Structures Seminar III	2	11.5505, 11.5605,	
1.5705	Environmental Control Seminar II	2	11.5704	
	General Education Electives	<u>8</u> 45	Nil	
Year 4 - S	Session 1			
11.5810	Architectural Practice i	2	11 5103	
1.5912	Research Methods	2	11.5103	
Design S	tage IV			
1.5110	Studio IV	8 1	11.5103. 11.5503.	
1.5210	Communication Seminar IV	1/2	11.5603. 11.5703.	
1.5310	Theory Seminar IV	1	four from 11.5205.	
1.5510	Construction Seminar IV	2	11.5306, 11.5506,	•
1.5710	Environmental Control Seminar III	$\frac{1}{22^{1}}$	11.5606, 11.5705	
	or	22 12		
1.5910	Practical Experience		11.5103	
(ear 4 - S	Session 2			
1.5913	Dissertation	6	11.5912	
ption rem	aining from Session 1			
' ear 5 - S	Session 1			
1 5811	Architectural Practice II	2	11 5810	

			Flerequisites	· · · · · · · · · · · · · · · · · · ·
Design S	itage V			
11.5111	Studio V	8 -		
11.5211	Communication Seminar V	1/2	11.5110, 11.5210,	
11.5311	Theory Seminar V	1	11.5310, 11.5510,	
11.5511	Construction Seminar V	2	11.5710, 11.5910	
11.5711	Environmental Control Seminar IV	1		
	Seminar Elective Package*	$\frac{8}{221}$	•	
*either		22 2		
Technol	ogy Elective Package I			· ·
11.5220	Computer Graphics Programming I	2 7		
11.5520	Advanced Building Materials	2		
11.5620	Conceptual Structural Design	4		
11.5720	Design for Energy Efficiency	2	11.5910, 11.5912	Ч., С., С., С., С., С., С., С., С., С., С
11.5820	Building Economics & Development	2		
11.5920	Architectural Research I	4		
	Other	2		
	Eight credit points from above	8		
∼or				
Vesign				
11.5222	Computer Applications I	4		
11.5225	Drawing	4		
11.5320	Ineory of Form	2	11 5010 11 5012	
11.5321	Criticism and Evaluation	2	11.0010, 11.0012	
11.5420		2		
11.5425	Architectural Besearch I	4		
11.0920	Other	2		
	Eight credit points from above	= 8		
Year 5 -	Session 2			
11.5812	Architectural Practice III	1	11.5811	
11.5813	Architectural Practice IV	1	11.5811	
Design	Stage VI			
11 51 12	Studio VI	8		
11.5212	Communication Seminar VI	1/2	11.5111, 11.5211,	
11.5512	Construction Seminar VI	2	11.5311, 11.5511,	
11.5712	Environmental Control Seminar V	1	11.5711	

*either

B Arch Course 3260: Schedule of Subjects

No.	Subject Name	Credit Points	Prerequisite
Technol	ogy Elective Package II	· · · · · · · · · · · · · · · · · · ·	
11.5221 11.5521 11.5621 11.5721 11.5821 11.5921	Computer Graphics Programming II Advanced Construction Systems Advanced Structural Design Design of Lighting Project Management Architectural Research II Other Eight credit points from above	4 2 4 2 2 4 2 4 2 8	Technology Elective Package I, 11.5220 for 11.5221, 11.5620 for 11.5621
*or			
Design E	Elective Package II		
11.5223 11.5226 11.5322 11.5421 11.5424 11.5921	Computer Applications II Painting Imagination Recent Australian Architecture Urban Design Architectural Research II Other Eight credit points from above	2 4 2 2 2 4 2 8	Design Elective Package I
Year 6 - 3	Session 1		
Design S	itage VII	_	
11.5113 11.5213 11.5513 11.5713	Graduation Project Communication Seminar VII Construction Seminar VII Environmental Control Seminar VI	$ \begin{array}{c c} 10 \\ 1/2 \\ 1 \\ -8 \\ 21^{1}/2 \end{array} $	198 credit points, including 11.5913
*either			
Technolo	ogy Elective Package III		
11.5522 11.5622 11.5722 11.5822 11.5922	Construction Planning and Management Lightweight Structural Design Acoustics Studies The Architect and the Law Architectural Research III Other Eight credit points from above	2 4 2 2 4 2 8	Technology Elective Package II, 11.5621 for 11.5622
*or			
Design E	lective Package III		
11.5224 11.5323 11.5422 11.5425 11.5922	Advanced Graphics Spirit in Architecture Great Architects Landscape Design Architectural Research III Other Eight credit points from above	4 2 2 4 2 8	Design Elective Package II

Note: Other denotes one subject from the alternate package

BSc (Arch) Course 3265: Schedule of Subjects	í
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No.	Subject Name	Credit Points	Prerequisites
Year 1			
11.5201	Architectural Communication 1	3	Nil
11.5301	Theory of Architecture 1	2	. NII
11.5401	Introduction to Architecture 1	1	Nil
11.5402	History of Architecture 1	2	NH
11.5501	Architectural Construction 1	3	Nil
11.5601	Architectural Structures 1	2	Nil
11.5701	Environmental Control 1	3	Ni
Design S	Stage I		
11.5101	Studio 1	9	NII
11.5203	Communication Seminar 1	6	Nil
11.5304	Theory Seminar 1	6	NH
11.5504	Construction Seminar 1	4	NI
11.5604	Structures Seminar 1	2	NII
Year 2 -	Session 1	45	
11 5914	Special Research Programme	5	Head of School's approval
11.0014	Choice of B Arch, subjects	15	Head of School's approval
	General Education Elective	2	NI
		22	
Year 2 -	Session 2		
11.5915	Special Research Programme II	5	11.5914, Head of School's approval
	Choice of B.Arch. subjects	15	Head of School's approval
	General Education Elective	2	Nil
		22	
Year 3 -	Session 1		
11.5916	Special Research Programme III	5	11.5915, Head of School's approval
11.5912	Research Methods	2	11.5915
	Choice of B.Arch. subjects	13	Head of School's approval
	General Education Elective	2	
V	Occupier O	22	
Tear 3 -	Session 2	-	44 5040 44 5040
11.5917	Research Project	8	11.5916, 11.5912
	Choice of B.Arch. subjects	12	Head of School's approval
	General Education Elective	2	
		22	
Year 4 (Optional Honours year) - Session	1	
11.5918	Honours Project I	22	131 credit points
		22	
Year 4 -	Session 2		
11 5010		22	11 5918
11.5919		77	110010
		24	

The Special Research Programmes and Research Project may only be credited to the BSc(Arch) degree programme. The Honours Projects may only be credited to the BSc(Arch) degree programme at Honours level.

Department of Industrial Arts

Acting Head of Department

Dr W. R. Lawson

The Department of Industrial Arts offered a BSc(IndArts) DipEd course (3320) which was available through full-time study in the general field of Industrial Arts. This course was discontinued from 1982 and no new students may be enrolled. Students already enrolled may continue with their studies until completion of the degree.

Students who wish to pursue their studies in Industrial Arts at graduate level may apply to enrol in the Master of Science and Doctor of Philosophy degree courses (by research) offered by the School of Architecture.

3320 Industrial Arts Course - Full-time

Bachelor of Science (Industrial Arts)/

Diploma in Education BSc(IndArts) DipEd

This course was discontinued from 1982 and no new students may be enrolled. Students already enrolled may continue with their studies until completion of the degree. Students should consult pages 37 and 38 of the 1984 Architecture Faculty handbook for details of this course.

School of Building

Head of School Associate Professor R. M. A. Miller

Undergraduate Course Co-ordinator Mr. Clyde Smythe

Building Degree Course

Bachelor of Building BBuild

This course prepares students for professional and executive employment within one of Australia's largest industries, the building industry. Careers in a wide variety of areas, in both private enterprise and in the public sector are available to building graduates. More specifically, these include positions as project manager, master builder, construction consultant, building surveyor, building estimator, quantity surveyor, building economist, property manager and building scientist.

General Description of the Course

The course is offered on a semester basis. Students are required to complete a minimum of eight semesters (sessions). The course leads to the award of the degree of Bachelor of Building (BBuild).

The eight semesters of the course are structured as follows:

- semesters 1 to 6 consist of a fixed program of compulsory subjects,
- semesters 7 and 8 consist of electives and a compulsory Thesis.

In a normal semester program, this usually results in six subjects requiring 18 class hours plus a General Education subject.

Credit points are allocated to all subjects. Usually a subject having one hour of classes per week for one session is rated at one credit point.

To qualify for a Bachelor of Building degree a student must have completed all compulsory subjects (comprising 129 credit points) and a minimum of 20 credit points from the elective subjects. In addition, all students are required to satisfy the General Education requirement by taking two full General Education subjects (refer to the General Education Handbook for details).

Progress through the Course

Progression through the course is by subject, provided that:

- the necessary subject prerequisites are completed;
- failed subjects are repeated the next time they are offered.

In the event of failure in one or more subjects, the student may carry the failed subject(s) provided that:

- prerequisite subjects have been completed to the satisfaction of the Head of School
- the total number of subjects taken at any time does not exceed 7 including General Education; and
- the total contact hours do not exceed 20 per week.

Practical Experience

Prior to graduation, students are required to have gained a minimum of 70 days of practical experience by appropriate employment in the building industry. This can be in the form of a semester working full-time in industry. Alternately, the requirement can also be satisfied by vacation employment at any time during the course prior to graduation, provided that the experience is not too fragmented and that employment is with no more than three employers. Students are encouraged to seek vacation employment in industry from early in the course.

The proposal for employment must be submitted to the Head of the School of Building for approval and students will be required to produce documented evidence of their work experience. In order to formally complete the industry experience requirement, students must enrol in 35.410 Industry Program in semester 7 or 8 of the course.

Award of the Degree at Honours Level

The award of honours is based on performance throughout the whole course, without requiring an additional honours program. Honours are determined on the basis of a score which is calculated by weighting more heavily the subjects taken in the later years of the course.

Professional Recognition

The award of the degree, Bachelor of Building, is recognized for admission to membership by:

(1) The Australian Institute of Building

(2) The Australian Institute of Quantity Surveyors, subject to completion of the following electives:
35.303 Quantity Surveying 3
35.313 Building Economics 3
35.005 Construction 5
35.006 Construction 6
35.274 Commercial Arbitration
(3) The Institution of Surveyors Malaysia, subject to completion of the following:
35.301 Quantity Surveying 1
35.302 Quantity Surveying 2
35.303 Quantity Surveying 3
(4) The Society of Lead Economizets as a partially qualifying

(4) The Society of Land Economists as a partially qualifying degree for corporate membership.

The course is also recognised as an educational qualification for licencing by the Building Services Corporation.

Schedule of Subjects

Year 1 (All subjects compulsory)

Semester 1		Credit	
		points	Prerequisites
35.001	Construction 1		
	(Domestic Buildings)	3	
35.010	Communications and		
	Resource Usage	3	
35.091	Built Environment 1	2	
35.111	Building Science 1		
	(Materials)	4	
35.170	Mathematics for Builders	4	
35.261	Management 1 (Manageme	ənt	
	Principles)	2	
Semeste	er 2		
1.931	Physics for Builders	4	
29.411	Surveying for Architects		
	and Builders	2	
35.002	Construction 2		
	(Low Rise Domestic)	4	35.001
35.051	Structures 1	3	
35.151	Building Services 1		
	(Hydraulics)	2	

Years 2 (All subjects compulsory)

Semester 3

0011000	<i>a</i> 0		
35.003	Construction 3		
	(Framed Buildings)	4	35.002,
			35,151
35.052	Structures 2	4	35.051
35.262	Management 2 (Planning)	3	35.261
35.271	Law for Builders 1	2	
35.281	Introduction to Computing	2	
35.311	Building Economics 1	3	
Semest	er 4		
14.001	Introduction to Accounting A	2	
35.112	Building Science 2		
	(Concrete and Metals)	4	
35.152	Building Services 2		
	(Mechanical)	2	1.931,
			35.151
35.263	Management 3 (Contracts)	3	35.262
35.301	Quantity Surveying 1	4	
35.321	Estimating 1	2	35.301

Year 3 (All subjects compulsory)

Semest	er 5				
14.002	Introduction to Accounting B	2	14.001		
35.004	Construction 4				
	(High Rise Buildings)	4	35.003,		
			35.052		
35.264	Management 4				
	(Personnel Management)	3	35.263		
35.282	Computer Applications				
	in Building	2	35.281		
35.302	Quantity Surveying 2	4	35.301		
	General Education Elective				
	(See General Education Hand	book)			

Year 4 (Thesis preparation and Thesis are compulsory. Students must take a total of 20 elective credit points.)

6

Semester 7 Compulsory Subject 35.401 Thesis preparation

Elective Subjects		

35.006	Construction 6 (Industrialization				
	and Technological Change)	. 2	35.005		
			35.703		

35.008	Construction Plant	2		
35.092	Built Environment 2	2	. •	5.
35.113	Building Science 3			
	(Energy and Thermal)	3		
35.266	Management 6			
	(Corporate Strategy)	2	35.265	€ .
35.284	Building Information		.*.	
	Systems	з	35.282	
35.313	Building Economics 3	2	35.312	
35.322	Estimating 2	2	35.321	
35.392	Property Development 2	2	35.312	
Semest	er 8			
Compui	sory Subject			
35.401	Thesis Preparation	6	35.401	
Elective	Subjects			
35.007	Construction 7			
	(Special Project)	2	35.005	
35.114	Building Science 4			
	(Timber)	2		
35.267	Management 7 (Marketing)	З	35.265	
35.273	Law for Builders 3	3	35.272	
35.274	Commercial Arbitration	3	35.263	
35.2 83	Systems Analysis			
	and Modelling	3	35.263	
35.3 03	Quantity Surveying 3	3	35.302	
35.390	Property Valuation	3		
35.391	Land Economics	з	35.312	
35.393	Management of Buildings	2		

School of Landscape Architecture

Head of School Professor William Hendrix

Landscape Architecture Degree Course

BLArch

Landscape Architecture is a professional discipline which is based on an understanding of the natural sciences. Graduates will be able to share in mankind's responsibility towards the environment.

Landscape in its broadest sense encompases all external spaces comprising natural topography and vegetation as well

as modified environments constructed for society's enjoyment or comfort. Opportunities for graduates to contribute professional advice vary in scale through the design of domestic gardens, urban plazas and thoroughfares, regional parks and new cities to national considerations of land use and environmental policies. Creative design ability, based on an appreciation of natural systems and society's requirements can bring about management plans for natural areas or the planned modification of areas to provide external spaces which are both practical and enjoyable.

The course is designed to introduce students to landscape architecture through an understanding of the components and processes at work in primitive environments, and of the philosophies and techniques which have been developed by people in continuous efforts to improve this environment. In the later years of the course emphasis is given to creative design work of a kind appropriate to Australian conditions. Programs are related to the subject matter of concurrent lectures, and culminate in an examination of landscape problems of regional and national significance.

General Description of the Course

The course requires full-time attendance of approximately 20 hours per week over at least four years.

The majority of subjects are specific; however, contact with the students of other schools within the Faculty and of other faculties within the University is assured by the inclusion of subjects from the Schools of Botany, Geography, Town Planning, Civil Engineering and the Centre for Liberal and General Studies.

Practical Experience

Students of the undergraduate course must obtain a total of four months practical experience prior to graduation, of which a minimum of two months must be in a design office and a minimum of two months must be in landscape industry work. This normally takes the form of employment during long vacations under a landscape architect, landscape contractor or nurseryman. Each student entering upon practical experience must obtain prior approval of the Professor of Landscape Architecture or his nominee. Each student must obtain from the employer a statement of experience gained, maintain an accurate record in logbook form and submit a written report describing the work undertaken during the various practical experience components. This practical experience must be obtained prior to enrolling in 37.5808 Landscape Design 6.

Honours

The Bachelor of Landscape Architecture degree may be awarded with Honours based upon the quality of performance in the course and in accordance with current Faculty regulations. Honours are Class 1 or Class 2 Division 1 or Class 2 Division 2.

Professional Recognition

The course is recognized by the Australian Institute of Landscape Architects and graduates holding the BLArch degree will qualify for corporate membership after a specified period of graduate experience and formal examination.

3380 Landscape Architecture Course

Bachelor of Landscape Architecture BLArch

The course structure shown below represents the normal pattern of progression which students entering course 3380 are expected to follow. In exceptional circumstances the Head of School may allow variation of the normal pattern, and in such cases progression in individual subjects will be governed by the prerequisites as indicated.

A student may be enrolled concurrently in the subjects of only two consecutive years, but this will not apply to students entering with advanced standing in their first year of attendance or to modifications of the course which are initiated by the School.

Students are required to participate in field exercises and practical construction programs outside the metropolitan area.

Schedule of Subjects

No.	Subject Name	Hours Per Week	Prerequisites
Year 1			
Session	1		
25.5222	Geology for Landscape		
	Architecture	1	nil
27.818	Australian Environment		×.
	and Human Response	4	nił
37.0001	Introduction to Landscape)	
	Architecture	1	nil
37.3101	Landscape Graphics 1	4	nil
37.5101	Design 1	3	nil
37 7203	Landscape Materials		
0111200	and Construction	3	nil
43 202	Botany for Landscape		
-0.205	Architects	5	nil
	General Education Electiv	A 2	
	General Education Elevan	23	
Session	2		
37,1102	Horticulture for Landscap	e	
0	Architects	2	43.202
37 1302	Landscape Analysis*	6	27.818,
01.1002			43.202
37 3203	Landscape Graphics 2	4	37,3101
37 5202	Design 2	3	37.5101
	General Education Flectiv	e 2	
	Gonoral Eddoulorr Broom	17	

* These subjects include a number of lectures and field trips for the purpose of practical observation. Students are expected to make their own transport arrangements for these trips.

Year 2

Session 1		•.
Architecture	2	nil

37.1513 37.5313 37.7204	Environmental Sociology for Landscape Architects Landscape Design 1 Landscape Technology A General Education Elective	2 10 3 <u>2</u> 19	37.5202 37.7203
Session 37.0014 37.5004 37.5014 37.7205	2 Introduction to Computer Applications Planting Design Landscape Design 2 Landscape Technology B General Education Elective	2 2 12 3 <u>2</u> 21	nii 37.1102 37.5313 37.7204
Year 3			
Session	1	•	
36.411	Town Planning	2	
37,3000	Hesearch Methods	8	37.5014.
37.5500	Landscape Design 0	ĩ	37.7205
37.7113	Professional Practice A	2	37.5014,
			37.7205
37.7515	Landscape Engineering A	3	37.7205
37.9105	Landscape Planning 1	3	37.1513
	General Education Elective	2	
		21	. •
Coordian	2		
37 1616	2 Land Systems and		
37.1010	Management	2	37.5505
37.5606	Landscape Design 4	8	37,5505
37.7114	Professional Practice B	2	37.7113
37.7616	Landscape Engineering B	3	37.7515
37.9206	Landscape Planning 2	3	37.9105
	General Education Elective	_2	
		20	
Year 4			
Session	1		
37.3007	' Landscape Thesis	10	37.3005,
			37.5606
37.502	Landscape Design 5	3	37.5606
37.501	Urban Landscape Design	_6	37.5606
		19	
Sessior	2	_	
37.3007	Landscape Thesis	4	See Session 1
37,5808	3 Landscape Design 6	12	37.5/U/ TOUR
			Avoerlance
		16	avhallalina
		10	

School of Town Planning

Head of School Professor H. L. Westerman

Town Planning Degree Course BTP

Town planning is concerned with the existing and future environment, ranging from small local precincts, neighbourhoods, centres, districts and towns to metropolitan areas and regions. The town planner's task in this regard is to integrate and coordinate the aims and actions of a large number of government and private organizations and individuals. This involves collecting and analysing information, identifying needs, making forecasts, preparing policies, plans and programs for consultation, decision and implementation, exercising development control, and evaluating development proposals.

The objective of the course is to create an awareness of the context in which planning operates, impart knowledge of how planning can influence the physical environment, equip students with the competence of applying this knowledge at different levels in a wide range of situations, create an understanding of the contribution other disciplines can make to planning and vice versa, and develop skills in policy formulation, land use allocation and control, design and communication.

General Description of the Course

The course is of five years' duration and requires full-time attendance throughout Years 1, 2 and 5. Students are required to attend the University on a full-time basis for the first session of Year 3 and for the second session of Year 4, the intervening period being devoted to practical experience.

The course leads to the award of the degree of Bachelor of Town Planning (BTP).

Practical Experience

For the period covered by Session 2 of Year 3 and Session 1 of Year 4 the students must be engaged in approved employment related to the course; for example, in government planning and housing authorities, in municipal and shire councils preparing or implementing town and country planning schemes, in private development companies or with planning consultants. The type of employment proposed must be submitted to the Head of the School of Town Planning for approval.

Honours

Honours are awarded in the Bachelor of Town Planning degree course on the basis of quality of performance throughout the whole course and in accordance with current Faculty regulations.

For the purpose of calculating Honours at graduation, the Honours value of each subject is indicated by the credit points associated with that subject. Credit points generally reflect the workload required of students in subjects in which grades are awarded.

Professional Recognition

The course is recognized by the Royal Australian Planning Institute as an academic qualification for corporate membership. The Institute requires that for corporate membership graduates must also have at least one year of practical experience subsequent to graduation.

3360

Town Planning Course

Bachelor of Town Planning BTP

Schedule of Subjects

Note: One or more major planning subjects are shown in each session in bolder type. Each of these subjects must be passed before a student may progress to the next year's major planning subjects.

Year 1		Hours per week	Credit points for Honours
Session	1		110110010
36.211	Introduction to Planning	12	14
29.901	Introduction to Mapping	11/2	2
36.134	Communication Techniques (4	4
36.222	Computers and	-•	-
	InformationSystems	2	3
36.245	The Development Process	2	3
	• • • • • • • • • • • • • • • • • • • •	211/2	26
Session	2		
36 212	Planning Studies I	10	14
36 131	Communication	12	14
00.101	Techniques II	3	
36.232	Environmental Science 1	2	4
36.245	The Development Process	2	3
		19	24
			27
Year 2			
Session	1 .		
36.213	Local Planning 1	12	14
36.4611	Engineering A	2	2
36.4612	Engineering B	1	1
36.233	Environmental Science 2	2	3
26.000	General Education Elective	_4	_4
		21	24
Session	2		
36.218	Regional Planning 1	12	14
36.234	Urban Design	3	4
36.452	History of Town Planning	2	3
26.000	General Education Elective	4	4
		21	25

Year 3

Session 36.215	1 Planning Law and Administration 1	12	14
36.230	Politics, Power and Policy	3	4
36.235	Urban Society and Sociology	3	4
37.224	Landscape Architecture	<u>2</u> 20	$\frac{3}{25}$
Session	1		
36.503	Practical Experience	3	-
Year 4			
Session	1		
36.503	Practical Experience	3	-
Session	2		
36.214	Local Planning 2	6	9
36.228	Transportation Planning	3	4
36.216	Planning Law and		
36.421	Administration 2 Integrated Planning	3	4
	Project 1	<u>_8</u>	_8_
		20	25
Year 5			
Session	1		
36.219	Regional Planning 2	6	9
36.223	Computer Applications in		
	Planning 1	2	3
36.491	Thesis	1	-
36.422	Integrated Planning		
	Project 2	<u>12</u> 21	<u>12</u> 24
Session	2		
36.491	Thesis	15	20
36.210	Professional Practice	1	2
36.8300	Planning Elective	$\frac{4}{20}$	$\frac{4}{26}$
* The fe	ollowing planning electives and availability	e offered	subject to
36,8301	Residential Planning	4	4
36 8303	Regional Planning 3	4	4
36.8304	Rural Planning	4	4
36,8305	Urban Conservation	4	4
36.8306	Planning Law and		
	Administration 3	4	4
36.8307	Urban Studies	4	4
36.8308	Social Planning	4	4
36.8309	Environmental Psychology	4	4
36.8312	Transport and		
	Environmental Management	4	4
36.8313	Urban Design 2	4	4
36.8314	Computer Applications in	-	
	Planning 2	4	4

Note: Due to the revision of the course, there is a transition period during which some subjects may be taught in different

sessions than those indicated above, while other subjects maybe phased in progressively. Details will be provided prior to enrolment.



Undergraduate Study

Subject Descriptions

Identification of Subjects by Number

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

Each approved subject of the University is identifiable both by number and by name as this is a check against nomination of subject other than the one intended.

Subject numbers are allocated by the Academic Registrar and the system of allocation is based on the following guidelines:

1. The authority offering the subject, normally a School of the University, is indicated by the number before the decimal point.

2. Each subject number is unique and is not used for more than one subject title.

Subject numbers may not be re-used with a new subject title within ten years of the prior use.

 Graduate subjects are indicated by a suffix 'G' to a number with three digits after the decimal point. In other subjects three or four digits are used after the decimal point.

Subjects taught are listed in full in the handbook of the faculty or board of studies responsible for the particular course within which the subjects are taken. Subject descriptions are contained in the appropriate section in the handbooks.

The **identifying numerical prefixes** for each subject authority are set out on the following page.

Servicing Subjects are those taught by a school or department outside its own faculty. Their subject descriptions are published in the handbook of the faculty which originates the subject and are also published in the handbook of the Faculty in which the subject is taught. The following pages contain descriptions for most of the subjects offered for the courses described in this book, the exception being the General Education subjects. For General Education subjects see the General Studies Handbook which is available free of charge.

HSC Exam Prerequisites

Subjects which require prerequisites for enrolment in terms of the HSC Examination percentile range, refer to the 1978 and subsequent Examinations.

Candidates for enrolment who obtained the HSC in previous years or hold other high school matriculation should check with the appropriate school on what matriculation status is required for admission to a subject.

Information Key

The following is the key to the information which may be supplied about each subject:

S1 Session 1, S2 Session 2

F Session 1 plus Session 2, ie full year

S1 or S2 Session 1 or Session 2, ie choice of either session

SS single session, but which session taught is not known at time of publication

CCH class contact hours

L Lecture, followed by hours per week

T Laboratory/Tutorial, followed by hours per week

hpw hours per week

- C Credit point value
- CR Credit
- **DN Distinction**
- **HD** High Distinction

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	School, Department etc *Subjects also offered for cou	Faculty urses in this handbook	Page		School, Department etc "Subjects also offered for cou	Faculty Irses in this handbook	Page
1	School of Physics	Science		41	School of Blochemietry	Biological and	···· ···
2	School of Chemistry	Science			Series of Biochemistry	Boboyloural Salanaaa	
3	School of Chemical	Applied Science		42	School of Applied	Applied Colonce	
	Engineering and Industrial				Bioscience (Biotechnology)	Applied Science	
	Chemistry (New Course)			44	School of Microbiology	Biological and	
- 4	School of Materials	Applied Science			ochod of Microbology	Boboyicural Solonooo	
	Science and Engineering			45	School of Biological	Benavioural Sciences	
5	School of Mechanical and	Engineering			Science	Biological and Debayley rel Selement	
	Industrial Engineering	• •		48	Eachthy of Applied Selence	Applied Sciences	
6	School of Electrical	Engineering		40	Centre for Safaty Salance	Applied Science	
	Engineering and			40	School of Chemical		
	Computer Science			40	Engineering and industrial	Applied Science	
7	School of Mines	Applied Science					
	(Mineral Processing and			40	School of Applied		
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	Mining Engineering)			50	Sobool of English	A mb m	
8	School of Civil	Engineering		61	School of Ulaters	Arts	
	Engineering			50	School of Ohlessenhu	Arts	
9	School of Fibre Science	Applied Science		0Z 50	School of Philosophy School of Scalala m.d.	Ans	
	and Technology	• • • • • • • • • • • • • • • • • • • •		03 E4	School of Sociology"	Arts	
	(Wool and Animal Science)			34	School of Political	Arts	
10	School of Mathematics	Science		55	Science Science		
11	School of Architecture	Architecture	27	50	School of Librarianship	Professional Studies	
12	School of Psychology*	Biological and		00	School of French	Ants	
_	,	Behavior ral Sciences		0/	School of Theatre Studies	Arts	
13	School of Fibre Science	Applied Science		58	School of Education	Professional Studies	
	and Technology			59	Department of Hussian	Arts	
	(Textile Technology)			~~	Studies	• .	
14	School of Accounting	Commerce & Fornomice		60	Faculty of Arts	Arts	
15	School of Economics	Commerce & Economice		61	Department of Music	Arts	
16	School of Health	Professional Studies		62	School of Science and	Arts	
	Administration			~~	lechnology Studies		
17	Faculty of Biological and	Biological and		63	School of Social Work	Professional Studies	
••	Behavioural Sciences	Behavior ral Sciences		64	School of German	Arts	
18	School of Mechanical and	Engineering			Studies		
	Industrial Engineering			65	School of Spanish and	Arts	
	(Industrial Engineering)				Latin American Studies		
10	School of information			66	Subjects Available from		
	Svateme	Commerce & Economics			Other Universities		
20	Centre for Petroleum	Applied Science		67	Faculty of Science	Science	:
	Engineering Studies	Applied octation		68	Board of Studies in	Board of Studies in	
21	Department of Industrial	A robite at me			Science and	Science and	
	Arte	AI CHINACTURA	33		Mathematics	Mathematics	
25	School of Mines	Applied Science		70	School of Anatomy	Medicine	
	(Applied Geology)	where a creatice		71	School of Medicine	Medicine	
26	Captro for Liberal	I there I and Gameral		72	School of Pathology	Medicine	
20	and General Studies	Shullon		73	School of Physiology and	Medicine	
27	School of Geography	Applied Science			Pharmacology		
20	School of Markethan	Applied Science		74	School of Surgery	Medicine	
20	School of Summing	Commerce & Economica		75	School of Obstetrics and	Medicine	
20	School of Industrial	Commoning			Gynaecology		
50	Belations and	Commerce & Economics		76	School of Paedlatrics	Medicine	
	Organizational Dahavdave	·		77	School of Psychiatry	Medicine	
44	Organizational Benaviour	0-1		78	School of Medical	Medicine	
30	Centre for Riemadical	Science			Education		
32	Centre lor Biomedical	Engineering		79	School of Community	Medicine	
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32			~~	80	Faculty of Medicine	Medicine	
33 92	School of Town Planate	Architecture	36	81	Medicine/Science/	Medicine	
30	School of Londonning		40		Biological		
3/		AICHIECUTE	e -		Sciences		
• -	AICHNECTURE		44	85	Australian Graduate	AGSM	
38	School of Applied Bioscience	Applied Science			School of Management		
	(Food Science and			90	Faculty of Law*	Law .	
	lechnology)			97	Faculty of Engineering	Engineering	
30	Graduate School of the	Architecture		98	School of Banking	Commerce & Economics	
	Built Environment				and Finance		
40			30	99	Department of Legal	Commerce & Economics	
40	Academic Board				Studies and Taxation		

Architecture

Architectural Design Studio

From the beginning architectural synthesis will be the central function of the design studio, the locus of the application of knowledge gained in the lectures and seminars. Projects and exercises of increasing depth and complexity covering a wide range of building types will be the vehicles for studies in massing, spatial manipulation, functional planning and constructional engineering. The studios will progressively consider social and aesthetic factors affecting architecture which will advance design beyond utilitarian concerns demonstrating architecture as an art form. Great places and buildings exercise a pervasive influence on the fabric of society and condense sentiments and meanings within their structures and spaces which symbolise and enshrine human needs and aspirations. They have not only a physical existence but are also capable of having an important spiritual and cultural existence.

The studios in advanced architectural design will, therefore, focus with intensity on the constituent factors and continuities arising from the history of our culture which deeply influence architecture seeking an integration of these with material and technological rationality.

Thus, they will seek to make clear connections between underlying principles, historical explanation and analysis, order, unity, reason, location, place and the dimension of human experience.

1.5101 Studio I

Prerequisite: Nil

Analysis of the built environment to develop an awareness of man's need for shelter and an understanding of his functions, activities and aspirations and of the architects' essentially creative and conceptual role. Introductory studio focussing on the application of design theory/methodology through simple three dimension design and communication exercises exploring a variety of media and materials and oulminating in the design of simple, small-scale buildings.

11.5102 Studio II

C10

C9

Prerequialtes: 11.5101, 11.5501, 11.5601, 11.5701, three from 11.5203, 11.6304, 11.5504, 11.5604.

The design of simple residential and non-residential buildings with few spaces, relatively simple functional relationships for clearly defined and familiar user groups on straightforward but interesting sites requiring some contextual understanding. Integration of basic structural, constructional, servicing and environmental control concepts.

11.5103 Studio III

C10

Prerequisites: 11.5102, 11.5502, 11.5602, 11.5702, four from 11.5204, 11.5305, 11.5505, 11.5605, 11.5704.

The design of non-residential projects of moderate complexity and scale with more demanding siting and contextual considerations and more complex and less familiar user needs. Considered analysis of structure, construction, services, environmental control and building regulations and landscape design. Some group work, but largely individual work.

11.5110 Studio IV

C8

C8

Prerequialtes: 11.5103, 11.5503, 11.5603, 11.5703, four from 11.5205, 11.5306, 11.5506, 11.5606, 11.5705.

The design of a small-scale building in considerable depth including detailed design of all internal and external spaces including material and colour choices, fixtures and fittings, construction detailing, services and environmental control.

1.5111 Studio V

Prerequisites: 11.5110, 11.5210, 11.5310, 11.5510, 11.5710, 11.5910.

The design of a relatively complex and large scale development, incorporating residential, involving a range of user groups. Resolution of conflicting issues such as site constraints, planning controls and building regulations, environmental context and social role of the development. Integration of structure, construction, services and environmental controls at an advanced level. Group and individual work.

11.5112 Studio VI

Prerequisites: 11.5111, 11.5211, 11.5311, 11.5511, 11.5711.

Exploration and resolution of relatively complex lifestyles not necessarily of a known pattern for non-residential buildings, with emphasis on urban design and contemporary technology.

11.5113 Graduation Project

C10

C8

Prerequisites: 198 credit points, including 11.5913,

This subject represents the culmination of the B.Arch course and comprises a design project resolved in depth in approved areas of architecture, including architectural design, urban design, interior design, construction, structure, services, acoustics, lighting or practice and management. Students are offered a project by the School, or may be offered the opportunity to choose their own project to be submitted to the Head of School for approval two weeks before the commencement of the session in which the student intends to enrol.

There may be an opportunity for students to combine Dissertation with the Architecture Graduation Project by selecting a Dissertation topic which provides the detailed brief or technological or management aspects applicable to the Architecture Graduation Project.

Architectural Communication

11.5201 Architectural Communication I

Prerequieite: Nil.

Introduction to communication theory and practice in relation to Architecture. Spatial communication: plane and solid geometry; manual drafting skills; parallel and conic projections; skiagraphy. Lettering. Graphic design: colour theory; rendering techniques; drawing from outdoor and studio subjects. Written and oral communication: study and research skills; introduction to scholarly writing; oral presentation skills. Introduction to the computer as a problem-solving tool in architecture; description of computing technology.

C3

11.5202 Architectural Communication II Prerequisite: 11.5201.

C2

Theory and language of communication. Development of spatial, graphic, written and oral communication skills. Advanced perspective and graphic techniques. Geometric studies. Model making and photography.

11.5203 Communication Seminar I C6

Prerequisite: Nil.

Development of techniques and skills in architectural drawing and rendering. Parallel projections; descriptive, plane and solid geometry; measured drawings; lettering; perspective theory and application; shadow projection and curvilinear construction in perspective; colour theory and practice using transparent and opaque media; principles of composition in architectural drawing. Introduction to the computer and its application to architecture. Studio projects.

11.5204 Communication Seminar II C4

Prerequisites: 11.5101, 11.5501, 11.5601, three from 1.5203, 11.5304, 11.5504, 11.5604.

Perspective and rendering techniques, graphic presentation of natural and man-made environment, model making for design study and presentation. Introduction to the computer and its application to architecture. Further applications of the computer. Exercises related, when appropriate, to design projects in Studio II.

11.5205 Communication Seminar III C2

Prerequisites: 11.5102, 11.5502, 11.5602, 11.5702, four from 11.5204, 11.5305, 11.5505, 11.5605, 11.5704.

Introduction to the techniques and processes of computer aided drafting for the production of architectural drawings; hands-on experience.

11.5210 Communcation Seminar IV C1/2

Prerequisites: 11.5103, 11.5503, 11.5603, 11.5703, four from 11.5205, 11.5306, 11.5506, 11.5606, 11.5705.

Communication theory debates and discussions. Exercises in advanced graphic analysis and presentation, rendering and model making. Use of the computer in architectural design and documentation. Exercises related, when appropriate, to design projects in Studio IV.

11.5211 Communication Seminar V C1/2

Prerequisites: 11.5110, 11.5210, 11.5310, 11.5510, 11.5710, 11.5910.

Communication theory debates and discussions. Exercises in advanced graphic analysis and presentation, rendering and model making. Use of the computer in architectural design and documentation. Exercises related, when appropriate, to design projects in Studio V.

11.5212 Communication Seminar VI C1/2

Prerequisites: 11.5111, 11.5211, 11.5311, 11.5511, 11.5711.

Communication theory debates and discussions. Exercises in advanced graphic analysis and presentation, rendering and model making. Use of the computer in architectural design and documentation. Exercises related, when appropriate, to design projects in Studio VI.

11.5213 Communication Seminar VII

Prerequisites: 198 credit points,. including 11.5913

Communication theory debates and discussions. Exercises in advanced graphic analysis and presentation, rendering and model making. Use of the computer in architectural design and documentation. Exercises related, when appropriate, to design in the Graduation Project.

11.5220 Computer Graphics Programming I C2

Prerequisites: 11.5910, 11.5912

Introduction to the fundamentals of interactive computer graphics programming: techniques of computer programming using a high-level language; use of standard graphics libraries; user interaction. Controlled series of programming exercises.

11.5221 Computer Graphics Programming II C4 Prerequisite: 11.5220

Further aspects of interactive computer graphics programming: user interface techniques; colour manipulation; three-dimensional modelling. Development of an interactive computer graphics application program.

11.5222 Computer Applications I

Prerequisites: 11.5910, 11.5912.

Extended study of computer graphics applications in Architecture: advanced use of computer-aided drafting systems: introduction to computer modelling and three-dimensional graphics. Staged drafting and design exercises,

11.5223 Computer Applications II

C2

C4

C4

C4

Prerequisite: Design Elective Package I

Advanced used of three-dimensional computer graphics for the representation of built form in Architecture: model description; colour shading techniques; multiple light sources; surface texture. Design representation exercises.

11.5224 Advanced Graphics C4

Prerequisite: Design Elective Package II

A theoretical and practical study of the relationship between the visual and plastic arts. Media and material studies. Development of a professional level of performance in adapting graphic theory and techniques to contemporary needs.

11.5225 Drawing

Prerequisites: 11.5910, 11.5912.

Direct drawing from life and man-made environment, media studies, to develop technical and perception skills, Gallery visits and drawing theory.

11.5226 Painting

Prerequisite: Design Elective Package I

The theory and practice of painting. Figure and ground interaction, colour, media studies. Gallery visits and studies. Individual style and thematic development encouraged.

Theory of Architecture

11.5301 Theory of Architecture I *Prerequisite: Nil.*

The meaning of design as designation for a purpose: aim, possibilities, acts, fulfilment, the four cornerstones of design around the central idea. The nature of corporeal, mental and spiritual influences flowing from man and the cosmos affecting the architectural endeavour. The task of composition, the whole and its parts generally. Introduction to form and its principal characteristics; the notion of fit.

Specific studies of measure, extension and size related to architecture. The body of man taken in the singular and in the plural, as the basis of sizes in architectural interiors and exteriors. Subtle connotations of varied spatial extensions.

Specific studies in compositions in plane and volume. Ordered and systematic relations between whole and part. Unity-multiplicity, continuity-alternation; rhythm, proportion.

11.5302 Theory of Architecture II

Prerequisite: 11.5301.

Methodical study of the design process. Analysis as means of understanding the fabric of life to be served by architecture. Detailed analysis of explicit and implicit human aims and spatial possibilities. The architectural idea as the unifying principle of creative synthesis and as contribution to the fabric of life. Further studies of the world order: the meaning of place, light, orientation, direction and sequence. The natural divisions of space and time, the regular solids, the geometrical order. Methodical studies of context and architectural fit by character, size, order, proportion and material selection.

Specific studies of mental expectations and patterns of behaviour. Detailed consideration of mental effects rooted in instinct, emotion, perception, memory, reason, imagination and intention. The nature of behaviour - environment relationship, notions of personal space, territory, privacy and crowding. Cultural and personal variables. The meaning of built environments.

11.5303 Theory of Architecture III

Prerequisite: 11.5302.

Systematic and detailed analysis of a complex life-event to be served by architecture. Correct and incorrect divisions and separation of parts. Recognition of different human roles and experiences. The notion of a living whole translated into a built whole. Systematic studies of architectural ideas generating appropriate spatial arrangements. Detailed quantification of space requirements and material configurations dealing with control of climate, light and sound and with structural and constructional necessities. Further studies of form as principle: authority-dependance, completeness-transformation. Subtle influences of regions, localities and the cultural milieu. Introduction to the meaning of signs, symbols, styles and trends. Introduction to goodness, truth, honesty and beauty in architecture as implicit spiritual aspirations.

Specific studies in the history of architectural theory from antiquity to the present day. Relationship between the theoretical percept, the cultural milieu and architecture as art. Careful consideration of the architectural ideas and of their translation into the built fabric by ordered geometrical relations. Studies in geometry and design. Introduction to the meaning of basic geometrical symbols.

11.5304 Theory Seminar I C6

Prerequisite: Nil.

C2

C2

C2

Exercises in the application of 11.5301 Architectural Theory I related to projects in Studio I.

11.5305 Theory Seminar II

Prerequisites: 11.5101, 11.5501, 11.5601, 11.5701, three from 11.5203, 11.5304, 11.5504, 11.5604.

Exercises in the application of 11.5302 Architectural Theory II related to projects in Studio II.

11.5306 Theory Seminar III

Prerequisites: 11.5102, 11.5502, 11.5602, 11.5702, four from 11.5204, 11.5305, 11.5505, 11.5605, 11.5704.

Exercises in the application of 11.5303 Architectural Theory III related to projects in Studio III.

11.5310 Theory Seminar IV

C1

C1

C2

C4

C4

Prerequisites: 11.5103, 11.5503, 11.5603, 11.5703, four from 11.5205, 11.5306, 11.5506, 11.5606, 11.5705.

The components of interiors: light, sound colour, texture, shape. Perception. Anthropometrics and ergonomics. The nature of 'inside'. History of interior design. Perception of space; physical, mental and spiritual. The meaning of colour and shape. Colour psychology. Investigation of current interior design practice. Design studies applying current practice to a range of interior design situations.

11.5311 Theory Seminar V

Prerequisites: 11.5110, 11.5210, 11.5310, 11.5510, 11.5710, 11.5910.

Critical discussions and debates on the theoretical percepts of senior design projects arranged as a forum or as a teaching jury.

11.5320 Theory of Form C2

Prerequisites: 11.5910, 11.5912.

The ontological basis and the antinomical qualities of form in the causal sense, reflected in nature, art and architecture. Practical investigation of the antinomical qualities of form with special emphasis on the brief and on the built fabric of contemporary architecture, and practical attempts to identify shortcomings and develop corrective measures.

11.5321 Criticism and Evaluation

Prerequisites: 11.5910, 11.5921.

The nature, function and value of criticism. Subjective and objective criticism. A short history of architectural criticism, architectural critics, past and present. Discrimination and values ina changing society; fashion, the influence of mass opinion, communication media, advertising, propaganda. Collection of data; establishment and application of critical criteria; effective communication of conclusions; recommendations and feedback. The use of criticism and evaluation during and after the design process. Practical evaluation of examples of architectural criticism, past and present. Criticism of contemporary buildings and projects. Criticism of current work by self and others.

11.5322 Imagination

Prerequisite: Design Elective Package I.

Architecture built in the image of the cosmic order and of the ideas directing that order. The nature of imagination, analogy and proportion. The meaning of number, of the elements of space and time and of the geometrical order, and this image in architecture. Seminars and practical projects focus on selected case studies.

11.5323 Spirit in Architecture

Prerequisite: Design Elective Package II.

Spatial symbolism and intellectual intuition, principles and methods of sacred architecture. Spiritual doctrine reflected in the layout of Judaeo-Christian architecture with reference to the architecture of sacred traditions. Seminars and practical projects focus on selected case studies.

History of Architecture

The aim of the history programme is to provide an overall view of the development of architecture, and its achievements within different cultural traditions, with reference, where appropriate, to Australian architecture, with a view to giving the student a fuller awareness of design, and the objectives and influences that shape it.

11.5401 Introduction to Architecture	C1
Prerequisite: Nil,	

The environment and human influence upon it. Human needs, resources of energy and materials and their utilization in architectural design. The design professions and the building industry.

11.5402 History of Architecture I

Prerequisite: Nil.

General exploration of the historical development of architectire. Definitions of architecture, and influences on architecture; geographical, climatic, cultural, social, religious, material. Selected site visits and projects.

Discussion and analysis of some major themes in architecture such as rationalism and romanticism, structural integrity, tradition and innovation, taste, style and decoration.

11.5403 History of Architecture II

Prerequisite: 11.5402.

A generally chronological account of the cultural development of architecture and its role in society up to the Industrial Revolution, within the western world and in other important cultural traditions, (a) from archaic historical times to the end of the 14th century, and (b) from the 15th century up to the early 19th century and the Industrial Revolution.

11.5404 History of Architecture III C2

Prerequisite: 11.5403

Antecedents of modern architecture. Industrialism in the 19th and 20th centuries. The interrelationship between architecture and the fine arts, and the development of various art movements.

The origins of and influences upon 20th century architecture. Functionalism v. traditionalism, international style, high-tech, post modernism, and current developments in international and Australian architecture.

11.5420 Building Conservation

Prerequisites: 11.5910, 11.5912.

Attitudes towards building conservation and introduction to guidelines and techniques for the treatment of old buildings, both heritage and common building stock, with regard to their preservation, restoration, reconstruction, adaptation for re-use, and repair. Preparation of conservation proposals and plans.

11.5421 Recent Australian Architecture C2

Prerequisite: Design Elective Package I.

History of Australian architecture: historical, human and environmental context of Australian architecture.

11.5422 Great Architects

Prerequisite: Design Elective Package II.

Detailed study of the theories and work of selected architects throughout history. Normally four architects will be studied, two from the 20th century and two prior to the 20th century.

11.5423 Urban Systems C2

Prerequisites: 11.5910, 11.5912.

Studies of the social and technological systems that determine the form of contemporary cities. Government systems and controls, land development economics, land use, transport, services.

11.5424 Urban Design

Prerequisite: Design Elective Package I.

Design Studies in the integration of buildings and groups of buildings in their urban context, and of spaces between buildings, accommodation of pedestrian and vehicular movement, micro-climate.

11.5425 Landscape Design

Prerequisite: Design Elective Package II.

Aesthetic appreciation of chosen environments both urban and natural. The treatment of spaces between and upon buildings. 'Hard' and 'soft' landscape treatments. Functional uses of open space within the built environment and the design of street furniture.

Architectural Construction

11.5501 Architectural Construction i

Prerequisite: Nil.

Introduction to the principles of architectural construction and their application to the design of simple, small-scale buildings. Architectural construction as a design activity and its relationship to building materials, structure, services, process and regulation. Basic building materials, systems and processes and their historic development. Introduction to materials science. Basic structure, properties, manufacturing techniques, use and performance of materials in building and artefact design. Construction design methodology, use of resource materials, basic dimensional co-ordination and construction drawing practice.

11.5502 Architectural Construction II

Prerequisite: 11.5501.

The principles of architectural construction applied to the design of buildings of moderate scale and complexity through

C2

C2

C2

C3

C4

C2

C2

C2

C2

11.5503 Architectural Construction III

C2

C4

C3

C3

Prerequisite: 11.5502.

The principles of architectural construction applied to the design of complex and large scale buildings. Appropriate construction systems, materials and organisation of the building process. Detailed analysis of junctions and connections between elements, components, materials and finishes. Construction durability, weathering and failure. Rationalised systems, prefabrication, modular coordination and construction documentation.

11.5504 Construction Seminar I

Prerequisite: Nil.

Exercises in the practical application of materials science and the principles of architectural construction. Emphasis on the exploration of basic building materials, systems and processes, dimensional coordination and construction drawing related where possible to Studio I communication and design projects.

11.5505 Construction Seminar II

Prerequisites: 11.5101, 11.5501, 11.5601, 11.5701, three from 11.5203, 11.5304, 11.5504, 11.5604.

Exercises in the practical application of the principles of architectural construction to the design of small scale residential and non-residential buildings. Emphasis on common constructional systems using timber, masonry, steel and concrete, resource materials, dimensional coordination and construction drawing practice related where possible to Studio II design projects.

11.5506 Construction Seminar III

Prerequisites: 11.5102, 11.5502, 11.5602, 11.5702, four from 11.5204, 11.6305, 11.5505, 11.5605, 11.5704.

Exercises in the practical application of the principles of architectural construction to the design of buildings of moderate scale and complexity. Emphasis on construction detailing as well as the general resolution of constructional systems related where possible to Studio III design projects.

11.5510 Construction Seminar IV

C2

C2

Prerequisites: 11.5103, 11.5503, 11.5603, 11.5703, four from 11.5205, 11.5306, 11.5506, 11.5606, 11.5705.

Studio consultancy in the selection and application of structural and constructional systems, building materials and processes appropriate to Studio IV design projects.

11.5511 Construction Seminar V

Prerequisites: 11.5110, 11.5210, 11.5310, 11.5510, 11.5710, 11.5910.

Studio consultancy in the selection and application of structural and constructional systems, building materials and processes appropriate to Studio V design projects.

11.5512 Construction Seminar Vi

Prerequisites: 11.5111, 11.5211, 11.5311, 11.5511, 11.5711.

Studio consultancy in the selection and application of structural and constructional systems, building materials and processes appropriate to Studio VI design projects.

11.5513 Construction Seminar VII

Prerequisites: 198 credit points, including 11.5913,

Studio consultancy in the selection and application of structural and constructional systems, building materials and processes appropriate to the Graduation Project.

11.5520 Advanced Building Materials

Prerequisites: 11.5910, 11.5912.

Analysis of the structure, classification, properties, manufacturing techniques, use and performance of constructional materials at an advanced level. New materials, their testing and development. Criteria for material selection, detailing and specification. Durability and deterioration of materials and their design implications. Case studies, site and plant visits, seminars.

11.5521 Advanced Construction Systems

Prerequisite: Technology Elective Package I.

A review of recent developments, current trends and possible future directions in building design, construction systems, detailing and documentation. Case studies, projects, seminars.

11.5522 Construction Planning and Management C2

Prerequisite: Technology Elective Package II

The role of the architect in construction planning and management. Pre-planning and building technology design for improved performance and management of the building process. Recent developments in constructional and structural engineering. Erection methods and equipment. Construction management and coordination of the building process. Building economics and cost planning, case studies, reports, seminars.

Architectural Structures

11.5601 Architectural Structures I

C2

C2

C2

C2

C2

Prerequisite: Nil.

Basic structural concepts: load, force, loadpath; resolution of forces, equilibrium; moment (overturning); stability (element, assembly) strength and stiffness; supports and connections; stress, strain, modulus of elasticity, tension, compression, shear, bending, torsion.

Basic structural elements and their behaviour: cable and arch, strut and column, beam, truss, frame, grid, plate/slab, vault and dome, tent and pneumatic; load application, loadpath, connections, reactions at supports/connections, internal forces.

11.5602 Architectural Structures II

Prerequisite: 11.5601.

The structural design process: definition of the structural task in relation to an architectural concept, system options and choice.

C2

11.5603 Architectural Structures III

Prerequisite: 11.5602.

Constructional aspects of structures: structural design related to materials (timber, steel, masonry, concrete and composites), foundations, connections and joints.

The morphology of structures, structural form, structural systems, the "lightweight" concept, structural systems for wide-spanning and highrise structures, selective studies of structural behaviour.

11.5604 Structures Seminar I C2

Prerequisite: Nil.

Exercises almed at developing an understanding of basic structural concepts and the fundamental behaviour of structural elements, related where appropriate to Studio I design projects.

11.5605 Structures Seminar II C2

Prerequisites: 11.5101, 11.5501, 11.5601, 11.5701, three from 11.5203, 11.5304, 11.5504, 11.5605.

Exercises in the behaviour, selection, analysis and design of simple structural assemblages, related where appropriate to Studio II design projects.

11.5606 Structures Seminar III C2

Prerequisites: 11.5102, 11.5502, 11.5602, 11.5702, four from 11.5204, 11.5306, 11.5505, 11.5606, 11.5704.

Exercises in the constructional aspects of structures, with particular emphasis on the chracteristics of current and evolving structural systems, related where appropriate to Studio III design projects.

11.5620 Conceptual Structural Design C4

Prerequisites: 11.5910, 11.5912.

Choice of systems, scale, structure as a visual element in architectural design, design methods using graphic, model and computer methods. Structural form-finding and form-determination. Model and computer laboratory exercises.

11.5621 Advanced Structural Design C4

Prerequisite: 11.5620.

Architectural/structural design issues: skin/frame options, roof/wall interface, envelope design, emphasis on structural detailing; design for wind and earthquake; constructional design issues, new materials and systems, manufacturing processes, assembly and erection. Structural CAD applications. Case studies, site and plant visits, project.

11.5622 Lightweight Structural Design

Prerequisite: 11.5621.

Architectural/structural/constructional design of cable, cable-net, membrane, tensegrity, gridshell, shell and folded structures. Seminar and project(s). Occasional construction workshop.

Environmental Control

C2

The aim of the environmental control course is to present students the theory in daylight, artificial light, accustics, thermal behaviour and the services to buildings in the context of modern building design.

11.5701 Environmental Control I C3 Prerequisite: Nil.

Human response to the environment: climate and its effects, environmental design methods for total human comfort, introduction to thermal, lighting and acoustic comfort and basic concepts, subjective and objective assessment of aural, visual and thermal environments, laboratory work and field studies.

Thermal environment; evaluation of thermal conditions, comfort indices, air quality and movement, solar heat gain; visual environment; psychological and physiological effects of light, performance of the visual system, visual discomfort, glare indices; acoustic environment; human hearing, human response to vibration, psychological and physiological effects of noise.

11.5702 Environmental Control II

Prerequisite: 11.5701.

The role of the building envelope; thermal performance; principles of heat transfer, insulation, condensation and vapour barriers, strategies for modifying envelope properties; daylight performance; natural light sources, traditional methods of daylighting buildings, window design and energy consumption, sun control, patterns of innovation and change; acoustic performance; external noise levels, selection of building envelope elements, methods of noise control; integrated envelope design, computing.

Design of the interior environment; thermal design; heating and cooling of buildings, thermal storage effects, passive methods of design; visual design; electric light sources, integration of daylight with electric light, quantitative and qualitative requirements, visual appraisals; acoustic design; acoustic design criteria – ambient sound levels and reverberation time, selection of interior building materials; integrated interior design, laboratory work and computing.

11.5703 Environmental Control III

C4

C1

C4

Prerequisite: 11.5702.

C4

Building services; sources and distribution of water, wastes and energy supplies, application of electric power, hydraulics, vertical transport, fire protection in buildings, equipment selection and space allocation. Air conditioning, heating and ventilating of buildings, design of systems, selection of equipment and allocation of space.

11.5704 Environmental Control Seminar I

Prerequisites: 11.5101, 11.5501, 11.5601, three from 11.5203, 11.5304, 11.5504, 11.5604.

Emphasis on the implications of sun and climate in the design of comfort conditions in buildings, the relation between climate, occupants and envelope design, and envelope design and energy consumption; and the application of strategies to modify envelope properties; experimentation with innovative
methods to introduce daylight into buildings for human well-being by model studies in design projects in Studio II. Analysis calculation and design using computer software.

11.5705 Environmental Control Seminar II C1

Prerequisites: 11.5102, 11.5502, 11.5602, 11.5702, four from 11.5204, 11.5305, 11.5805, 11.5605, 11.5704.

Emphasis on mechanical engineering systems in buildings. Analysis, calculation and design, selection of equipment and allocation of space. Application of thermal, lighting and acoustics principles to promote human comfort in buildings.

11.5710 Environmental Control Seminar III C1

Prerequieites: 11.5103, 11.5503, 11.5603, 11.5703, four from 11.5205, 11.5306, 11.5506, 11.5606, 11.5705.

Lighting, acoustics and thermal design linked where appropriate to design projects in Studio IV. Design of selected HVAC systems and components.

11.5711 Environment Control Seminar IV C1

Prerequisites: 11.5110, 11.5210, 11.5310, 11.5510, 11.5710, 11.5910.

Analysis, calculation and design of selected systems and components of mechanical engineering systems, worked examples of lighting and acoustics, related when appropriate to design projects in Studio V.

11.5712 Environmental Control Seminar V C1

Prerequisites: 11.5111, 11.5211, 11.5311,, 11.5511, 11.5711.

Analysis, calculation and design of selected systems and components of mechanical engineering systems, worked examples of lighting and acoustics, related when appropriate to design projects in Studio VI.

11.5713 Environmental Control Seminar VI C1

Prerequisites: 198 credit points., including 11.5913

Analysis, calculation and design of selected systems and components of mechanical engineering systems, worked examples of lighting and acoustics, related when appropriate to design of Graduation Project.

11.5720 Design for Energy Efficiency C2

Prerequisites: 11.5910, 11.5912.

The development of the design of buildings and building types incorporating technological means of energy conservation and generation, use of energy-efficient materials, maintaining ecological balance and developing suitable structural techniques.

11.5721 Design of Lighting C2

Prerequisite: Technology Elective Package I.

Major factors influencing design and application in buildings. Evaluation of Impact of current technologies on lighting using computer simulations, appraisals and model studies. Design project.

11.5722 Acoustics Studies

Prerequisite: Technology Elective Package II.

Experimental investigation and research in selected aspects of acoustics. Laboratory and field work, methodology of results, development of techniques of application. Laboratory work.

Architectural Practice

11.5810 Architectural Practice I

Prerequisite: 11.5103.

Contract documentation and specification writing techniques. Estimating, cost planning and bills of quantities.

11.5811 Architectural Practice II

Prerequisite: 11.5810.

Introduction to the legal system; aspects of the law of contract, torts, property, copyright. Legal consequences of architectural practice. Liability of architects, professional indemnity insurance. Authorities controlling building. Types of building contract. Tendering and negotiating. The architect/client agreement. Budgets and estimates. Engagement of consultants. Contract administration procedures. Professional ethics.

11.5812 Architectural Practice III C1

Prerequisite: 11.5811.

Alternative methods of building procurement. Detailed comparison of standard contracts in current use. Advanced contract administration procedures. Critical path. Partial architectural services and liability. Professional defensive measures and crisis management.

11.5813 Architectural Practice IV C1

Prerequisite: 11.5811.

Introduction to management theory. The structure and organisation of an architectural office; aspects of company and partnership law and insurance. Business principles and management procedures relevant to an architectural office.

11.5820 Building Economics and Development C2

Prerequisites: 11.5910, 11.5912.

1. The Economy: structure of the economy. History and development of modern economics. 2. Investment: investigation in buildings, property (public and private), large scale, small scale. 3. Valuation: statutory valuations, karket value, unimproved and improved land depreciation and obsclescence, valuation of improvements, valuation law, land laws. 4. Feasibility: economic models, optimization, feasibility studies on small-, medium, large-scale development and subclivisions. 5. Rationalized Building: dimensional control, component technology, building systems, cost planning. 6. Seminars.

11.5821 Project Management

C2

C2

C2

Prerequisite: Technology Elective Package I.

1. Principles of scientific management and organization, individual group behaviour, management functions, planning, organizing, staffing, directing, coordinating, monitoring, appraisals and evaluation. 2. Operations research techniques; network analysis, multi-activity charting. 3. Decision theory and procedures. 4. Contract and contract documents. 5. Industrial relations, employment. 6. Industrial organization. 7. Seminars.

11.5822 The Architect and the Law

Prerequisite: Technology Elective Package II.

1.Arbitration and litigation.2. Appeals to the Land and Environment Court. 3.Environment law. 4. Industrial law. 5. Case studies.

C2

C2

Other Required Studies

11.5910 Practical Experience C0 Prerequisite: 11.5103.

Each student is required to obtain, before enrolling in Year 5, practical experience under a registered architect for a period of six months. The experience is to be recorded in a log book to be signed by the registered architect. No other subject may be taken concurrently with Practical Experience.

11.5912 Research Methods

Prerequisites: 11.5103 for BArch; 11.5916 for BSc(Arch).

The processes and methods of research, writing and referencing for publication of academic works.

11.5913 Dissertation

C6

C8

C2

Prerequisite: 11.5912.

An individual study, on an approved topic, taken under staff supervision, with the purpose of allowing the student either to gain knowledge in some aspect of architecture which is not covered in the course, or to increase knowledge in some aspect which has been covered. It requires the gathering of data, analysing that material and reaching a conclusion. The work is typewritten, in concise and clear English, properly ordered and referenced and presented in A4 format. The work is normally about 10,000 words, illustrated as necessary. To be completed before enrolment in Graduation Project.

11.5914 Special Research Programme I C5 (For BSc(Arch) only)

Prerequisite: Head of School's approval.

Programme selected by the student in accordance with his or her particular interest and approved by the Head of School. Such programs include studies in design, technology, architectural and materials sciences, conservation, history, communication and management.

11.5915 Special Research Programme II C5 (For BSc(Arch) only)

Prerequisites: 11.5914, Head of School's approval.

Programme selected by the student in accordance with his or her particular interest and approved by the Head of Schoool. Such programs include studies in design, technology, architectural and materials sciences, conservation, history, communication and management.

11.5916 Special Research Programme III C5 (For BSc(Arch) only)

Prerequisites: 11.5915, Head of School's approval.

Programme selected by the student in accordance with his or her particular interest and approved by the Head of School. Such progams include studies in design, technology, architectural and materials sciences, conservation, history, communication and management.

11.5917 Research Project

Prerequisites: 11.5916, 11.5912.

This project is available to those students intending to obtain the degree of BSc(Arch) and is intended as the culminating study of that area of architectural endeavour in which the student wishes to major. The area selected would be investigated to a degree of depth not normally required by practising architects, and thus would serve as an introduction to professional or consulting expertise in one aspect of architecture. The research project, communicated graphically or in writing, is to integrate the student's knowledge and skill in the selected area of study and the topic is to be submitted for approval by the Head of School. The Research Project can be credited only towards the BSc(Arch) degree.

11.5918 Honours Project I

Prerequisite: 131 Credit points.

This subject is required for students who may enrol in the BSc(Arch) degree course at Honours level and represents the architectural endeavour in which the student wishes to major. The project should demonstrate a depth of knowledge of the chosen aspect of architecture that extends beyond that normally required of a practising architect. It may be a graphic and/or written presentation. It normally extends over two semesters and the proposed program is to be submitted for approval to the Head of School five weeks before the beginning of the session in which the student intends to enrol in the Honours Project.

11.5919 Honours Project II

Prerequisite: 11.5918.

This subject is required for students who may enrol in the BSc(Arch) degree course at Honours level and represents the architectural endeavour in which the student wishes to major. The project should demonstrate a depth of knowledge of the chosen aspect of architecture that extends beyond that normally required of a practising architect. It may be a graphic and/or written presentation. It normally extends over two semesters and the proposed program is to be submitted for approval to the Head of School five weeks before the beginning of the session in which the student intends to enrol in the Honours Project.

Other Elective Studies

11.5920 Architectural Research I

Prerequisite: 11.5910, 11.5912.

An elective designed for students wishing to pursue an independent course of study in a field of architecture not falling specifically within the domain of any existing elective. Students are required to present a detailed program of study for approval by the Head of School by the end of the semester preceding that in which it is intended to enrol in this elective. For special conditions consult Head of School.

11.5921 Architectural Research II

C4

C4

C22

C22

Prerequisite: Technology Elective Package I or Design Elective Package I.

An elective designed for students wishing to pursue an independent course of study in a field of architecture not falling specifically within the domain of any exisiting elective. Students are required to present a detailed program of study for approval by the Head of School by the end of the semester preceding that in which it is intended to enrol in this elective. For special conditions consult Head of School.

C2

11.5922 Architectural Research III

C4

Prerequisite: Technology Elective Package II or Design Elective Package II.

An elective designed for students wishing to pursue an independent course of study in a field of architecture not falling specifically within the domain of any existing elective. Students are required to present a detailed program of study for approval by the Head of School by the end of the semester preceding that in which it is intended to enrol in this elective. For special conditions consult Head of School.

General Education Subjects

The student is to refer to the General Education Handbook for details of subjects available in this area.

Industrial Design

In any academic year, one or more of the following undergraduate subjects may be offered to students undertaking qualifying programmes leading to admission to the Master of Industrial Design course or the Master of Science (Industrial Design) course in the Graduate School of the Built Environment. Students in the Bachelor of Architecture and Bachelor of Science (Architecture) courses may not enrol in any of these subjects without the permission of the Head of the School of Architecture.

The Industrial Design subjects are made up of lectures, demonstrations, group discussions and criticism, with design projects as the main study.

Theory of the historic, social, psychological, and economic aspects of industrial design; the methodology and techniques of industrial design.

The design projects are set in many differing industrial and social frameworks, and give the student an opportunity to solve problems across the whole spectrum of Industrial Design. The understanding of the problem-solving process and the individual student's own experience of it is considered to be of as much importance as the final solution. The brief for each project details the production and marketing situation, the criteria for design, the academic aims of the project, background information, a time schedule and the requirements for presentation of the subject's analysis and final solution.

11.4740 Industrial Design 1

Prerequisite: 30 credit points.

The emergence and development of the industrial design profession from 1850 to the present day. Introduction to the principles of ergonomics, two- and three-dimensional design communication, and industrial design problem solving. Studio: Design project work applying industrial design criteria and methods to the solving of design problems; the solutions to be evaluated by means of prototypes, drawings and reports.

11.4741 Industrial Design Methods A

Prerequisite: Nil.

The need for design methodology and its application in the industrial situation; strategy planning, the methods with examples of their application; the problems of problem solving.

11.4742 Industrial Design Methods B C5

Prerequisites: 11.4740, 11.4741.

The systematic application of industrial design research, practice, techniques and methodologies to the analysis, briefing and solving of a complex problem involving product systems.

11.4743 Industrial Design Case Histories C2

Prerequisites: 11.4740, 11.4741.

A series of case histories covering a selected range of industrial design and practice areas. The cases are given by practitioners in industrial design from the University, design consultancies, and the design studios of manufacturing companies. The methodologies used in the cases and the resultant products are studied and comparisons are made with theoretical methodologies. Studies are made to determine possible differences in the final product that could have resulted from the application of different methodologies.

11.4744 Industrial Design 2	C7
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Prerequisite: 11.4740.

C6

Studies of the design applications of selected materials, project work involving design problems intrinsically concerned with particular materials.

11.4745 Industrial Design 3A C10

Prerequisites: 11.4742, 11.4743, 11.4744.

The application of industrial design research and practice methodologies to the study and solving of selected design problems.

11.4746 Industrial Design 3B C10

Prerequisites: 11.4742, 11.4743, 11.4744.

The application of industrial design research and practice methodologies to the study and solving of selected design problems.

11.4747 Industrial Design Special Project C10

Prerequisite: 100 credit points. Selection on merit.

An elective subject intended for students wishing to pursue an independent course of study within an area of industrial design not falling within the domain of any existing elective. Students are required to present a detailed program of study for approval to the Head of School during the semester preceding that in which it is intended to enrol in this elective.

Building

Construction Stream

29.411 Surveying for Architects and Builders S2 LT5 Compulsory. Prerequisite: Nil.

Introduction. Chaining, methods of measurement, corrections, chain surveys. Level, differential levelling, booking. Contours, volumes of earthworks. Theodolite, methods of reading angles, applications in building. Traversing, setting out.

35.001 Construction 1 (Domestic Buildings) S1 LT3

Compulsory. Prerequisite: Nil.

Functional requirements and methods of building single family dwellings: residential slabs and footings for various site conditions; brick, brick veneer and timber walls; flooring, ceiling and roof framing for one and two storey houses; domestic joinery; staircase construction; finishes; plumbing, drainage and electrical services; methods of setting out and supervision.

35.002 Construction 2 (Low Rise Domestic) S2 LT4

Compulsory. Prerequisite: 35.001.

Small multi-storey buildings from the functional and construction operation viewpoints. Study of the major building trades and crafts including tools, plant and materials, and the on-site observation of trade practices: materials, techniques, terminology, quality control and supervision. Foundations and footings; types of wall and frame construction; basement, ground floor and upper floor slab construction; methods of roofing, waterproofing; joinery; internal finishes; minor construction plant, formwork. Construction drafting, on-site observation and report on home unit building.

35.003 Construction 3 (Framed Building) S3 LT4

Compulsory. Prerequisites: 35.002, 35,151.

Functional requirements and methods of constructing framed buildings: study of structural steel and concrete frames; large span factory roofing, precast concrete walling, tilt up construction, pneumatic formwork, slip form, lift slab, welding techniques, fire requirements, cladding methods, installation of cranes and machine footings, scatfolding, relevant builder's plant and equipment including site works, dewatering, shoring, pilling on site observation and report on factory building.

35.004 Construction 4 (High-rise Buildings) S5 LT4

Compulsory. Prerequisites: 35.003, 35.052.

Functional requirements and building techniques of high-rise buildings and major building projects; structural systems, enclosure systems and environmental control systems and their inter-relation from a building standpoint; various methods and materials commonly used to solve functional demands; comparison of systems of construction, selection of plant and equipment cranes hoists concrete pumps etc.; building loads and load factors; stability of structures and structural components; creep, settlement and other movement; principles of fire protection in high-rise projects; cladding in concrete, metal and glass; ceiling and partition systems; integration and coordination of services. On site observation and report on high rise building.

35.005 Construction 5 (Techniques) S6 LT4 Compulsory. Prerequisite: 35.004.

Specialized building techniques employed on major projects including the use of plant, equipment and various construction systems: excavation equipment, shoring, ground anchorage, pile drivers, formwork, slip form, craneage, concrete handling. Construction methods with minimal impact on the environment. Integrated construction systems. Students undertake on-site studies. Emphasis on method of construction rather than the attributes of the finished product.

35.006 Construction 6 (Industrialization and Technological Change) S7L2

Elective. Prerequisite: 35.005,

Factors influencing change in building techniques: technological change in building; implication of level of demand; new products, materials and processes; the regulatory system; the effect of government policy. The implications of changing techniques; the changing structure of work, skills loss, methodologies for coordinating building components; the evaluation of performance, social consequences of industrialization. Teaching centres around case studies of Australian and overseas building techniques, building systems, construction systems, portable buildings and mobile homes.

35.007 Construction 7 (Special Project) S8 L2

Elective. Prerequisite: 35.005.

The study of special advanced topics in building construction on either a group or individual basis.

35.008 Construction Plant

Elective. Prerequisite: Nil.

On-site materials handling: hoists, cranes, concrete pumps. Earth moving plant: bulldozers, excavators, backhoes. Pile driving equipment; shoring and rock anchoring equipment. Economic optimization of plant.

35.010 Communications and Resource Usage S1 LT3 Compulsory. Prerequisite: Nil.

Sources of information: using the library and off-campus sources including data bases and designs of surveys. Accessing information: reading, summarizing and note taking. Written communication: organization of and participation in meetings, seminars and lectures. Graphic communication: sketching, photography, drafting and detailing.

35.050 Soil Mechanics for Building

S6 LT2

S7 L2

Compulsory. Prerequisite: Nil.

The origins and formation of soils; clay mineralogy; classification of soils; soil as an engineering material; site investigation; boring, sampling and insitu testing; shear strength of soils; stress distribution in earth masses; consolidation and settlement; earth pressure calculations; bearing capacity; improvement of soil properties by compaction and stabilization; introduction to foundation design; laboratory testing of soils.

35.051 Structures 1

S2 LT3

Compulsory. Prerequisite: Nil.

Loads on structures; external and internal forces; conditions of force and moment equilibrium. Analysis of statically determinate beams, bending moment and shear force diagrams; bending and shear stresses; deflections. Qualitative structural behaviour of arch, cable, membrane, plate and shell structures; the function of bracing.

35.052 Structures 2 S3 LT4

Compulsory. Prerequisites: 35.051.

Analysis of statically determinate frames; principles of structural design; design of beams and columns in timber and steel for strength, deflection and stability criteria; combination of axial and bending stresses. Joints in timber and steel structures: bolting, nailing, welding. Design of reinforced and prestressed concrete beams, columns and slabs for strength and serviceability.

35.091 Built Environment 1 S1 LT2

Compulsory. Prerequisite: Nil.

The intention is to develop an understanding of the relevance of man's "culture" (that thing which his social, economic, political, religious and physical environment gives rise to) to the nature of buildings and settlements which he devises, and an appreciation of the architecture and building (in particular in terms of materials and construction) of those cultures which can be seen to be providing the line to modern "western" building from as far back as "the stone ages".

35.092 Built Environment 2

S7 LT2

Elective. Prerequisite: Nil.

Development of an understanding of the nature of the C20th "western" industrial city in general and C20th Sydney in particular: how the urban system functions and the forces and skills at work in its continuing growth. Lectures will sketch the essentials of western industrialisation in the 18th and 19th centuries, urban problems facing Third World countries, the particular problems of C20th Sydney in terms of socio-political environment, environmental pollution, environmental impact statements, transport, urban decay and renewal and expansion, the current planning and development framework, and possible futures for the built environment in Australia."

Building Science Stream

1.931 Physics

S2 LT4

Compulsory. Prerequisite: Nil.

Energy transfer: conduction, convection, radiation, emittance, absorptance; Joules equivalent; thermometry; heat transfer through materials; thermal storage; thermal resistance; insulation; water vapour, condensation and vapour barriers. Refrigeration theory, properties and characteristics of refrigerants. Electrostatics and electromagnetism: DC circuits; Coulomb's law; electric field; electric potential; capacitance; conductors; resistivity; Atomic view of conduction; EMF; Kirchoff's laws; magnetic induction; torque on a coil in a magnetic field; moving coil meter; Wheatstone bridge; potentiometer; Faraday's law; transient circuits. AC power and circuit theory. Sound: longitudinal waves; overtones; intensity levels; decibels; quality of sound; assessment of noise annoyance; airborne sound transmission; sound attenuation; transmission loss; adsorption coefficients; partitions; recommended acoustic criteria; introduction to auditorium acoustics.

35.111 Building Science 1 (Materials) S1 LT4

Compulsory. Prerequisite: Nil.

Properties of materials; plasticity, elasticity, density, porosity, hardness. Optical, electrical, thermal and acoustic properties. Deterioration. Properties and manufacture of building materials; wood, wood products, cements, limes, concrete, bricks metals, asbestos cement, ceramios, plastics, sealants and mastics, stones.

35.112 Building Science 2 (Concrete and Metals) S4 LT4 Compulsory, Prerequisite: Nil.

Concrete technology: cement, aggregates, water and admixtures; properties of fresh concrete; strength considerations; durability, shrinkage and creep; special concretes; non-destructive testing; mix design. Metals in building: structural ferrous alloys; structural and architectural non-ferrous alloys; corrosion and protection; welding; types of failure, brittle fracture, fatigue, creep; impact resistance; tensile properties; hardness; strain hardening. Fire: behaviour of building materials and structures.

35.113 Building Science 3 (Energy and Thermal) S7 LT3 Elective. Prerequisite: Nil.

Building with climate: climate (global and local); thermal comfort factors; effective temperature; solar radiation; heat flow through building materials; thermal storage; thermal resistance; insulation. Principles of thermal design: thermal control, ventilation and air movement. Solar control: solar position diagrams; shading devices; shading by buildings and trees. Daylight: availability and intensity; design considerations. Artifical light: light sources; quality; spatial illumination; design considerations; maintenance.

35.114 Building Science 4 (Timber) S8 LT2

Elective. Prerequisite: Nil.

The production and marketing of timber; test methods and properties; stress grading of timber, codes of practice, chemical, physical and biological attack and weathering of timber, protection and preservation; thermal, acoustic and aesthetic properties: factory techniques, phywood, particle board, hardboard, softboard, prefabricated building components, laminated beams.

35.151 Building Services 1 (Hydraulics) S2 LT2

Compulsory. Prerequisite: Nil.

Hydraulic services pertaining to small and medium size projects; hot and cold water reticulation; sewer and storm water drainage; sanitary plumbing, introduction to fire fighting equipment and services; regulatory authorities and requirements.

35.152 Building Services 2 (Mechanical)S4 LT2Compulsory. Prerequisites: 1.932, 35.151.

Ventilation theory; ventilation systems and equipment; refrigeration theory; air conditioning heat loads; air conditioning equipment; electrical equipment; telephones and security; lifts and escalators; recess; plumbing; fire protection; garbage and incinerators.

35.170 Mathematics for Builders

S1 LT4

Compulsory. Prerequisite: Nil.

Calculus: limits and continuity of functions; differentiation and integration of polynomial, exponential and logarithmic functions; the definite integral; practical applications. Probability: discrete events, sample spaces and probabilities; complex events; probability trees; distribution of random variables; expected value and decision analysis. Statistics: mean, mode, median, standard deviation and variance of normal and binomial distributions; hypothesis testing; linear and multiple regression; non-parametric statistics; chi-square testing; descriptive presentation of data.

Management Stream

35.261 Management 1 (Management Principles) S1 LT2

Compulsory. Prerequisite: Nil.

Basic management principles, scientific management, management objectives. Structure of building industry. Building Acts and Regulations, codes, local government authority powers.

35.262 Management 2 (Planning) S3 LT3

Compulsory. Prerequisite: 35.261.

Introduction to Operation Research, OR techniques and their relevance to building, concept of planning and control, CPM, PERT, Line of Balance, Multi-activity Chart, computer applications of CPM. Principles and application of Work Study. Risk analysis, decision making process.

35.263 Management 3 (Contracts) S4 LT3

Compulsory. Prerequisite: 35.262.

Concept of contracting and subcontracting, different procurement methods. Contract law, building contracts and contract administration, standard forms of contracts, contract claims and disputes, contract negotiation. Principles of insurance, contract insurance, professional negligence. Purchasing.

35.264 Management 4 (Personnel Management) S5 LT3

Compulsory. Prerequisite: 35,2634.

Personnel management, human motivation, employment. industrial relations, employers and employer groups, unions and unionism. Conciliation and arbitration. Site organization (labour aspects), safety management. Quality assurance.

35.265 Management 5 (Project Management) S6 LT3

Compulsory. Prerequisite: 35.264.

Project management and site organization. Theory and concept of project management. Alternative organization of the building process. Application of project management in building. Management of pre-design, design and construction activities. Strategic planning, construction strategy. Site organization (physical), planning of materials handling. Project management control.

35.266 Management 6 (Corporate Strategy) S7 L2

Elective. Prerequisite: 35.265.

Corporate strategy and the overall general management of an enterprise in the building and development industry,

derivation of policy by top management together with planning of policy implementation; tax planning. There is an integration and application of knowedge acquired in previous and concurrent courses. By using case studies students appraise the present position and future prospects of enterprises in the building industry; assess potential risks and opportunities; plan the human and physical resources and activities of the enterprises required to achieve corporate objectives.

35.267 Management 7 (Marketing) S8 LT3

Elective. Prerequisite: 35.265.

Marketing for builders and developers in the Australian and Pacific environment with particular emphasis on the marketing mix, the relationship between a marketing system and its environment, development of marketing, tactics and strategy, market segmentation and the buyer decision process. Listing, selling and the auction process.

35.271 Law for Builders 1 S3 LT2

Compulsory. Prerequisite: Nil.

Law, including brief outline of sources of law in New South Wales and the system of judicial precedent. General principles of law of contracts. Contractual rights and obligation. Court structures; sale of goods; a general introduction to the law of bankruptcy. General principles of law of agency. Law of partnership.

35.272 Law for Builders 2 S6 LT2

Compulsory. Prerequisite: 35.271.

General principles of insurance law. Law related to non-commercial succession to property. Real property and local government law, company and administrative law.

35.273 Law for Builders 3

Elective. Prerequisite: 35.272.

Recognition of the significance of different land titles, tenures and interests in land; understand the construction and content of contracts, leases and other forms of agreement required for property dealings and use; develop a familiarity with public and private controls and restrictions on land use and development; appreciate the relationship between planning policies at all levels and the valuation process; a knowledge of the valuation review and determination processes of the Land and Environment Court and similar tribunals; appreciate the requirements for presentation of evidence as an expert witness; acquire a familiarity with major court cases, relevant to a valuer, which establish valuation principles; understand the major objectives of principal New South Wales Acts dealing with real estate or interests therein.

35.274 Commercial Arbitration

S8 LT3

S8 LT3

Elective. Prerequisite: 36.263.

The nature and function of arbitration in relation to building contract disputes, the parties to arbitration, the arbitrator, his duties and powers. Case studies, moot arbitration.

35.381 Introduction to Computing

Compulsory. Prerequisite: Nil.

Introduction to computer programming and applications. Description of computer hardware and peripheral equipment; use of time-sharing computing facilities; development of basic programming skills.

35.282 Computer Applications in Building S5 LT2 Computery, Prerequisite: 35.281.

Extensions of flowchart and program development via time-sharing processing with emphasis on structured programming and internal program documentation. introduction to data file structures and access modes. Microcomputer wordprocessing and spreadsheet programs. Applications in quantity surveying, estimating and construction management.

35.283 Systems Analysis and Modelling S8 LT3

Elective. Prerequisite: 35.263.

Systems analysis methods. The systems approach of considering the interaction of processes forming part of a larger whole is introduced as a general concept applicable to a wide variety of planning and management problems. In particular, the systems analysis techniques of network analysis, mathematical programming, simulation and financial modelling are studied in relation to the planning, design and construction management of building projects. Extensive use is made of microcomputer spreadsheet software for financial modelling, and other appropriate software packages for linear programming and simulation.

35.284 Building Information Systems S7 LT3

Elective. Prerequisite: 35.282.

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The specification, development and use of computer based information systems in the management of building companies. Information system components, attributes and lifecycle; system and procedure representation tools. Data files structures and access modes; database systems. Information system response, distribution, size and controls; logical and physical design. Computer hardware; communications; local area networks. Case studies of computer systems in building construction and management companies. The subject involves extensive use of microcomputer based database and spreadsheet packages.

Building Economics Stream

14.001 Introduction to Accounting A S4 LT2 Compulsory, Prerequisite: Nil. S4 LT2

An introduction for non-commerce students to the nature, purpose and conceptual foundation of accounting. Information systems including accounting applications. Analysis and use of accounting reports.

14.002 Introduction to Accounting B S5 LT2

Compulsory. Prerequisite: 14.001.

An introduction for non-commerce students to managerial accounting. Long-range planning, budgeting and responsibility accounting: cost determination, cost control and relevant cost analyses.

35.301 Quantity Surveying 1 Compulsory. Prerequisite: Nil.

Quantity surveying; historical background; functions of the quantity surveyor; the origin and development of the Australian Standard Method of Measurement of Building Works, its importance and application; methods of recording dimensions, checking and correlating plans and specifications; principles of measurement; measuring techniques for single storey construction; billing fundamentals of item descriptions; taking off quantities from plans and specifications.

35.302 Quantity Surveying 2

S5 LT4

S4 LT4

Compulsory. Prerequisite: 35.301.

sory. Prerequisite: 35.301.

Advanced quantity surveying for the trades, mechanical, air conditioning and hydraulic services; measuring techniques for multi-storey construction; detailed study of the Australian Standard Method of Measurement of Building Works; billing procedures for single items and complete trades; contract administration; specification writing.

35.303 Quantity Surveying 3 S8 LT3 Elective. Prerequisite: 35.302.

Functions of the cost planner; liaison with consultants; cost planning techniques including practical exercises; cost control and design economics; professional practice.

35.311 Building Economics 1 S3 LT3

Compulsory. Prerequisite: Nil.

Introduction to building economics, the interrelationship between the national economy and the building industry; quantitative techniques and the interpretation of economic data, economic principles applied to aspects of the building industry; introductory investment analysis and decision theory.

35.312 Building Economics 2 S6 LT3

Compulsory. Prerequisite: 14.002.

The business environment; business structures; taxation, depreciation; operating costs; economics of building plant and materials handling systems; financial control in the erection, management and demolition of buildings.

35.313 Building Economics 3 S7 LT2

Elective. Prerequisite: 35.312.

Capital investment analysis; advanced investment evaluation; feasibility studies; financial management and analysis; growth and development; the financial market.

35.321 Estimating 1	S4 LT2
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Compulsory. Prerequisite: 35.301.

Introduction to techniques used by building estimators. Topics include the analysis of costs of material, plant and labour, and the estimation of unit rates; labour and plant scheduling, preliminary items, general and site overheads, the preliminary estimate.

35.322 Estimating 2 S7 LT2

Elective. Prerequisite: 35.321.

Advanced estimating techniques, competitive tendering, contract cost adjustments; computer techniques applied to estimating.

35.390 Property Valuation

Elective. Prerequisite: Nil.

General principles of valuation, legal background to valuation of land and property. Judicial valuations, legal precedent, land titles and rights. Depreciation assessment. Building maintenance cycles. Time value of money and equivalence. Methods and philosophies of determining market value: comparable sales analysis, statutory values and applications. Building investment feasibility assessment. Case studies of property valuations. Detailed measured survey drawing and inspection of buildings.

35.391 Land Economics

Elective. Prerequisite: 35.312.

Ability to apply relevant valuation techniques to a broad range of common land use types; acquisition of knowledge of efficient property management techniques; identification of a range of unusual property types which require specialised valuation skills and knowledge and the means of developing such skills and knowledge; knowledge to develop novel valuuation techniques for application to specific property types; ability to determine the highest and best use for nominated property types; the application of inspection techniques for broad propety types; competency in the use of property valuation and inspection aids; familiarity with resource materials and information sources required to undertake specific types of valuation.

35.392 Property Development S7 LT2

Elective. Prerequisite: 35.312.

A total approach to the building process through the four stages of pre-design, design, construction and post-construction. Market research, establishing client's needs, site selection and analysis, feasibility studies and financing methods. Selection and monitoring the work of the design team, preliminary designs, preparation of development applications, cost value analysis, value management, life cycle costing and services integration. Preplanning the building process, utilization of construction and management consultants. Development control during construction and in completion, tenant fit-outs and handing over to clients of the completed project.

35.393 Management of Buildings

Elective. Prerequisite: Nil.

Maintenance and obsolescence; economics of refurbishment; marketing; tenancy management; building control and security systems; management of commercial, retail, industrial and large scale residential complexes; legal aspects of tenancy management; energy conservation; taxation law and implications.

Other Subjects

35.401 Thesis Preparation

S7 LT2

S8 LT2

Compulsory. Prerequisite; Nil.

Thesis research requirements, format, writing style, mode of referencing, information sources, library facilities and thesis topic selection. Students will be required to produce a summary of objectives, a plan for their subsequent thesis research and a preparatory table of contents.

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35.402 Thesis

Compulsory. Prerequisite: 35.401.

Results of research on selected Thesis topic, written up in technical report format. The Thesis requires the student to survey the literature on the chosen topic, collect information and data, effectively process and document the research results and draw reasoned conclusions from them.

35.410 Industry Program

Compulsory. Prerequisite: Nil.

70 days of approved building industry experience, which may be taken non-contiguously at any time prior to graduation. Submission requirements are a daily diary and a letter from the employer.

35.420 Special Programme

S7 or 8 LT2

Elective. Prerequisite: Nil.

This subject, to be presented by visiting lecturers, would allow presentation of subject material not covered elsewhere in the course. The subject is to be presented on an occasional basis; subject content dependent on lecturer.

Town Planning

Core Subjects

36.211 Introduction to Planning

S1 L5T7

A broad range of aspects of planning, including: the aims of planning and its role in shaping our environment; the development and characteristics of urban settlements throughout history, as well as today; categories of land-use and their functions; forms of transport; planning at regional and local levels; neighbourhood theory and practice; planning legislation and administration; appearance and design of urban areas.

Lectures, seminars and films are used to present the material, in conjunction with project exercises. These include studies of past planning publications and current issues under discussion in the press, as well as an in-depth survey and analysis of specific localities. A three-day excursion, visiting planning offices and developments outside Sydney, is part of the subject. Skills are developed in observing, recording, analysing and presenting information. The use of imagination and an enquiring frame of mind are encouraged.

36.212 Planning Studies

S2 L6T6

Lectures, seminars and projects concerning the principles of research related to the assessment of the urban environment. 1. Role of Planning Studies: the purpose and scope of planning studies in the planning process, relationship to planning objectives and decision making. 2. Research Methodology: social science research methods. Study design, sampling techniques, questionnaire design, data collection, data analysis using packaged computer programs. Introduction to statistics. Introduction to demographic concepts and methods. 3. Social Science Research and Planning Issues: a series of student-led seminars that focus on topics of importance to planning (e.g., measuring environmental quality, social indicators, social mix, community

S1-8

S8 L3

S8 LT3

design and crime) which have been studied from a variety of viewpoints using various research techniques.

36.213 Local Planning 1 S1 L3T9

Prerequisites: 36.211 and 36.212.

A lecture, seminar and practical exercise program dealing with the principles and practice of planning, the places where people live, from the small scale of housing to the larger scale of urban districts. All the factors which influence the shape of urban areas, and which affect the quality of life within them: physical factors - noise, sunlight and shade, microclimate and wind, solis and other site engineering factors, traffic and accessibility, and design and aesthetics; with socio-economic factors - demography, ethnicity, and politics; and with the processes of urban change. Students undertake reading and exercises in integrated planning related to their skills and abilities, and by the end of the subject are brought to the level at which they will be able to prepare simple local environmental studies, and to assess development applications with a full awareness of the issues to be considered and the implications of their decisions.

36.214 Local Planning 2

S2 L3T3

Prerequisites: 36.213 and 36.215. Co-requisite: 36.421

Lectures and seminars focusing on areas similar to those treated in Local Planning 1, but permitting the students to explore issues in more depth. Emphasis is placed on the reasons for urban areas being as they are - the factors which influence the existing form of an urban area from the small residential scale to that of the integrated district; the reasons for growth and change occurring in the way that they do and the ways in which planners can affect these; the implications of the planner's actions at the local scale for the physical and social environment; and the ways in which urban areas can be planned, altered and designed to make the best use of the environment while conserving its desirable qualities and aiming for beauty and equity. The subject is undertaken by a series of lectures, directed reading, seminars and case studies.

36.215 Planning Law and Administration S1 L6T6

Prerequisites: 36.213 and 36.218.

Theory and the practice of techniques and the administrative procedures needed to transform the policies and details of planning proposals into documents which have legal effect.

The subject comprises three parts, Planning Law, Planning Administration and Land Valuation. 1. Planning Law: conceptual/theoretical nature of the law, the relationship between the environmental context, the Crown, the parliament and the judiciary, the ways in which the laws are made and promulgated, the relationship between laws and regulations, the legal concept of property in land, the definition of various legal concepts of interests in land, the Australian Constitution and the legal relationship between the Commonwealth and the States, particularly in regard to matters affecting land, the place of administrative law. An historical introduction to planning law in Australia. A detailed account of the principles and practice of strategic and statutory planning in Australia. State environmental planning policies, regional environmental plans, local environmental plans, the role and function of environmental studies, statutory mapping, the development application process, the appeal process, the settlement of disputes. 2. Planning Administration: administrative context within which planning operates as a function of government, especially the role and function of statutory bodies in the planning and environment area, the administration of the planning function at national, state and local levels, the art of management, administrative theory, personnel administration, the role and responsibility of the professional planner in the public and private sector. 3. Land Valuation: the principles and practice of land valuation in Australia. Definitions of value, methods of valuation, the role of the valuer, compensation and betterment.

36.218 Regional Planning 1

S2 L6T6

S1 L2T4

Prerequisites: 36.211 and 36.212.

Introduction to major land-use and infrastructure patterns, economic and social processes, in large urbanised and less urbanised regions; examples of the latter include, respectively, metropolitan Sydney and the far north coast of NSW. The biophysical, social, and economic dimensions of regional systems, and the typical public management issues to which their operation gives rise, are analysed. Regional management is presented as a means of meeting social and economic objectives of the community, both in itself and by providing a policy framework within which local government planning operates. Lecture and tutorial format.

36.219 Regional Planning 2

Prerequisite: 36.215 and 36.218. Co-requisite: 36.422.

Treats, at a higher level, selected issues raised in Regional Planning 1. Current issues in regional spatial and economic development planning, both in Australia and in other parts of the world, are examined. Detailed treatment is given to strategies for the management of complex regional systems. Teaching is mostly in seminar format.

36.491 Thesis

A specialized individual study taken under staff supervision with the object of allowing students either to gain knowledge in some aspect of town planning which is not covered in the course or to increase their knowledge of some aspect which has been covered. As such the thesis is essentially evidence of this individual study. The study does not require original experimental research for the purpose of discovering new facts or the testing of an hypothesis; neither is it an essay permitting the student's unsupported opinion. The thesis topic is submitted by the student for the approval of the Head of the School of Town Planning at the end of Year 4 of the course and the completed thesis is submitted for examination towards the end of Year 5.

Students participate in seminars on report and thesis writing during Year 5 and present progress reports on their theses at the seminars. The subject is not complete until a bound copy has been submitted.

Related Subjects

36.134 Communication Techniques 1

Graphics as an effective communication medium for town planners. Technical information and studio experience in essential skills for creative graphics as a functional tool for communicating factual information to peers and clients. Exercises in basic drawing, drafting and lettering.

S2 L1T3

36.131 Communication Techniques 2

S2 L1 T1

A "hands-on" introduction to and exploration of various non-graphic techniques used by planners to communicate information. The students are taught about and undertake exercises in: reports and letter writing-- language, structure and style; audio-visual presentations - video, slide tape, etc; public speakingin a variety of situations from large meetings to telephone; models-- the techniques and uses of physical models.

36.210 Professional Practice

S2 L1

Planning as a profession, professional standards, ethics, preparing studies and plans, preparing and giving evidence, briefing and consulting, management, corporate planning, continuing education.

36.216 Planning Law and Administration 2 S2 L1T2

The objective of this subject is to provide practical guidance on the operation of the Land and Environment Court, the significance of court judgments and the role of planners. While emphasis is placed on taking steps in plan making and development control to avoid planning appeals the major concern is with preparing for an appeal – legal research, preparation of evidence, appearing as a professional witness and small-group psychology.

36.222 Computers and Information Systems S2 L1T1

Computer use in the planning professions. Components of computers and their interrelationships; time sharing, batch and stand-alone processing. Exercises using integrated software including data bases, spreadsheets, graphics and word processing. Planning information systems: applications, establishment, maintenance.

36.223 Computer Applications in Planning 1 S1 L1T1

Computer applications in planning and related fields. An exploration and documentation of available software of use to the planning profession which has not been covered earlier in the course. Students also may develop and document their own planning-related software.

36.228 Transportation Planning S2

S2 L1¹/2T1¹/2

The relationship between the planning and management of transport and the planning and management of land-use and the environment. Transport demand and supply at strategic, tactical and operational levels; networks; policies for the integrated management of precincts, corridors and centres; transport assessment of development applications; environmental assessment of transport proposals. At least one computer application is tested, and there are one further assignment and a number of small exercises to develop a basic skill in analysis.

36.230 Politics, Power and Policy

S1 L1T2

The aim of the subject is to create an understanding of the complex forces and processes (political, ideological, economic etc) which operate in the management of urban areas. Issues covered will include: relationships between urban government, politics, planning, the community and various interest groups. Urban theory. The relationship between public policy and planning. The social context of planning. The different social needs within Australian society. The formulation and implementation of policy.

36.232 Environmental Science 1

S2 L1T1

Elements of the bio-physical environment which may have direct significance for man in his occupation of the earth. These elements are considered both as controls on man's activities and as targets for man's impacts, in ways relevant to the work of urban and regional planners. Physical processes directly related to planning problems; human occupation of areas subject to natural hazards; impact of urbanization on the environment; environmental issues in general; skills in map interpretation.

36.233 Environmental Science 2

Introduction to methods used to incorporate consideration of physical environmental variables into the planning process.

36.234 Urban Design

S2 L2T1

S1 L1T1

The aim is to develop a greater awareness of the character and quality of our physical surroundings and to provide some knowledge as to how improvements can be made. Slide lectures and site visits are used to illustrate good or interesting developments in Australia and overseas. Townscape elements are studied and performance standards and other controls affecting the appearance are discussed. Small design exercises and, where feasible, at least one bigger project dealing with a real situation are undertaken.

36.235 Urban Society and Sociology S1 L1T2

A series of lectures and seminars on the relationship between planning and the social structure of urban areas with reference to both social theorists and empirical studies. The origins and concerns of the discipline of sociology and of urban sociology. Urban effects on living patterns. The relationships between different groups, including town planners, in the urban context. The evaluation of planning objectives and outcomes. Sociological views of the planner's role in contemporary urban society.

36.244 Economic Issues in Planning S2 L1T1

The market mechanism and market failure. Macroeconomic policy, investment patterns and economic change in cities and regions. Financing urban services and the impact of growth on local government. Economic impacts of development proposals,

36.245 The Development Process

FL1T1

Introduction to land development process in N.S.W. Basics of investment analysis, elemental costing and marketing. Society, the market place, land development and the role of town planning.

36.452 History of Town Planning

S2 L2

Brief review of planning theories and practices before the Industrial Revolution. Planning theories and practices in the late 19th and early 20th century. The birth and development of the town planning profession in Australia and overseas. The development of Australian towns and suburbs to the present day. Recent planning theories and practices. The material is covered through lectures, essay projects and discussion seminars.

36.4611 Engineering A

S1 L2

Transport engineering: road hierarchy, road geometry, arterial roads, access streets, intersections, cross sections, road

layouts in residential areas, public transport. Traffic and environment: accidents and safety, noise, air pollution. Traffic engineering: characteristics of road vehicle, driver, and road system, levels of performance, traffic management.

36.4612 Engineering B

S1 L1

The provision of public utilities: town water supplies, sewerage, drainage, flood management, electricity and gas supply, telecommunications, waste disposal.

36.421 Integrated Planning Project 1 S2 L2T6 Co-requisite: 36.214. S2 L2T6

Each year a project is designed which requires knowledge and skills from the several sub-disciplines of planning. The aim of the project is to further develop skills in the complementarity of knowledge and perspectives typically required to deal with complex problems in the real world. Depending on the topic under investigation, students may be required to attend an off-campus survey camp of up to one week's duration. The project will involve research, analysis, planning and design, and implementation.

36.422 Integrated Planning Project 2 S1 L3T9

Co-requisite: 36.219.

Each year a project is designed which requires knowledge and skills from the several sub-disciplines of planning. The aim of the project is to further develop skills in the complementarity of knowledge and perspectives typically required to deal with complex problems in the real world. Depending on the topic under investigation, students may be required to attend an off-campus survey camp of up to one week's duration. The project will involve research, analysis, environmental planning and implementation.

36.503 Practical Experience

For the purpose covered by Session 2 of Year 3 and Session 1 of Year 4 the students may be engaged in approved employment related to the course; for example, in government planning and housing authorities, in municipal and shire councils preparing or implementing town and country planning schemes, in private development companies or with planning consultants. The type of employment proposed must be submitted to the Head of the School of Town Planning for approval.

Students are expected to attend a seminar to discuss their experience approximately half way through their year off campus and are required to submit a paper describing and assessing their experience when they enter Year 4, Session 2.

Planning Electives

Students are required to select an elective from the topics listed (subject to availability) for the session where such an elective is part of the course program. Students are permitted to select electives offered by other schools subject to approval of the lecturer concerned and the Head of the School of Town Planning.

38.8300 Planning Elective

For initial enrolment only.

36.8301 Residential Planning

4CCH

Procedures and legal controls over land subdivision in NSW, land studies in terms of climate, terrain, vegetation, slopes, soils, drainage, etc; land development in relation to earthworks, roads, drainage and other utilities; detailed consideration of road and drainage design; subdivision design, land values and land economics. Innovatory designs.

36.8302 Local Planning 3

4CCH

Research and design into a topic at the town scale of current concern in planning.

36.8303 Regional Planning 3

4CCH

Planning methodology in metropolitan areas; a critical overview and a detailed examination of planning processes, policies and programs for selected areas/functions/institutions.

36.8304 Rural Planning

4CCH

4CCH S2 L1T3

4CCH

4CCH

4CCH

Original research into a topic of current concern in rural planning.

36.8305 Urban Conservation

Definitions and philosophy of urban conservation; setting objectives and formulating policy, criteria for selecting and assessing conservation areas; planning consideration to protect and enhance the urban fabric; legislation and mechanisms for urban conservation existing in NSW and elsewhere; potential; some effects of urban conservation; (physical, social, economic); attitudes to urban conservation; case study of selecting and planning a conservation area.

36.8306 Planning Law and Administration 3 4CCH

Aimed at increasing the student's knowledge and awareness of issues in the general areas of Planning Law, Planning Administration and Statutory Planning.

36.8307 Urban Studies

An evaluation of the effects of one or more aspects of the urban environment on individuals and/or communities. Emphasis on individual research which expands the student's experience in methodological and substantive areas beyond what is encountered elsewhere in the course.

36.8308 Social Planning

S3

Planning responsibilities in equalizing resources distribution. Discussion of consensual goal definition and achievement versus social engineering. Popular participation in planning: why, where and how. Methodology and aids to social planning. Policy formulation and case studies. The program is presented by and with practitioners in the field and includes role playing games and problem solving essay. If possible an involvement in an area project may be substituted for some of the program.

36.8309 Environmental Psychology

The environment considered subjectively and objectively. Man as a social and psychological rather than a strictly economic being. The significance for decision-making, of individual and group values held on the environment (nature and man-made), from individual decision on where to live through to government decisions on policy. Forces influencing the formation of these values. The distinction between value held and actual behaviour. The emergence of different viewpoints and resultant conflicts. The role of planning in understanding, anticipating and reconciling such conflicts.

36.8312 Transport and Environmental Management

Related to the integration of transport and environmental management at the local level.

4CCH

S1 L2T1

36.8313 Urban Design 2 4CCH

Research into and design of an area, from an urban design perspective.

36.8314 Computer Applications in Planning 2 S2 L1T3

Exploration in depth of an application of personal computers in planning.

36.4402 Planning (Special Subject) 2CC	H
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36.4404 Planning (Special Subject) 4CCH

Students have the opportunity to pursue a subject of special interest related to planning, depending on staffing resources.

Subjects Offered to Other Schools

36.411 Town Planning

Architecture prerequisite: 11.5102.

Introduction to the purpose, scope and application of planning. The urban planning process. Objectives and means of planning cities. Levels of planning and types of plans: state environmental policies, regional environmental plans, local environmental plans. Problems in planning: equitable distribution of resources. Environment and environmental impact statements. Planning law and administration. Future of cities.

36.4012 Environmental Planning S2 L2

36.4014 Environmental Planning S2 L2T2

The aim of this subject is to provide the student with an understanding of the objectives of environmental planning and how the system operates with particular reference to New South Wales. The nature of planning philosophy, environmental law and administrative structures are the core aspects of the course. Within this framework specific areas of concern are introduced and discussed – the central business district of cities, housing and equity, land-use and transport interaction, urban design, location theory, and urban and rural conservation.

As planning is a temporal concept, historical, contemporary, and future themes are built into the subject. At the completion of the program the student should understand the environmental planning process and the individual's rights under it.

This full subject is also offered as a half elective consisting of the lecture sessions only. Assessment is by written assignment, tutorial paper, and class participation. The assignment is based on the lecture material, and students are also required to prepare a wirtten paper for tutorial discussion.

Landscape Architecture

37.0001 Introduction to Landscape Architecture S1 L1 Prerequisite: Nil.

Introduction to the discipline of landscape architecture. Outline of the program and its major stands of planning; design and implementation; natural and social sciences; skills (graphic, verbal and written communication). Brief exposure to examples of landscape planning, design and implementation throughout history, both overeseas and in Australia. Issues and opportunities for landscape architects.

37.0014 Introduction to Computer Applications S2 L1T1 Prerequisite: Nil.

The use of computers by landscape architects. Necessary knowledge to make full use of opportunities that the computer can provide including time sharing, batch processing and the use of graphic output. Components of the computer and their interrelationships, data processing, file management, use of library programs, interpretation of results, basic programming.

37.1112 Horticulture for Landscape Architects S2 L1T1 Prerequisite: 43.202.

General horticultural study of propagation techniques, current nursery practice, impact of weeds, plant diseases, planting techniques and forestry practice. Plant collecting and identification.

37.1302 Landscape Analysis

S2 L2T4

Prerequisites: 27.818, 43.202.

Observation and interpretation of both physical and biological environment and their interrelationships. Landscape character through sensory inputs and prehistory. Fundamental characteristics of biological systems, with emphasis on relationships with the physical environment, particularly geology, soils. Survey of Australian plant communities and associated fauna with particular emphasis on the Sydney Region. Recording and presentation techniques associated with landscape surveys. field excursions.

37.1413 History of Landscape Architecture S1 L2

Prerequisite: Nil.

Chronological development of cultural landscapes described by the investigation of philosophical, aesthetic and social aspects of Eastern and Western cultures with an emphasis on the Australian context. Changing attitudes to nature as reflected in land uses. The development of garden design and landscape architecture.

37.1513 Environmental Sociology for Landscape Architects S1 L1T1

Prerequisite: Nil.

Perception of human requirements through behavioural studies, including territoriality and personal space identity. The effect of environmental changes on people. Sociological techniques for understanding user requirements. Post design evaluation. Application of simple statistical methods.

37.1616 Land Systems and Management S2 L1T1

Prerequisite: 37.5505.

An investigation of resources and their management in relation to a range of land use types with an emphasis on an ecological approach. Management of both natural and cultural tandscapes. Studies of specific examples and the effects of human impacts. Methods of conservation and rehabilitation considered. Field excursions.

37.3005 Research Methods S1 L1

Prerequisite: Nil.

Investigation of various research methods with application to study in landscape architercture. Development of the critical logical and stylistic skills involved in researching, writing and presenting essays, thesis, articles, papers and reports. Selection of topic for study in the subject 37.3007 Landscape Thesis.

37.3007 Landscape Thesis

Prerequisites: 37.3005, 37.503.

A specialized individual study under staff supervision enabling the student to gain knowledge in some aspect of landscape architecture which has not been covered, or to extend the student's knowledge and/or understanding in one which has. As such the thesis is essentially evidence of this individual study. The study does not require original experimental research for the purpose of discovering new facts or the testing of an hypothesis. Neither is it an essay permitting the student's unsupported opinion. The topic of the thesis must be submitted for approval of the Professor of Landscape Architecture at the close of Year 3. The completed thesis must be submitted for examination at the close of Year 4.

37.3101	Landscape Graphics 1	S1 L2T2
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Prerequisite: Nil.

Basic techniques of creative drawing with emphasis upon two dimensional graphics, use of pencil techniques. Assorted point media. Basic technical drawing with emphasis on two-dimensioanl graphics. Pencil techniques, drafting conventions, layouts, lettering, instruments and scale presentation. The principles and application of orthographic, axonometric and isometric projection. Development of plan and section drawing techniques.

37.3202 Landscape Graphics 2	S2 L2T2
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Prerequisite: 37.3101.

Advanced techniques of creative drawing with emphasis on various media. Advanced technical drawing techniques including the use of various media, with emphasis on three-dimensional graphic concepts. Investigation of the basic principles of perspective theory. Application of perspective drawing to landscape architectural works, including landforms and other elements.

37.5014 Planting Design	S2 L1T1
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Prerequisite: 37.1112.

Plants as design elements; management of plant designs. Plant designs for specific sites; water plants, indoor plants, roof gardens, industrial and reclaimed sites. Observation of existing landscape schemes. Documentation of plant design.

37.5101 Design 1

Prerequisite: Nil.

Basic design theory to initiate a language of design elements. Investigation into materials and methods of expression used in art and design. Practical exercises in communication of ideas. Sketching in the field; studio work.

37.5202 Design 2

Prerequisite: 37.5101.

Design theory and processes including introduction of notions of spatial design and composition with reference to historical examples. Development of personal expression in art and design through exercises in selected media. Concepts of naturalism and abstraction. Sketching in the field; studio work. Site appreciation.

37.5313 Landscape Design 1 S1 L2T8

Prerequisite: 37.5202.

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Basic Design. The interpretation of aesthetic values of sites and environments used in design exercises. Freehand drawing in the field. Applied Design. Logical design process applied to simple landscape design exercises with emphasis on site survey, site analysis and functional analysis. Applied graphic presentation techniques for site survey and analytical drawings.

37.5414 Landscape Design 2 S2 L2T8

Prerequisite: 37.5313.

Basic Design. Aesthetic appreciation of chosen environments both urban and natural. Graphic communication using selected media. Seminars on design philosophy. Applied Design. An understanding of materials and construction as applied to a range of medium scaled projects with an emphasis on practical relationships bhetween design, use of appropriate materials and construction detailing.

37.5505 Landscape Design 3 S1 L2T6

Prerequisites: 37.3404, 37.5404, 37.7404.

More advanced design exercises within the context of both natural and urban environments. Emphasis is on gaining a knowledge of site planning with specific reference to sites located within the geological areas of the Sydney Region. Projects are of a large scale and further emphasis is directed towards consideration of appropriate environmental management and realisation of required maintenance ends in relation to design solutions.

37.5606 Landscape Design 4

S2 L2 T6

S1 L1T2

S2 L1T2

Prerequieite: 37.5505.

Experience of dealing with medium to large scale projects of specific land uses such as schools and residential sub-divisions, in which research is encouraged to assess environmental impacts, both physical and social. Emphasis on practical solutions and the preparation of contract documents including preliminary costing of design proposals.

37.502 Landscape Design 5 S1 L1T2

Prerequisites: 37.5606, 37.9206.

Investigation of the relationship between design and planning issues through a major Regional Study. Preparation of a masterplan for a selected site to be used in conjunction with Landscape Design 6. Discussions on contemporary environmental planning, design and management issues.

Architecture

37.503 Landscape Design 6

S2 L2T10

S2 L2

Prerequisites: 37.502, 37.9206. Four months approved practical experience.

Students are called upon to employ all the knowledge, skill and understanding they have gained in previous years. The graduating design project follows from 37.502 Landscape Design 5 and involves sketch design, detail design development and construction documentation. Emphasis on professional standard. Graduating project is related to the natural, urban or rural environment.

37.501 Urban Landscape Design S1 L1T5

An exploration of the relationships within the fabric of the urban environment including concepts of city functions and the analysis of disparate parts of the city with physical design being the primary focus. Context and place, history and theory are considered as well as analytical techniques. Design studios, lectures and seminars.

37.7113 Professional Practice A S1 L2

Prerequisites: 37.5104, 37.7205.

The Landscape Architect's responsibilities in Law. A study of the development of Law in Australia. Project procedure, the stages of a capital development project. Cost planning and feasibility studies. Construction contracts, including tender documentation, subcontract conditions and subconsultative responsibilities. The specification, its function and styles. A comparative analysis of various standard contract forms.

37.7203 Landscape Materials and Construction S1 L1T2

Materials science: the relationship between the properties and structure of materials. The derivation, conversion or production of materials commonly used in landscape construction. Investigation of structures: elements and systems, loads and structural requirements and basic structural form.

37.7114 Professional Practice B

Prerequisite: 37.7113.

Preparation of contract documentation, including technical sections. Contract administration and project supervision, the role of the consultant. Tender evaluation, award of contracts, site inspections, variation procedure, claims and certificate issue and general site administration. Practical completion, and final certification. The rights and duties of the principal and contractor, including the relationship with consultants. Post-contract activities, maintenance manuals, appraisal of design and construction, and retention of records.

37.7204 Landscape Technology A S1 L1T2

Prerequisite: 37.7203.

Site surveying and mapping techniques. Land surface manipulation including contour planning and basic earthworks. Field work exercises.

37.7205 Landscape Technology B S2 L1 T2

Prerequisite: 37.7204.

Landscape construction methods, including documentation of grading, drainage, earthworks and structures. Application of materials in detailed design development.

37.7515 Landscape Engineering A

S1 L2T1

S2 L2

S2 L2

Prerequisite: 37.7205.

Design and construction techniques related to basic civil works, including earthworks, hydraulics, municipal services, urban and rural drainage. Interpretation of engineering design and development documents. Projects incorporating detail resolution of civil works.

37.7616 Landscape Engineering BS2 L1T2

Prerequisite: 37.7515.

Design and construction techniques related to transport planning and route alignment. Overview of the principles of transportation systems including railway permanent ways, airports, ports and harbours.

37.9105 Landscape Planning 1 S1 L2T2

Prerequisite: 37.1504.

Basic methods and techniques of resource data collection, analysis and valuation. History of landscape planning in Australia and overseas with reference to pioneering case studies. Projects include the use of maps, air photos and simple computer programs.

37.9206 Landscape	Planning 2	S2 L2T2
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Prerequisite: 37.9105.

Classification of planning methods. Study of complex methods and techniques used in recent landscape planning models. Development of land use suitability models for recreation, residential, industry, commercial, grazing, agriculture, forestry and conservation. Projects include the use of remote sensing techniques and advanced computer programs.

Landscape Electives for Students of Architecture and Related Disciplines

The following landscape electives require attendance of two hours per week over a period of 14 weeks. They are offered subject to demand and availability of resources, consequently students are advised to contact the School before finalizing their program. Credit point values and prerequisites specifically refer to students of Architecture enrolled in courses 3275, 3280 or 3295.

37.100 Site Planning Elective

2 credit points. Prerequisite: 52 credit points.

Not offered in 1989.

Recognition of natural processes and factors in site analysis. Opportunities and constraints with respect to potential development. Development of a logical approach to site planning.

37.300 Planting Design Elective

2 credit points. Prerequisite: 104 credit points.

The selection and use of plant materials within the built environment with particular reference to visual and ecological considerations.

37.400 Urban Landscape Elective

2 credit points, Prerequisite: 104 credit points.

Not offered in 1989.

The treatment of spaces between and upon buildings 'Hard' and 'soft' landscape treatments. Functional uses of open space within the built environment and the design of street furniture.

37.500 Recreation Planning Elective S1 L2

2 credit points. Prerequisite: 156 credit points.

Not offered in 1989.

Various recommended provisions for open space allocation for recreation are examined and classified in terms of contemporary needs. Specific requirements of a range of recreation facilities are studied in detail and successful Australian and overseas examples evaluated.

Subject Offered to Other Schools

37.224 Landscape Architecture

S2 L2

S1 L2T3

S1L2

Landscape and planting within the built environment with particular reference to functional, ecological and aesthetic considerations; the treatment of spaces between buildings and in road reservations; hard and soft landscape treatments; establishment and maintenance cost.

Geography

27.818 Australian Environment and Human Response S1 L2T2

Prerequisite: Nil. Excluded: 27.010, 27.030, 27.801, 27.295, 27.111.

Themes selected from the mechanisms of the physical environment with particular reference to Australia and the Sydney region. Landscape as an expression of dynamic response: land capability and land use problems, humans as agents of landscape change. Energy and Atmospheric Circulation over Australia: local weather patterns and weather extremes, human responses to fire, flood, and drought hazards. Development and Stability of Hillslopes: soil, vegetation and drainage relationships, problems of soil erosion. Coastal Ecosystems: problems of demand, risk and management in the coastal zone. Lectures are supplemented with tutorials, workshops, and field tutorials. Students are required to provide some materials for workshop exercises and to contribute to the cost of field tutorials.

Botany

43.202 Botany for Landscape Architects

Prerequisite: Nil.

How green plants function. What is known about how plants grow. Specific topics include: what happens in a plant meristem, hormone interactions and growth, transport systems in plants, water uptake and use, mineral nutrition, the role of light and leaves in photosynthesis, control of flowering process, germination and senescence. Emphasis is on the interaction between plant sturcture and function.

Mines

25.5222 Geology for Landscape Architecture S1 L1 Prerequisite: Nil.

Minerals and rocks. Igneous, sedimentary and metamorphic rocks; their origin and their relationship with the landscape. Geological structures and their graphic representation. Interpretation of geological maps and sections.

Graduate Study

Faculty of Architecture Graduate Enrolment Procedures

All students enrolling in graduate courses should obtain a copy of the free booklet *Enrolment Procedures 1999* available from School Offices and the Admissions Office. This booklet provides detailed information on enrolment procedures and fees, enrolment timetables by faculty and course, enrolment in miscellaneous subjects, locations and hours of cashlers and late enrolment.

Higher Degrees – Research

Following the award of a first degree in Architecture, Building, Landscape Architecture or Town Planning of the University of New South Wales or other approved university, graduates may apply to register for study leading to the award of the degree of Master of Architecture, Master of Building, Master of Landscape Architecture, or Master of Town Planning. Facilities are also available in each school for research towards the degree see Conditions for the Award of Higher Degrees later in this handbook or write to the Dean.

Summary of the Conditions for the Award of a Masters Degree

1. Every candidate for the degree shall be required to carry out a program of advanced study, to take such examinations, and to perform such other work as may be prescribed by the Faculty. The program shall include the preparation and submission of a thesis embodying the results of an original investigation or design relative to architecture, building, industrial design, landscape architecture or town planning. The candidate may also submit any work published, whether or not such work is related to the thesis.

2. No candidate shall be considered for the award of the degree until the lapse of four complete sessions from the date from which the registration becomes effective, save that in the case of a candidate who has obtained the degree of Bachelor at Honours level or who has had previous research experience, this period may, with the approval of the Faculty, be reduced by not more than two sessions.

3. For each candidate there shall be two examiners appointed by the Academic Board, one of whom shall, if possible, be an external examiner.

4. Every candidate shall submit three copies of the thesis as specified in the University Calendar, and it shall be understood that the University retains three copies of the thesis and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act 1968, the University may issue the thesis in whole or in part in photostat or microfilm or other copying medium.

Graduate Courses

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

- 1. Master of Science (Acoustics
- 2. Master of Project Management
- 3. Master of Science (Industrial Design)
- 4. Master of the Built Environment (Building Conservation)
- 5. Master of Architectural Design
- 6. Master of Industrial Design
- 7. Master of Construction Management
- 8. Master of Landscape Planning
- 9. Graduate Diploma in Landscape Planning

Duration

Each course is programmed over two years of part-time study in the University, involving attendance on two or three evenings per week. Subjects in the Master of Project Management course are normally timetabled on two evenings and one afternoon per week.

Graduate School of the Built Environment

Graduate Studies in Acoustics, Building Conservation, Industrial Design and Urban Design

Head of School Professor J.C. Haskell

The aim of the Graduate School is to provide, within the Faculty of Architecture, a centre to promote the inter-disciplinary study of the built environment through research, teaching, publications and expert advice to appropriate authorities, organizations and professions in Australia and Southeast Asia, at a high level of academic excellence, critical objectivity and perceptive innovation.

The School undertakes a range of activities within the area of acoustics, architectural history, building consdervation, health facilities design, industrial design, urban design and continuing education.

Research

The School currently has active research units working under its control in most of the areas listed above. For more detailed information concerning current research and facilities, contact the Head of School.

Research Degrees

The School makes available to research students a resource facility covering a wide spectrum of relevant disciplines in which students can follow a largely self-determined program of study, research and practice.

The School tailors individual programs to student needs at both Masters and Doctoral levels. In doing so it is able to call on its own research units and on many resources from within every faculty of the University.

Research may be undertaken towards the award of Doctor of Philosophy (PhD), Master of Architecture (MArch) and Master of the Built Environment (MBEnv).

Eligibility for Enrolment

The school welcomes professional level graduates in any discipline whose further studies are to be in the area of the built environment and does not restrict its intake to graduates in architecture, building, town planning, landscape architecture or industrial design.

1120 Doctor of Philosophy

Doctor of Philosophy PhD

This is a research degree requiring an original and significant contribution to knowledge in an approved subject.

1121 Doctor of Philosophy

Doctor of Philosophy PhD

This degree provides for research work of a specialized and restricted nature. Students individually follow a self-determined program of study and research.

In addition to the general conditions governing the award of the degree of Doctor of Philosophy, the School offers an alternative study program to students already holding the degree of Master in an appropriate discipline.

Course Structure

The program is normally taken over four full-time sessions (two academic years). In special circumstances where the research project can be properly served and with the concurrence of the Academic Board, some of this time may be fulfilled on an equivalent part-time basis, but in no case will students spend less than two consecutive sessions full-time in the course.

The program consists of:

1. A compulsory core containing: (1) 39.301G New Development Studies

2 credit points

- (2) 39.302G Research Studies
- (3) 39.303G Directed Studies 3 credit points

(4) Preparation and structuring of a doctoral research topic

2 credit points

This part must normally be completed by the end of the first session of studies.

2. Electives selected from a wide range of relevant subjects offered by faculties throughout the University (12 credit points).

Elective studies commence at the beginning of the first session of studies and must normally be completed by the end of the second session of studies.

3. Supervised research of a doctoral research topic approved by the Higher Degree Committee of the Faculty of Architecture and the preparation of a thesis. This work can be undertaken only on satisfactory completion of Part 1.

Student progression is evaluated at the end of first session (preliminary evaluation) and at the end of second session (confirmation evaluation). The thesis examination and its procedures conform to the normal University examination practice with regard to doctoral theses.

2201 Master of Architecture

Master of Architecture MArch

Graduates holding the degree of Bachelor of Architecture of the University of New South Wales or other approved university may apply to register for the degree of Master of Architecture by research. General conditions governing registration as a candidate for this degree are given later in this handbook.

2240

Master of the Built Environment

Master of the Built Environment MBEnv

This degree provides for research work of an interdisciplinary nature relevant to the built environment. Graduates holding a minimum four year degree of Bachelor of the University of New South Wales or other approved university in any appropriate discipline may apply to register for the degree of Master of the Built Environment by research. General conditions governing registration for this degree are given later in this handbook.

8100 Master of Science (Acoustics) Course

Master of Science (Acoustics) MSc(Acoustics)

This course provides for graduate study and research in several important aspects of acoustics, such as community noise control, noise control in industry and in buildings, auditorium design and physical acoustics. It is designed primarily for graduates in engineering, architecture, science or building who wish to specialize in acoustics and it is suitable for those who wish to find employment with noise control authorities, or in industry, to practise as consultants, to undertake research or to become part of a multi-disciplinary team in an architectural or engineering practice.

Admission Requirements

General conditions governing registration as a candidate for the degree of Master of Science (Acoustics) are given in the Calendar, but the attention of applicants is directed to the following admission requirements.

An applicant for registration for the degree course of Master of Science (Acoustics) shall have been admitted to the degree of Bachelor of Science (Architecture) or Bachelor of Science (Design Studies) at Honours level, Bachelor of Architecture, Bachelor of Building, Bachelor of Science at Honours level, or Bachelor of Engineering at the University of New South Wales, or an equivalent degree from another university or tertiary institution. In exceptional cases applicants may be registered as candidates for the degree if they submit evidence of such academic and professional attainment as may be approved by the Higher Degree Committee of the Faculty of Architecture.

Notwithstanding any other provisions of these conditions the Higher Degree Committee of the Faculty of Architecture may require an applicant to demonstrate fitness for registration by carrying out such work and sitting for such examinations as the Higher Degree Committee of the Faculty of Architecture may determine. Candidates with BSc(Arch) or BSc(DesStud) at Honours level, BArch or BBuild degrees are strongly advised to take refresher courses in mathematics and physics before entry to the course. Candidates with BSc at Honours level or BE degrees who wish to specialize in noise control in buildings and auditorium acoustics are also strongly advised to study an introductory construction subject.

Course Structure

The course may be taken over two full-time or four part-time sessions, and a student must obtain 34 credit points to graduate. 15 credit points must be obtained by satisfactorily completing a graduate project in an approved topic. 8 credit points must be obtained by completing four compulsory core subjects and the remaining 11 credit points are obtained by the satisfactory completion of formal subjects which may be chosen to emphasize a particular field of acoustics. The subjects offered in any session will depend on student numbers and interests.

Course Subjects	Credit Pointe
Session 1 – Core	
1.927G Acoustic Theory	2
39.651G Mechanical Shock and Vibration	2
39.901G Acoustic Measuring Systems	
and Electroacoustics	2
39.993G The Ear, Hearing and	
Hearing Conservation	2

Architecture

Session 2 - Elective		
39.995G Communit	y Noise	4
39.998G Noise con	trol in Buildings	4
Session 3 Elective		
39.652G Noise Cor	itrol in Industry	4
39.902g Advanced	Physical Acoustics	4
39.997G Auditoriun	n Acoustics	3
Session 3 – Compul	sory	
39.994G Graduate	Project A	5
(Prerequis	ite 10 credit points)	-
Session 4 – Compul	sory	
39.997G Graduate	Project B	
(Prerequis	ite 39.994G)	10
	-	

In addition to these subjects, a total of up to 8 credit points may be obtained by completing other subjects offered by the University of New South Wales subject to the approval of the Head of Graduate School of the Built Environment.

8130 Master of the Built Environment (Building Conservation) Course

Master of the Built Environment (Building Conservation) MBEnv

This course consists of graduate work in the major areas of building conservation. It is designed for graduates who wish to specialize in the conservation of the built environment by working actively in the preservation, restoration, reconstruction, adaptation or related treatments of existing structures.

Admission Requirements

The conditions governing registration as a candidate for this course are given later in this handbook. In summary, admission is open to applicants who have completed at least a four year full-time university course in an appropriate area of an approved discipline.

In certain cases it may be necessary for applicants to complete a program of preparatory subjects set out by the Higher Degree Committee of the Faculty of Architecture, whose decision is influenced by the education and experience of each applicant.

Course Structure

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

The course comprises 36 credit points, each credit point representing class contact of approximately 14 hours.

Full-time study normally requires an attendance of 18 hours per week while part-time study normally requires attendance of an average of 9 hours per week for the duration of the course. Most of the work is done in the School, but approved practical experience forms an important component of the course. The program is so arranged that eminent visitors as well as guest lecturers may participate.

Normally, subjects are timetabled on one afternoon and evening, and one other evening each week. In addition to timetabled commitments, students may occasionally be required to attend for site visits and building inspections.

The requirements for this course include a period of at least eight weeks of approved practical experience.

Course Subject Areas

	Contact Hours	Credit Points
Contextual Studies	14	1
Architectural History	42	3
Conservation Management	42	3
Analysis and Documentation	84	6
Conservation Technology	210	15
Graduate Project	112	8
-	504	36

Typical Pattern of Full-time Study

		Hrs	Credite
Session	1		
39.101G	Contextual Studies	14	1
39.102G	Architectural History	42	3
39.104G	Analysis and Documentation A	56	4
39.105G	Analysis and Documentation B	28	2
39.106G	Conservation Technology A	28	2
39.108G	Conservation Technology C	56	4
39.110G	Graduate Project	56	_
-	······································	252	14
			•••
Session 2	2		
39.103G	Conservation Management	42	3
39.107G	Conservation Technology B	70	5
39.109G	Conservation Technology D	56	Ă
39 110G	Graduate Project	56	-
00.1100	Chaddate i roject	11	-
	_	Upon	-
	Cor	npletion	8
		252	22

Typical Pattern of Part-time Study

	Hrs	Credits
Session 1		
39.101G Contextual Studies	14	1
39.102G Architectural History	42	3
39.104G Analysis Documentation A	56	4
39.106G Conservation Technology A	28	2
	140	10
Session 2		
39.105G Analysis and Documentation B	28	2
39.107G Conservation Technology B	70	5
39.110G Graduate Project	28	-
•	126	7

Session 3	1		
39.108G	Conservation Technology C	56	4
39.110G	Graduate Project	<u>56</u> 112	= 4
Session 4	1		
39.103G	Conservation Management	42	3
39.109G	Conservation Technology D	56	4
39.110 G	Graduate Project	28	-
		Upon	
		completion	8
		126	15

8145 Master of Industrial Design Course

Master of Industrial Design MID

8146

Master of Science (Industrial Design) Course

Master of Science (Industrial Design) MSc(IndDes)

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

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

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

Admission Requirements

The conditions governing registration as a candidate for the MSc(IndDes) degree course are given later in this handbook: see below under Conditions for the Award of Higher Degrees. In summary, admission is open to applicants who have been admitted to an appropriate degree of at least four years' full-time duration, or its equivalent. For the MID degree course, admission is restricted to applicants who have been admitted

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

Course Structure

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

The MID degree course comprises 38 credit points. The MSc(IndDes) degree course comprises 36-38 credit points. One credit point is normally equivalent to one hour per week for one session. Full-time study normally requires an attendance of approximately 18 hours per week, while part-time study normally requires approximately 9 hours per week for the duration of the course.

The project work for both degree courses, part and full-time, is run simultaneously and is staffed according to the requirements of each project.

Most of the work is undertaken within the School, but industrial visits and experience forms an important component of the course.

The program is so arranged that eminent visitors as well as guest lecturers and designers may participate.

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

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

Course Subjects

		Credit Points	Usual Secolori
Commor	n Core		
39.501G	Industrial Design Studies	2	S1 S2
39.511G	Ergonomics for Industrial		
	Designers	2	S2
39.521G	Business Studies for		
	Industrial Designers	2	S1
39.531G	Manufacturing Technology	2	S1
39.541G	Industrial Experience*	2	•
	•	10	

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MID only

39.502G 39.512G 39.522G	Graduate Project (MID) Design Theory Industrial Design Approved Electives**	14 4 <u>6</u> 28	S1 S2 S1 S2 S1
MSc(Ind	Des) only		
39. 503G	Design Media and		
	Communication	2	S1
39.513G	Visual Thinking***	2	S1
39.523G	Industrial Design A	6	S1
39.533G	Industrial Design B	6	S1 S2
39.54 3G	Graduate Project (MSc(IndDes))	8	S2
	Approved electives**	_4	
		28	

* 4 week block during recesses. Part-time students in approved employment are exempt. ** Approved electives may be taken from subjects offered in other schools of the

University of New South Wales, subject to the approval of the Heads of the Graduate School of the Built Environment and the school offering the subject.

MID electives may be chosen to increase specialist knowledge relevant to the student's theory studies, project report or planned career activities. At least six credits must be taken of which up to four credits may be taken in undergraduate units at half their point value.

MSc(IndDes) electives are taken in approved subjects directly related to the development of the student's industrial delsgn knowledge and skill. At lest four credits must be taken of which up to two credits may be taken in undergraduate units at half their point value,

**** Graduates of visually oriented courses, eg architecture, are normally exempt.

Depending upon course requirements, the availability of University staff and Faculty resources, it may be possible to substitute some existing graduate or undergraduate courses in other faculties for certain subjects of the course. This development would be subject to the approval of the Higher Degree Committee of the Faculty of Architecture and the Heads of the schools offering the courses. Where the credit point of subjects is increased by substitution of subjects from other schools, the requirement for the stated number of credits in elective subjects is correspondingly reduced.

Typical Full-time Study Patterns for MID and MSc(IndDes)

Llauna nas wask

17

20

		nours per	WCCK
Common	Core	S1	S2
39.501G	Industrial Design Studies	1	1
39.511G	Ergonomics for Industrial		-
	Designers		2
39.521G	Business Studies for Industrial		
	Designers	2	
39.531G	Manufacturing Technology	2	
39.54 1G	Industrial Experience*		
MID only	۰.,		
39.502G	Graduate Project (MID)	3**	12**
39.512G	Design Theory	1	3
39.522G	Industrial Design	4	
	Approved Electives	4	2

	Hours p	er week
MSc(IndDes) only	S1	S2
39.503G Design Media and		
Communication	2	
39.513G Visual Thinking***	2	
39.523G Industrial Design A	6	
39.533G Industrial Design B	2	4
39.543G Graduate Project (MSc(IndDes)))	8**
Approved Electives		4
Total Hours per week MSc(indDes)	27	20

Typical Part-time Study Patterns for MID and MSc(IndDes)

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Common Core		S1	S2
39.501G Industrial Desig	n Studies	1	1
Designers	industrial		2
39.531G Manufacturing 7	Technology	2	-
39.541G Industrial Exper	ience *		
		S 3	S4
39.512G Business Studie	s for Industrial		
Designers		2	
39.541G Industrial Experi	ience*		
MID only		S 1	S2
39.502G Graduate Project	t (MID)	••	3**
39.512G Design Theory	· ·		2
39.522G Industrial Desig	n	4	
Approved Electi	ves	Ę	-2
Total nours per week Mit		1	10
		S 3	S4
39.502G Graduate Project	t (MID)	3**	9**
39.512G Design Theory	• •	2	
Approved Electi	ves	_3	_1
Total hours per week MID		10	10
MSc(indDes) only		S 1	S 2
39.503G Design Media a	nd	••	-
Communication		2	
39.513G Visual Thinking*	**	2	
39.523G Industrial Desig	n A	-	6
Approved electi	V98	1	_1
Total hours per week MSc	(IndDes)	8	10
MSc(indDes) only		S 3	S4
39.533G Industrial Design	nB	6	
39.543G Graduate Project	MSc(IndDes)		8**
Approved Electi	Ves	1	1
Total hours per week MSc	(IndDes)	9	9

* A four week period during the recess. Part-time students in approved employment are normally exempt. ** Nominal hours.

*** Graduates of visually oriented courses, eg architecture, are normally exempt.

Ten hours per week MID

School of Architecture

The School of Architecture offers facilities for research and welcomes enquiries from students who wish to pursue programs for the degrees of Master of Architecture (MArch) or Doctor ofPhilosophy (PhD). Prospective students should consult the Head of School to discuss their research interests prior to making a formal application.

The School also offers a course leading to the award of Master of Architectural Design (MArchDes). Details of the entrance requirements and course content are given later in this handbook.

1130 Doctor of Philosophy

Doctor of Philosophy PhD

This is a research degree requiring an original and significant contribution to knowledge in an approved subject.

2200 Master of Architecture

Master of Architecture MArch

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

8140 Master of Architectural Design Course

Master of Architectural Design MArchDes

The course is centred on the essential architectural activity, the conceptual design-synthesis of buildings to masterly accomplishment.

It aims at an embracing and thorough synthesis of all relevant influences arising from the inanimate (physical) and animate (human) context into which the building is to be placed. These subjects establish the nature of the course as a whole: they involve theory, research and studio practice crystallized into a *project* which is assessed at the conclusion of each semester.

The central project is supported by elective subjects.

Admission Requirements

The general conditions governing registration as a candidate for the degree of Master of Architectural Design are given later in this handbook but the attention of intending applicants is directed to the following specific requirements: 1. The standard of admission is the BArch degree at Honours level of the University of New South Wales or any other approved university followed by at least one year of professional practice.

 Graduates with a BArch degree at Pass level may be admitted only on the recommendation of the Head of School and the confirmation of the Faculty.

3. In special circumstances a person may be permitted to register as a candidate for the degree if evidence is submitted of such academic and professional attainments as may be approved by the Faculty on the recommendation of its Higher Degree Committee.

4. Admission is selective for the places available based on the academic record of applicants and the quality and extent of their professional practice.

Course Structure

The course is structured on a two-semester credit-point system. It is offered in two full-time semesters – (each one of a duration of 14 weeks), to be taken either in a single academic year or in two consecutive academic years – the first semester's work in the first session of Year 1, the second semester's work in the second session of Year 2.

Full-time study is the normal pattern for this type of course; however, in particular circumstances the first full-time semester may be replaced by two part-time semesters with the approval of the Head of School.

Each semester's work is equivalent to a minimum of 15 credit points totalling to a minimum of 30 credits for the award of the degree. Each credit point is approximately equivalent to 1 hour/week/semester attendance of the course.

Each student's program is to consist of the compulsory core subject equivalent to 67 per cent of the total credit points in the course, and of a selection of elective subjects equivalent to the other 33 per cent.

Course Program

6 15	11 15 30
Credit point	
9	
11	
2	
2	
2	
2	
2	
2	
. 2	
	11 9 9 6 5 Credit point 9 11 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

Credit points

Subject to approval of the appropriate Head of School and the Head of School Architecture, students may enrol in other graduate subjects offered by the Faculty: subject to the same conditions, students may also enrol in undergraduate subjects offered in the University but only to the maximum contributing total of 4 credit units calculated at half their value as an undergraduate subject.

2206

Master of Science (by Research)

Master of Science MSc

The conditions governing the award of the degree of Master of Science by research are set out in the next section.

School of Building

The School of Building has an active program of research and welcomes enquiries from students who wish to pursue programs for the degrees of Master of Building (MBuild) or Doctor of Philosophy (PhD). Graduates enrolled in these courses need not necessarily be building graduates. Prospective students should consult the Head of School to discuss their research interests prior to making a formal application.

The School also offers each year a series of short non-credit midcareer courses* which are designed to provide practical on-going education for experienced members of the building industry.

For further information, contact Dr. J. Hutcheson, Continuing Education Co-ordinator in the School of Building.

1140 Doctor of Philosophy

Doctor of Philosophy PhD

This is a research degree requiring an original and significant contribution to knowledge in an approved subject.

2210 Master of Building

Master of Building MBuild

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

8116 Master of Project Management Course

Master of Project Management MProjMgt

Course Co-ordinator Mr. Graham Levido

This four-session course has been designed to provide opportunities for advanced study in project management and building economics. It allows for study in two interrelated areas:

1. Planning and management aspects of a design or construction organization, including programming, evaluation, costing, performance feedback, feasibility and management of properties.

2. Operations and control aspects of a design or construction organization, concentrating on estimating and cost analysis, contract or design administration and building economics.

The course aims at attracting the qualified practitioner who wishes to widen his/her knowledge and understanding of construction planning, operation and economics related to project management.

Admission Requirements

The general conditions governing registration as a candidate for the degree Master of Project Management are given later in this handbook but the attention of intending applicants is directed to the following specific requirements:

1. Applicants will have been admitted to the degree of Bachelor of Architecture or Bachelor of Building in the University of New South Wales or an equivalent degree in another approved university and have appropriate industrial experience.

2. Graduates with a Bachelor of Architecture or Engineering or other four year degree, who have appropriate experience in building may be admitted to the course depending on the individual case.

3. Eligible applicants may be required to complete a program of preparatory or concurrent study set out by the Head of the School of Building whose decision will be influenced by the education and experience of each applicant.

Graduate experience and involvement in the building industry is considered an advantage in the selection of candidates.

Course Structure

The Master of Project Management is a formal four session part time degree course comprising 12 subjects. The subject program comprises studies in management, computations, building economics, operations planning, contract law and documentation. A student must successfully complete all the subjects in one session before progressing to the next session. Students with a grade average of Credit or better in their course may choose to write a Project Report to qualify for the degree with honours.

Course Program

Subjects are offered on a four-session cycle. Subjects are normally timetabled on two evenings and one afternoon per

week. Except in exceptional circumstances, a student is required to be concurrently enrolled in all subjects in a given session to allow for syllabus integration between subjects.

Session One

35.101G Economics and Finance 35.102G Management Framework 35.103G Computers Management

Session Two 35.201G Managerial Economics 35.203G Project Planning and Control 35.204G Personnel Management Techniques

Session Three

- 35.301G Project Feasibility
- 35.302G Building Contracts
- 35.303G Management of the Design and Construction Process

Session Four 35.401G Management of Buildings 35.402G Project Applications 35.403G Process Applications

Session Five and Six 35.1000 Project Report (full-time or part-time)

8125 Master of Construction Management

Master of Construction Management MConstMgt

Course Co-ordinator Mr Thomas E. Uher

Construction Management comprises all the modern management methodologies directed at the control of time, cost and quality in the design and construction of buildings and other structures.

This two-session full-time full-fee course has been designed to provide opportunities for advanced study in construction technology, project management and building economics. The course aims at improving proficiency of qualified practitioners in the construction industry to meet present and future challenges.

Admission Requirements and Fees

1. Applicants must hold degrees acceptable to the University of New South Wales in either building, civil engineering, architecture, quantity surveying or equivalent and must have appropriate industrial experience.

2. Applicants may proceed directly into the course, or be required to complete prerequisite or co-requisite programs of reading or study, with assessed assignments.

3. Applicants from non-English speaking countries must supply a certified statement of results in the Test of English as a Foreign Language (TOEFL) or another equivalent recognised test.

4. The tuition fee for 1989 is \$A11,000.

Course Structure

The Master of Construction Management course is a formal one year full-time full-fee degree course comprising two semesters of academic study, up to 7 weeks of industry training and the Research Report. A student must successfully complete all the subjects in the first semester before progressing to the second semester.

Course Program

Session One

- 35.151G Construction Methods and Techniques
- 35.152G Management of Construction Plant
- 35.153G Management of Construction
- 35.154G Economics in Construction
- 35.155G Computers in Construction Management
- 35.156G Advances in Building Materials

Session Two

- 35.251G International Construction Practice 35.252GBuilding Services 35.253G Construction Planning and Control 35.255G Contracts Management and Law 35.256G Cost Planning and Analysis
- 35.257G Quantitative Methods in Management

Other Subjects

35.150G Industry Training 35.250G Research Report

School of Landscape Architecture

The School of Landscape Architecture has an active program of research and advanced study and encourages enquiries from students who wish to pursue graduate education. The degrees Doctor of Philosophy (PhD) and Master of Landscape Architecture are available for those wishing to engage in research. The degrees Master of Landscape Planning (MLP) and Graduate Diploma in Landscape Planning (GradDipLP) are available as course programs. Prospective students should consult the Head of School to discuss their research interests and educational objectives prior to making a formal application.

1160 Doctor of Philosophy

Doctor of Philosophy PhD

This is a research degree requiring an original and significant contribution to knowledge in an approved subject.

2220 Master of Landscape Architecture

Master of Landscape Architecture MLArch

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

8135 Master of Landscape Planning

Master of Landscape Planning MLP

The course offers advanced education and study opportunities for graduate landscape architects, town planners, surveyors, geographers, engineers, and architects in landscape planning.

The intent is to offer students the opportunity to develop an understanding of the complex relationships between natural environments and expanding human population and to acquire the skills needed for planning and management of emerging 'landscapes. Principles and concepts from the natural and social sciences along with techniques and methods of geographic information systems, remote sensing and other technologies are emphasized.

Admission Requirements

A four year degree of appropriate standing in landscape architecture, architecture, town planning, surveying, geography or other approved degree in a relevant area of land management or resource and environmental science or a Graduate Diploma in Landscape Planning is required. A qualifying or concurrent program may be required in some cases.

Course Structure

The course will be offered as a full-time program that can be completed in three sessions. To accommodate the practising practising professionals in the Sydney metropolitan area, the course can also be taken part time and would normally be completed in six sessions or less.

The course is built upon a core of six required subjects totalling 18 credit points. As far as possible, these core subjects are offered between the times of 2 pm and 9 pm on Monday through Friday to accommodate the working professional. Beyond these core requirements students may select from two options. In either case the course requires the completion of 36 credit points. Those students wishing to engage in research would select the Landscape Research Project for 18 credit points. Those not wishing to do research would enrol in 9 more credits of elective subjects and complete a Landscape Project to 9 credit points. Topics for Landscape Research Projects and Landscape Projects will be determined in consultation with academic staff of the school.

Course Program

Core Sub	ojects	Credits	Session
37.504G	Conservation Studies	3	S2 Y2
90.341	Environmental Law	3	S2 Y2
37.901G	Landscape Planning	3	S1 Y1
37.902G	Landscape Planning Methods	3	S2 Y1
37.161G	Land Systems and Managemer	nt 3	S2 Y1
37.904G	Visual Landscape Assessment	3	S1 Y2
Electives	1		
27.644G	Computer Mapping and		
	Data Display	3	
39.106G	Conservation Technology A	3	
39.101G	Contextual Studies	3	
27.672	Geographic Information System	s 3	
29.604	Land Information Systems	3	
27.043G	Remote Sensing Applications	3	
Project			
37.101G	Landscape Project	9	
37.102	Landscape Research Project	18	

5215

Graduate Diploma in Landscape Planning

Graduate Diploma GradDipLP

This course is designed for people who wish to obtain formal qualifications in Landscape Planning through a program in which the emphasis is on completion of subjects. There is no research or independent project requirement.

The intent is as described above for the Master of Landscape Planning course but the program is offered in a more structured setting.

Admission Requirements

A three year degree from an approved unversity and/or qualifications deemed appropriate by the Higher Degree Committee of the Faculty of Architecture is required.

Course Structure

The course is offered as a one year full time, or two year part time program.

Students are required to complete a program totalling at least 30 credit points. The required core subjects comprise 18 of these credit points and the remaining are from electives. One third of the elective credits may be from approved undergraduate subjects. After successful completion of the course the student may elect to transfer into the Master of Landscape Planning course. This would require the completion of two additional core courses and either a Landscape Planning Project or a Landscape Research Project.

Course Program

Core Sub	ojects	Credits	Session
90.341	Environmental Law	3	S2 Y2
37.901G	Landscape Plannind	3	S2 Y1
37.902G	Landscape Planning Methods	3	S1 Y1
37.903G	Landscaspe Planning Project	6	S1/2 Y2
37/904G	Visual Landscape Assessment	3	S1 Y2

Electives

27.644G	Computer Mapping and	
	Data Display	З
39.106G	Conservation Technology A	з
39.101G	Contextual Studies	з
27.672G	Geographic Information Systems	З
29.604G	Land Information Systems	З
37.161G	Land Systems and Management	2
27.043G	Remote Sensing Applications	З

School of Town Planning

1150 Doctor of Philosophy

Doctor of Philosophy PhD

This is a research degree requiring an original and significant contribution to knowledge in an approved subject.

2230 Master of Town Planning (by Research)

Master of Town Planning MTP

The Master of Town Planning degree is a research degree awarded on the basis of a thesis embodying the results of an original investigation. The research is to be undertaken over four sessions, but the period may be reduced in certain circumstances. The conditions governing the award of the degree are set out later in this Handbook.

Professional Recognition

the degree is recognized by the Royal Australian Planning Institute as an academic qualification for corporate membership. The Institute requires that for corporate membership graduates must also have at least one year of practical experience subsequent to graduation

Course Work

Candidates with a primary degree in a subject other than that of Town Planning may be required to complete an additional program of study. The actual program is determined by the Higher Degree Committee of the Faculty of Architecture on the recommendations of the Head of the School of Town Planning. Candidates should contact the Head of the School about the guidelines used in formulating such a program.

Graduate Study

Subject Descriptions

Identification of Subjects by Number

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

Each approved subject of the University is identifiable both by number and by name as this is a check against nomination of subject other than the one intended.

Subject numbers are allocated by the Academic Registrar and the system of allocation is based on the following guidelines:

 The authority offering the subject, normally a School of the University, is indicated by the number before the decimal point.

2. Each subject number is unique and is not used for more than one subject title.

3. Subject numbers may not be re-used with a new subject title within ten years of the prior use.

4. Graduate subjects are indicated by a suffix 'G' to a number with three digits after the decimal point. In other subjects three or four digits are used after the decimal point.

Subjects taught are listed in full in the handbook of the faculty or board of studies responsible for the particular course within which the subjects are taken. Subject descriptions are contained in the appropriate section in the handbooks.

The **identifying numerical prefixes** for each subject authority are set out on the following page.

Servicing Subjects are those taught by a school or department outside its own faculty. Their subject descriptions are published in the handbook of the faculty which originates the subject and are also published in the handbook of the Faculty in which the subject is taught. The following pages contain descriptions for most of the subjects offered for the courses described in this book, the exception being the General Education subjects. For General Education subjects see the **General Studies Handbook** which is available free of charge.

HSC Exam Prerequisites

Subjects which require prerequisites for enrolment in terms of the HSC Examination percentile range, refer to the **1978 and subsequent Examinations.**

Candidates for enrolment who obtained the HSC in previous years or hold other high school matriculation should check with the appropriate school on what matriculation status is required for admission to a subject.

Information Key

The following is the key to the information which may be supplied about each subject:

S1 Session 1, S2 Session 2

F Session 1 plus Session 2, ie full year

S1 or S2 Session 1 or Session 2, ie choice of either session

SS single session, but which session taught is not known at time of publication

CCH class contact hours

L Lecture, followed by hours per week

T Laboratory/Tutorial, followed by hours per week hpw hours per week

C Credit point value

- CR Credit
- **DN** Distinction
- **HD** High Distinction

Architecture

	School, Department etc *Subjects also offered for cou	Faculty urses in this handbook	Page		School, Department etc "Subjects also offered for co	Faculty urses in this handbook	Page
1	School of Physics	Science		41	School of Blochemistry	Biological and	
2	School of Chemistry	Science			-	Behavioural Sciences	
3	School of Chemical Engineering and Industrial	Applied Science		42	School of Applied Bioscience (Biotechnology)	Applied Science	
	Chemistry (New Course)			- 44	School of Microbiology	Biological and	
4	School of Materials	Applied Science			.	Behavioural Sciences	
-	Science and Engineering			45	School of Biological	Biological and	
5	School of Mechanical and	Engineering			Science	Behavioural Sciences	
-	Industrial Engineering	- · ·		46	Faculty of Applied Science	Applied Science	
6	School of Electrical	Engineering		4/	Centre for Safety Science	Engineering	
	Engineering and			48	School of Chemical	Applied Science	
-	Computer Science				Engineering and industrial		
	Almorel Breeseling and	Appred Science		40	Sebeel of Applied	Annilla of Calanaa	
	(Mineral Processing and			49	Biogeneo	Applied Science	
	Extractive metallurgy and			EO	Bloadence Sebeel of Fastish	A-A-	
	Mining Engineering) Sabaal of Chill	C uesta e este es		50	School of English	Arts	
0		Engineering		51	School of Philosophy	Arts	
•	Engineering Sobool of Elbra Solonoo	Applied Colones		52	School of Sociology*	Arts	
9	and Technology	Applied Science		54	School of Bolitical	Arta	
	(Wool and Animal Science)			04	Science	A118	
10	School of Mathematics	Salanaa		55	School of Librarianabin	Professional Studies	
11	School of Architecture	Arabiteeture	63	56	School of Erench	Arte	
12	School of Psychology*	Biological and	03	57	School of Theatre Studies		
	central off sychology	Bebaydoural Solanoos		59	School of Education	Professional Studies	
13	School of Fibre Science	Applied Science		59	Department of Russian		
10	and Technology	Applied Science		00	Studies	7110	
	(Textile Technology)			60	Faculty of Arts	Arts	
14	School of Accounting	Commerce & Economics		61	Department of Music	Arts	
15	School of Economics	Commerce & Economics		62	School of Science and	Arts	
16	School of Health	Professional Studies			Technology Studies		
	Administration			63	School of Social Work	Professional Studies	
17	Faculty of Biological and	Biological and		64	School of German	Arts	
	Behavioural Sciences	Behavioural Sciences			Studies		
18	School of Mechanical and	Engineering		65	School of Spanish and	Arts	
	Industrial Engineering	5 5			Latin American Studies		
	(Industrial Engineering)			66	Subjects Available from		
19	School of Information	Commerce & Economics			Other Universities		
	Systems			67	Faculty of Science	Science	
20	Centre for Petroleum	Applied Science		68	Board of Studies in	Board of Studies in	
	Engineering Studies				Science and	Science and	
21	Department of Industrial	Architecture			Mathematics	Mathematics	
	Arts		33	70	School of Anatomy	Medicine	
25	School of Mines	Applied Science		71	School of Medicine	Medicine	
	(Applied Geology)			72	School of Pathology	Medicine	
26	Centre for Liberal	Liberal and General		73	School of Physiology and	Medicine	
	and General Studies	Studies			Pharmacology		
27	School of Geography	Applied Science		74	School of Surgery	Medicine	
28	School of Marketing	Commerce & Economics		/5	School of Obstetrics and	Medicine	
29	School of Surveying	Engineering		70	Gynaecology Sebeel of Beedletder	MA	
30	School of Industnar Relations and	Commerce & Economics		70	School of Pateonaurics	Medicine	
	Organizational Behaviour			79	School of Medical	Medicine	
21	School of Optometry	Salanaa		/0	Education	MOGICE 10	
32	Centre for Biomedical	Engineering		70	School of Community	Madicina	
04	Engineering	Cilginating			Medicine		
34	Faculty of Arts	Arts		80	Faculty of Medicine	Medicine	
35	School of Building	Architecture	83	81	Medicine/Science/	Medicine	
36	School of Town Planning	Architecture	65	•••	Biological		
37	School of Landscope	Architecture			Sciences		
	Architecture		66	85	Australian Graduate	AGSM	
20	Cohool of Annited Dissel				School of Management		
38	/Easd Salance *	Applied Science		90	Faculty of Law*	Law	
				97	Faculty of Engineering	Engineering	
-			1	98	School of Banking	Commerce & Economics	
39	Graduate School of the	Architecture	~~		and Finance		
			66	99	Department of Legal	Commerce & Economics	
40	Academic Board				Studies and Taxation		

Archite	cture		`	
	2			
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11.901G Architectural Synthesis 1

11.902G Architectural Synthesis 2

Theory, research and studio practice, in the form of graduate projects, applied to general architectural themes of high priority in the contemporary context. After thorough theoretical foundation and research analysis the theme is adapted to a specific and concrete situation to achieve an architectural synthesis of all relevant influences arising from the physical and human context.

11.930G Architectural Theory

C2

C9

C11

A general and theoretical approach to synthesis in art and architecture considering sensible and intelligible influences in the context of history and of the present age.

11.931G Ideologies of Modern Architecture C2

A critical and analytical review of the ideologies affecting the developments of and finding expression in the various phases of modern architecture from its beginnings to our present day.

11.932G Architectural Impact Studies C2

Examination of a number of selected buildings in the historical and in the contemporary milieu regarding their impact upon the animate and inanimate context of which they become an organic part. *Cultural context:* purpose and meaning of the building, its mode of expression, and effect upon the cultural existing pattern. *Communication context:* the effect of the building upon communication and exchange of experience and goods. *Urban context:* character, style, shape, proportion, material, colour of the building and its effect upon the urban scene. *Microclimatic context:* the effect of the building upon sunshade patterns, wind, heat, noise, air, etc. *Resource context:* the effect of the building upon the material, manpower, energy resources of the community and its overall economic effect.

11.933G Cultural Influences in Civic Design C2

An integrated examination of spiritual, mental (psychological, social, political, legislative, administrative) technological, economic, geographic and climatic influences affecting the character, grouping and relationships of buildings on a civic scale. Case studies in the historical and in the contemporary context.

11.934G Structure and Architectural Space C2

The qualitative role of structural systems in the determination of architectural mass and space. The structure affecting architectural unity, rhythm, variation, etc. The influence of loading patterns and material properties on structural shapes. Structural exhibitionism. Morphological studies of structural systems in nature. The geometrical order of structures. Studies of structural systems in historical and contemporary context with a special emphasis on their effect on architectural space. The design of structural systems for spatial articulation.

11.935G Design for Industrialized Building

Methods of industrialization in the field of building, considered from the general and simple to the specific and complex. Equipment and capital investment needed for equipment, problems of economical return. Standardization and flexibility. Component design in homogeneous and heterogeneous materials for simple and complex applications, Design principles for industrialization. Psychological aspects of acceptance: repetition, monotony and rigidity compared to variation, rhythm and flexibility.

11.936G Resources for Buildings

C2

C2

Sources of information on material, technological manpower and energy resources for building on a regional, national and global scale. Assessment of resources of a given regional and national economy. Infrastructure. Pattern of change and future forecasts. The energy-equivalents of processed building materials, of placed building components, of servicing methods. The energy equivalence and prime cost. Recycling of building components. Energy and resource conservation on a short and long-term basis. The problems of energy and conservation and resource recovery in a given system.

Building

Master of Project Management

35.100G Project Report

Students with a grade average of Credit or better in their course work may choose to write a Project Report to qualify for the degree with honours. This will require a specialized individual study taken under staff supervision, with the objective of allowing the student to expand knowledge in some aspect of building management.

The Project Report may be taken full-time over one session or part-time over two sessions following the satisfactory completion of all course work subjects. As part of the examination of the Project Report, students will be required to make an oral presentation and defence of the subject matter covered in their report.

35.101G Economics and Finance

S1 L2 T1

Economic modelling; a model of the Australian economy; economic targets and instruments; fiscal and monetary policies; the structure of the building industry; productivity and competition; land use theory; the structure of the financial market; sources of finance; costs of finance. Systems for effective management: types of systems and their characteristics. Communication and information systems. The changing environment and practice of management.

35.102G The Management Framework

S1 L2 T1

Definition of management, its functions, authority and responsibility; the manager as administrator, managerial and social scientist, entrepreneur and psychologist. The manager and ethics. Scientific management: theory of organisation and management; the human relations approach. Organisational effectiveness: objectives, strategies, policies and measures of performance. The functions of management: planning, organising and control. The decision making process – decision theory, decision trees.

35.103G Computers in Management S1 L2T1

The Nature of Information: qualitative v quantitative; numbers v text v graphics; precise v indicative. Useful application packages: spreadsheet programs; data base systems; word processing; construction scheduling; finance control. Computer graphics: operating systems; languages, such as basic; data communications and networks. Computer system acquisition: hardware, maintenance, environment, software, ongoing support, hardware and software maintenance.

35.201G Financial Analysis

S2 L4

Topics included are: discounted cash flow technique; time series and forecasting distributions and probabilities; portfolio management theories.

35.203G Project Planning and Control Techniques S2 L2 T1

Operations analysis – operation research techniques; concept of a model; optimization. Critical path method – arrow and precedence diagrams; critical paths and floats; project control time-cost trade offs; basic overlapping networks; resource allocation and levelling. Review of other planning techniques – linear programming; work study; line of balance; multi-activity charting; PERT. Survey of computerised planning systems. Value engineering and its applications.

35.204G Personnel Management Techniquesques

S2 L2 T1

Australian labour market, recruitment and remuneration and training. Interpersonnel relationships in the work place, motivation and negotiation, group behaviour and individual behaviour. Industrial relations in Australia with particular emphasis on the building industry. Statutory responsibilities of employing labour (safety, welfare, superannuation, awards, equal opportunity, etc.).

35.301G Project Feasibility

S1 L2 T1

Design feasibility: feasibility studies; cost planning practice; economics of services in building; maintenace methods and costs. Land economies: land resources; market and location of urban land uses; spatial and urban growth; property and investment markets; economics of development; investment appraisal; environmental impact studies.

35.302G Building Contracts

S1 L2 T1

S1 L2 T1

Acts, regulations, codes and ordinances; selection and preparation of contract documents for management, design and construction of building projects; legal and insurance aspects of alternative forms of contract; procedural and management aspects of alternative forms of contract; head contracts and subcontracts; contract claims and disputes; international contracting.

35.303G Management of the Design and Construction Process

Organisation of projects; facility procurement options; management of the design process; briefs - clients and

consultants; Cost management of fundamentals; project team building and motivation; application of value management; management of the design and construction overlap; Legal aspects of project management; project control systems.

35.401G Management of Buildings S2 L2 T1

Maintenance and obsolescence; economics of refurbishment; marketing; tenancy management; building control and security systems; management of commercial, retail, industrial and large scale residential complexes; legal aspects of tenancy management; energy conservation; taxation law and implications.

35.402G Project Applications S2 L2 T1

Introduction to case studies; the structure, purpose and value of case studies. Detailed analysis of each phase of the project case study: economic planning and feasibility; design, design management buildability; construction, program, process, cost, personnel management. Staff presentation of case studies. Tutorial sessions. Presentation of student case studies,

This subject relies on the involvement of major construction organisations who are prepared to permit the detailed analysis of past projects. A significant potential benefit for participating organisations in providing a thorough, structured review of their project.

It is proposed that company involvement should extend to senior staff being involved in the critique and assessment process.

35.403G Process Applications

S2 L2 T1

Topics vary from year to year to cover main industry-wide issues. They could include: industrial relations (a specific issue); superannuation; labour training, apprenticeship; safety; the use of prefabricates; formwork sophistication; project communication; contractual trends; structure of the materials supply sector.

Master of Construction Management

35.150G Industry Training

Students will be based on a project for a period and be required to attend inspections of other major construction projects, demonstrations of plant and equipment, and short courses on specific building materials and construction systems.

35.151G Construction Methods and Techniques

S1 L2 T1

Appropriate selection aand use of current techniques and systems in all construction phases.

35.152G Management of Construction Plant S1 L2 T1

Selection, control and optimisation of equipment and plant operations.

35.153G Management of Construction S1 L2 T1

Organisation of projects from design to commissioning; time and value management; team building and motivation.

35.154G Economics in Construction S1 L2 T1

Economics of the construction industry; its inter-relationship with national and trans-national economics.

35.155G Computers in Contruction Management

Information systems, communication networks and modelling techniques in construction management from micro computer to main frame.

35.156G Advances in Building Materials S1 L2 T1

Recent advances in high performance materials; better application of traditional ones.

35.250G Research Report

A specialised individual research study, under staff supervision, into an approved aspect of construction management or a related topic.

35.251G International Construction Practice S2 L2 T1

A comparison of construction practices in various nations. The impact of local economic, labour and technical parameters on construction management.

35.252G Building Services S2 L2 T1

The design, installation and coordination of building services: hydraulic, electrical, air conditioning, communication and transportation.

35.253G Construction Planning and Control S2 L2 T1

Programming, scheduling and control systems, both manual and computerised.

35.255G Contracts Management and Law S2 L2 T1

Selection of contract form; preparation of documents; procedures, disputes and claims; arbitration; legal aspects; risk and insurance.

35.256G Cost Planning and Analysis S2 L2 T1

Feasibility studies, cost planning, value analysis and value engineering.

35.257G Quantitative Methods in Management S2 L2 T1

Statistical analysis and systems modelling methods in construction management.

Town Planning

36.922G Communications and Public Utilities

Interaction of land use and transportation. Vehicular and pedestrian circulation patterns. Traffic function and capacity of district and neighbourhood roads. Principles and practice of local road construction, water supply, sewage treatment and disposal, and drainage. Local supply of electricity, gas, telephone, and other services.

36.923G Land and Housing Economics

Outline of principles and practice of land valuation with special emphasis on valuation of residential land and buildings. Rating and taxing systems. Effect of zoning and redevelopment on land values, National income and its distribution. Goals of a modern economy. Demand and supply analysis. Economics of road transport and public utilities in urban development. The costs of urban growth. Cost-benefit analysis.

36.924G Urban Sociology

S1 L2 T1

A sociological approach to the study of urban phenomena. Lectures deal with both methodological and theoretical issues relating to the study of urban social structures. Seminars provide students with the opportunity to examine critically a number of community studies. A research project is undertaken by each student.

36.925G Housing Law and Administration

Housing acts and regulations at Commonwealth, State and local levels. Related town planning acts ordinances. Commonwealth-State Housing Agreements. The organization and administration of public housing authorities. Significant overseas housing policies.

36.934G Introduction to Planning (G) SS L3

Structure of towns, cities and regions. Needs and activities of people. Land use, transport and service systems. Planning theories, aims and objectives. Planning at different scales and in different time frames. Planning as a process. Planning studies, information systems, statistics, research methodology, computer applications.

36.935G Local Planning 1 (G)

L3

Theories at the local level: neighbourhood and precinct concepts, local community structure, survey and analysis. Subdivision and housing layout, basic transportation planning and management, street design, landscaping, utilities. Practice of planning new neighbourhoods and proposals for conservation and redevelopment.

36.936G Local Planning 2 (G)

Theories at district/new town level. Structure, survey and analysis. Environmental and social analysis. Elements, industrial and commercial areas, transport systems, community services, open space, institutional land use. Integrated planning: alternatives, impacts, evaluation. Costing and programming. Implementation and development management.

36.937G Regional Planning 1 (G)

SS L3

SS L3

SS L3

Theories at the metropolitan level. Accessibility, equity, economics, politics. Structure and organization, land use and transportation relationships. Forecasting, alternative futures. Incremental decision making. Integrating local and metropolitan planning.

36.938G Regional Planning 2 (G)

Theories at the regional level. Location theory, strategies of regional policy. Trends in tourist, rural and extractive industries. Ecological land use planning, recreation and conservation. Environmental impact and assessment.

36.939G Law and Administration Planning (G) SS L3

Theory and practice of statutory planning. The legal framework. The administrative framework. Environmental

planning and related legislation. Techniques and procedures in transforming policies and proposals into statutory instruments. Development control. Planning appeals and the operation of the Land and Environmental Courts.

36.945G The Organization of Town Planning

Aims, means and consequences of town planning in Australia. Aims of planning: organization of the environment in respect of space and time, interrelationship of functions, equity of resource distribution, human satisfaction, the nature of the planning approach. Means of planning: overview of the planning process, laws related to planning, planning assessment procedures, environmental management at different levels, decision-makiong processes – financiers', firms' and private decisions, changes in public values, public participation, political and economic constraints. Consequences of planning: illustrative case studies, evaluation of planning methodology and procedures.

Landscape Architecture

37.101G Landscape Project

A project relating to the practice of landscape architecture selected by the student and approved by the academic staff of the school. The project should represent a synthesis of the knowledge and skills that have been acquired during the course of study and will be supervised by a member of the academic staff. Appropriate methodologies and techniques will be used for assessment, analysis, and evaluation pf project parameters.

37.102G Landscape Research Project

A research project directed at furthering the body of knowledge relating to the art and science of landscape architecture selected by the student and approved by the academic staff of the school. The research project should be a synthesis of the knowledge and skills acquired during the course of study, and should further the student's knowledge or expertise in a specialized field of study. Emphasis will be placed on continued development of research skills in the areas of data collection, analysis, interpretation and presentation. The research project will be supervised by members of the academic staff of the University.

37.161G Land Systems and Management S2 L1 T2

An investigation of resources and their management in relation to a range of land use types with an emphasis on an ecological approach. subject material includes consideration of management of cultural as well as natural landscapes. Studies of specific examples relating to the effects of human impacts are included. Methods of conservation and rehabilitation are considered. Field excursions are included.

37.504G Conservation Studies

An investigation of the concepts of environmental heritage concerning aspects of landscape architecture and conservation issues. The application of environmental heritage in the fields of planning and design. Investigation of case studies of the natural and cultural environment. Projects to investigate problems of planning and managing heritage environments. Methods of conservation analysis with an emphasis on Australian environments and their history.

37.901G Landscape Planning

S1 L2 T1

Introduction to the discipline of landscape planning. Explores a range of basic methods and techniques for the collection, analysis, and valuation of landscape resource data. Application of this knowledge in the development of simple landscape planning models. Participationin a planning exercise applying these skills and knowledge using simple computing techniques.

37.902G Landscape Planning Methods S2 L2 T1

Examination and comparison of a range of landscape planning methods using examples from Australia and overseas. Students conduct research relating to the physical parameters of models for land use evaluation and environmental impact assessment. Participation in planning exercises involving the application of these models using advanced computing techniques.

37.903G Landscape Planning Project S1S2 L2T2

Students will work in an interdisciplinary group setting to undertake a major landscape planning exercise. The project will place emphasis on the use of advanced computer modelling techniques. Individual research and seminar presentations will form a major part of the assessment.

37.904G Visual Landscape Assessment S2 L2 T1

Examination of visual analysis, assessment and evaluation techniques and their incorporation into landscape planning models. Research and study of recent Australian and overseas examples of visual resource management programs. Students will undertake visual planning exercises using relevant computer software.

Graduate School of the Built Environment

Not all graduate course subjects are necessarily offered in any one year.

39.101G Contextual Studies

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S1

The scope and international context of conservation. History, concepts and philosophies of the discipline. Definition of conservation processes, including preservation, restoration, rehabilitation, reconstruction, alteration, repair, adaptation and reuse, infill, urban conservation. Conservation as a heritage consideration, including the criteria for selecting, listing and classifying structures; as a non-heritage consideration, including aspects of economics and construction; and as a planning, landscape and townscape consideration. The current legal framework. Government, semi-government and community conservation organizations and their roles.

39.102G Architectural History

S1

S2

S1

S1

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The rationale, investigation and interpretation of architectural history. The cause-and-effect relationships, particularly social, underlying architecture. Influences upon Australia from other countries. Detailed studies of selected aspects of architectural and building history, mainly Australian. Traditional technology. Development of technology and the manifestation of style. Histories of selected building types, methods, materials and finishes.

39,103G Conservation Management

Environmental psychology and conservation. Individual, group and community processes and responsibilities. Public policy and public opinion. The organization of conservation treatments and processes, projects, and procedures. Professional, contractual and legal roles and responsibilities. Evaluation of historic and non-historic old buildings and their sites. Feasibility and economic considerations. Revolving funds. Acts and ordinances. Labour and materials resources. Model management plans. Case studies.

39.104G Analysis and Documentation A S1

Interpretation of extant structures. Introduction to historical, industrial and structural archaeology. Research methodology. Comparative analysis, typologies and surveys. Case studies.

39.105G Analysis and Documentation B S2

Preparation of documentary studies: measurement, photography, reportage. Photogrammetry and its applications.

39.106G Conservation Technology A

The integrity of old buildings and their environments, including planning, landscape and architectural considerations. Effects of acts and ordinances.

39.107G Conservation Technology B S2

Identification, understanding and diagnosis of deterioration in traditional structure, construction, decoration and building environments. Development of general techniques for preservation, restoration, reconstruction and adaptation. Comfort criteria and other functional considerations.

39.108G Conservation Technology C

Prerequisite: 39.107G or equivalent.

Policies and techniques appropriate to preservation, restoration, reconstruction and adaptation of heritage structures. Integration of new services and functions. Case studies.

39.109G Conservation Technology D S2

Prerequisite: 39.107G or equivalent.

Policies and techniques appropriate to adaptive reuse and other treatments of non-heritage structures. Integration of new services and functions. Case studies.

39.110G Graduate Project

An appropriate conservation topic from any apposite area, including such fields as historical archaeology, documentation, legislation, economics, technology, or a specific building restoration project. Conditions governing submission of the Project Report appear in the Calendar.

39.301G New Development Studies

S1 T2

Seminar group study in new ideas, activities and resources which affect the future development of research, education and practice in the man-made environment.

39.302G Research Studies

S1 T2

S1 T2

F

F

S1

Research viewed within a framework of priorities, policies, and interdependencies including case studies, resources, methodology and the preparation of research proposals.

39.303G Directed Studies

The conduct and report of findings of a short research project in the area of the student's concentration designed to meet the individual's needs and interests and supportive to the major research topic.

39.501G Industrial Design Studies

Prerequisite: Nil.

1. The objectives and methods of graduate study in industrial design: contemporary industrial design trends, the relationship between academic and practice objectives, the relationship of industrial design methodology and research techniques to those of other disciplines at the University. 2. A diverse range of current professional and theoretical interests, design and design related activities in Australia and overseas, current ideologies and historical assessments. Seminars are given by students, theorists, and practitioners in design and design related areas.

39.502G Graduate Project (MID)

Co-requisite: 39.522G.

A project within the practice areas of industrial design, selected by the student subject to the approval of the School; conducted within an approved methodology. Documentation of the methodology, research strategy and techniques, monitoring of the design process, resultant design, and evaluation of the methodology, research and final design. Students should give consideration to the School's specialist areas.

39.503G Design Media Communication

Prerequisite: Nil.

The major two and three dimensional media and computer techniques are analysed and demonstrated within the context of industrial design problem solving: orthographic techniques, the Australian Engineering Drawing Standard, graphic art processes, photography, current rendering and illustration techniques, modelling in automotive clay, plastic sheet and rigid foams, timbers and metals. The current state of computer aided design as well as its potential in design and the restructuring of engineering decision-making and drafting. Particular emphasis given to each method's role in problem analysis and communication at the concept, detail and final design stages. The social and physiological aspects of communicating design in industry are also examined.

39.511G Ergonomics for Industrial Designers

Prerequisite: Nil.

Objectives, methodology and research techniques of ergonomics. Man/machine, interaction, human perception and performance, anthropometrics, product evaluation, the establishment of ergonomic parameters in product design and the application of ergonomics in design, the interrelationship of ergonomics and industrial design in the product development process. Students carry out laboratory experiments related to project work and also contribute to the development of a data bank.

39.512G Design Theory

Prerequisite: 39.501G or equivalent.

Research into a theory aspect of industrial design, selected by the student subject to the approval of the School, in the general area of design and design related studies. Students should give consideration to the School's specialist areas. The study may be taken in product design but should not be directly linked to studio project work being undertaken by the student.

39.513G Visual Thinking

Prerequisite: Nil.

Visual language, media, problems and problem solving methods. The relationship between visual thinking and creative processes. Studies are undertaken in two and three dimensions and are developed within the context of art and design.

39.521G Business Studies for Industrial Designers

Prerequisite: Nil.

The theory and practice of business and industrial management, and marketing. Its application in the product development process and the relation of the process to other business and industrial objectives. Special reference to the Australian industrial context and potential developments resulting from technological and socio-economic change. Professional practice and the management of design organizations in the general context of business and industrial management.

39.522G Industrial Design

Co-requisite: 39.501 G.

Industrial design project work intended to integrate the student's previous experience and the course units in preparatory work for the Graduate Project. A part of the course may be undertaken on a group basis.

39.523G Industrial Design A S2

Co-requisite: 39.501 G.

Project work designed to introduce industrial design research and studio methodologies. Studies undertaken within a broad range of product areas and related to the concurrent course work.

39.531G Manufacturing Technology S1

Prerequisite: Nil.

Industrial processes and materials, production costing and changing production economics. Objectives and structures of the engineering professions and their integration with industrial design in the product development process. Students assist in the development of a data bank.

39.533G Industrial Design B

Co-requisite: 39.523G.

Advanced project work combining the research and practice methodologies of industrial design in product research,

development and design, preparatory to undertaking the Graduate Project.

39.541G Industrial Experience

Prerequisite: Enrolment in one of the degrees.

A four week period of approved industrial experience undertaken by full-time students in the mid-year recess and by part-time students in either the mid-year or summer recess. The period is intended to give students first hand interaction with industrial and commercial operations. Normally students are expected to be involved in design activities, however involvement in production, engineering, management and marketing is also considered. Part-time students in approved employment are exempt.

39.543G Graduate Project (MSc(IndDes))

Co-requisite: 39,533G.

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S1

S1

S2

A project within the practice areas of industrial design, proposed by the student in consultation with the School and conducted within an approved methodology; documentation of the methodology, research strategy and techniques, monitoring of the design process, resultant design, and evaluation of the methodology, research and design.

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39.651G Mechanical Shock and Vibration S1 L1T1 C2 Prerequisite: Nil,

Vibrating systems, strings, rods, beams, plates, shells; radiation characteristics of noise sources; random vibration; structures; fatigue, filters, isolators, attenuators, dampers; impedance.

39.652G Noise Control in Industry S1 L2T2 C4

Prerequisite: Nil.

Hearing conservation and community noise; standards and regulations; industrial noise sources; mechanical noise, electrical machinery, aerodynamic noise, jets, ventilation system noise, combustion noise, vibration; noise-reduction techniques: transmission and insertion loss; absorbers; impedance mismatch, vibration isolation; enclosures, barriers; room acoustics; practical measurement of sound power, sound pressure and directivity.

39.901G Acoustic Measuring Systems and Electroacoustics S1 L2 C2

Prerequisite: Nil.

Transducers; microphones; amplifiers; loudspeakers; filters, recorders, pick-ups; noise generators; acoustic measuring instruments. Sound reinforcement systems; ambiophony; assisted resonance. Special requirements for translation, language laboratories.

39.902G Advanced Physical Acoustics S1 L3T1 C4

Prerequisite: Nil.

Vibrating systems: coupled oscillators, beams, membranes, plates, resonators, acoustic filters, analogs, analogue computer simulation of vibrating systems; transfer of energy from one system to another. Reflection and transmission at walls, rigid walls, flexible walls, multiple walls, impulsive excitation. Sound absorbers: porous absorbers, perforated panel absorbers, sonic and ultrasonic measurement techniques, relation to properties of materials.
39.908G Community Noise Control S1 L1T1 C2

Introduction; sound and sound propagation, sound power, sound pressure, decibels; sound perception, psychoacoustics loudness, annoyance, phons and dB(A); hearing conservation; acoustic measuring and analysing instruments – sound level meters, filters, analysers, recorders; sound sources; community noise assessment; the NSW Noise Control Act; practical enxercises in sound recording, analysis and assessment; noise control – source noise reduction, use of barriers, enclosures, distance, sound absorbing materials; sound transmission through building elements; noise components of environmental impact statements.

39.993G The Ear, Hearing and Hearing Conservation

Prerequisite: Nil.

Physiological and psychoacoustic factors in sound perception; discrimination, masking; loudness and annoyance; subjective scales and units; hearing threshold shift; damage risk criteria, hearing conservation programs and audiometry; standards and regulations.

S1 L1T1 C2

39.994G Graduate Project A	S1 C5
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An individual research project on an approved topic in acoustics; preliminary report.

39.995G Community Noise S2 L2T2 C4

Prerequisite: Nil.

Sources of community noise; sound propagation out of doors; barrier theory; road, rail and air transportation noise; land-use zoning; measurement and assessment of community noise annoyance; standards, acts and regulations.

39 .996G Graduate Project B S2 C10

Prerequisite: 39.994G or equivalent.

An individual research project on an approved topic in acoustics; final report.

39.997G Auditorium Acoustics S1 L2T1 C3

Prerequisite: Nil.

Subjective and objective criteria for speech and music; speech intelligibility; characteristics of musical sources; reverberation theory, diffusion; steady-state and transient room response; design methods including graphic and model analysis; sound reflectors; sound absorbents.

39.998G Noise Control in Buildings S2 L2T2 C4

Prerequisite: Nil.

Airborne and impact sound transmission theory and measurement; vibration isolation; single, multiple-leaf and composite partitions; ventilation, plumbing and services noise control; criteria; regulations and standards.

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Graduate Study Conditions for the Award of Higher Degrees

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Rules, regulations and conditions for the award of first degrees are set out in the appropriate First Degrees Faculty Handbooks.

For the list of undergraduate courses and degrees offered see Faculty (Undergraduate Study) in the Calendar.

The following is the list of higher degrees and graduate diplomas of the University, together with Higher Degrees the publication in which the conditions for the award appear.

For the list of graduate degrees by research and course work, arranged in faculty order, see Table of Courses (by faculty): Graduate Study in the Calendar.

For the statements Preparation and Submission of Project Reports and Theses for Higher Degrees and Policy with respect to the Use of Higher Degree Theses see later in this section.

Title	Abbreviation	Calendar/Handbook	
Doctor of Science	DSc	Calendar	Higher Degrees
Doctor of Letters	DLitt	Calendar	
Doctor of Laws	LLD	Calendar	
Doctor of Medicine	MD	Calendar Medicine	
Doctor of Philosophy	PhD	Calendar and all handbooks	
Master of Applied Science	MAppSc	Applied Science	
Master of Architectural Design	MArchDes	Architecture	
Master of Architecture	MArch	Architecture	
Master of Archives Administration	MArchivAdmin	Professional Studies	
Master of Arts	MA	Arts University College	
Master of Biomedical Engineering	MBiomedE	Engineering	
Master of Building	MBuild	Architecture	
Master of the Built Environment	MBEnv	Architecture	

Higher Degrees

Architecture

	Title	Abbreviation	Calender/Handbook
Higher Degrees	Master of the Built Environment (Building Conservation)	MBEnv	Architecture
(continued)	Master of Business Administration	MBA	AGSM
	Master of Chemistry	MChem	Sciences*
	Master of Cognitive Science	MCodSc	Arts
	Master of Commerce (Honours)	MCom(Hons)	Commerce
	Master of Commerce	MCom	Commerce
	Master of Community Health	MCH	Medicine
	Master of Construction Management	MConstMgt	Architecture
	Master of Education	MEd	Professional Studies
	Master of Educational Administration	MEdAdmin	Professional Studies
	Master of Engineering	ME	Applied Science Engineering University College
	Master of Engineering without supervision	ME	Applied Science Engineering
	Master of Engineering Science	MEngSc	Engineering Applied Science University College ~
	Master of Environmental Studies	MEnvStudies	Applied Science
	Master of Health Administration	MHA	Professional Studies
	Master of Health Personnel Education	MHPEd	Medicine
	Master of Health Planning	MHP	Professional Studies
	Master of Industrial Design	MID	Architecture
ţ.	Master of Landscape Planning	MLP	Architecture
	Master of Landscape Architecture	MLArch	Architecture
	Master of Laws	LLM	Law
	Master of Librarianship	MLib	Professional Studies
	Master of Mathematics	MMath	Sciences*
	Master of Management Economics	MMgtEc	University College
	Master of Music	MMus	Arts
	Master of Nursing Administration	MNA	Professional Studies
	Master of Optometry	MOptom	Sciences*
	Master of Paediatrics	MPaed	Medicine
	Master of Physics	MPhysics	Sciences*
	Master of Project Management	MPM	Architecture
	Master of Psychology (Clinical)	MPsychol	Science§
	Master of Psychology (Applied)	MPsychol	Sciences §
	Master of Safety Science	MSafetySc	Engineering
	Master of Science	MSc	Applied Science Architecture Engineering Medicine Sciences*§ University College
	Master of Science without supervision	MSc	Applied Science Architecture Engineering Medicine Sciences*§ University College

Title	Abbreviation	Calender/Handbook	
Master of Science (Acoustics)	MSc(Acoustics)	Architecture	
Master of Science (Industrial Design)	MSc(IndDes)	Architecture	
Master of Science and Society	MScSoc	Arts	
Master of Social Work	MSW	Professional Studies	
Master of Statistics	MStats	Sciences*	
Master of Surgery	MS	Medicine	
Master of Surveying	MSurv	Engineering	
Master of Surveying without supervision	MSurv	Engineering	
Master of Surveying Science	MSurvSc	Engineering	
Master of Town Planning	MTP	Architecture	
Master of Welfare Policy	MWP	Professional Studies	
Graduate Diploma	GradDip	Applied Science Architecture Engineering Sciences*§	Graduate Diplomas
	DipPaed DipEd DipIM-ArchivAdmin DipIM-Lib	Medicine Professional Studies	
17	DipFDA	Sciences*	

§Faculty of Biological and Behavioural Sciences.

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

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

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

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

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

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

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

(a) full-time attendance at the University;

(b) part-time attendance at the University.

(4) A full-time candidate shall be fully engaged in advanced study and research except that the candidate may undertake not more than five hours per week or a total of 240 hours per year on work which is not related to the advanced study and research.

(5) Before permitting a part-time candidate to enrol, the Committee shall be satisfied that the candidate can devote at least 20 hours each week to advanced study and research for the degree which (subject to (8)) shall include regular attendance at the school* on an average of at least one day per week for 48 weeks each year.

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

* Or department where a department is not within a school or schools or departments where the research is being undertaken in more than on e school or department.

Higher Degrees

Doctor of Philosophy (PhD)

Qualifications

Enrolment and Progression

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

(8) The work, other than field work, shall be carried out in a school of the University except that the Committee:,

(a) may permit a candidate to spend not more than one calendar year of the program in advanced study and research at another institution provided the work can be supervised in a manner satisfactory to the Committee;

(b) may permit a candidate to conduct the work at other places where special facilities not possessed by the University may be available provided the direction of the work remains wholly under the control of the supervisor;

(c) may permit a full-time candidate, who has been enrolled as a full-time candidate for at least six academic sessions, who has completed the research work and who is writing the thesis, to transfer to part-time candidature provided the candidate devotes at least 20 hours each week to work for the degree and maintains adequate contact with the supervisor.

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

(10) No candidate shall be awarded the degree until the lapse of six academic sessions from the date of enrolment in the case of a full-time candidate or eight academic sessions in the case of a part-time candidate. In the case of a candidate who has had previous research experience the committee may approve remission of up to two sessions for a full-time candidate and four sessions for a part-time candidate.

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

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

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

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

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

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

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

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

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

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

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

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

Examination 5. (1) There shall be not fewer than three examiners of the thesis, appointed by the Academic Board on the recommendation of the Committee, at least two of whom shall be external to the University.

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

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

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

* Or department where a department is not within a school or schools or departments where the research is being undetaken in more than one school or department. (c) the candidate be awarded the degree subject to a further examination on questions posed in the report, performance in this further examination being to the satisfaction of the Committee; or

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

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

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

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

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

1. The degree of Master of Architectural Design by formal course work may be awarded by the Council to a candidate who has satisfactorily completed a program of advanced study.

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

(a)have been awarded the degree of Bachelor of Architecture with Honours from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Higher Degree Committee of the Faculty of Architecture (hereinafter referred to as the Committee), and

(b) have had at least one year's professional practice subsequent to graduation of a kind acceptable to the Committee.

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

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

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

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

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

(4) No candidate shall be awarded the degree until the lapse of two academic sessions from the date of enrolment in the case of full-time candidate or three sessions in the case of a part-time candidate. The maximum period of candidature shall be four academic sessions from the date of enrolment for a full-time candidate and six sessions for a part-time candidate. In special cases an extension of these times may be granted by the Committee.

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

*Or department where a department is not within a school or schools or departments where the research is being undertaken in more than one school or department.

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

1.

Fees

Master of Architectural Design (MArchDes)

Qualifications

Enrolment and Progression

Fees

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

Qualifications	2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor of four full-time years duration (or the part-time equivalent) from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Committee.
	(2) In exceptional cases an applicant who submits evidence of such academic and/or professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.
	(3) When the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant, before being permitted to enrol, to undergo such examination or carry out such work as the Committee may prescribe.
Enrolment and Progression	3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Academic Registrar at least one calendar month before the commencement of the session in which enrolment is to begin.
	(2) In every case, before permitting a candidate to enrol, the head of the school in which the candidate intends to enrol shall be satisfied that adequate supervision and facilities are available.
	(3) An approved candidate shall be enrolled in one of the following categories:
	(a) full-time attendance at the University;
	(b) part-time attendance at the University;
	(c) external – not in regular attendance at the University and using research facilities external to the University.
	(4) A candidate shall be required to undertake an original investigation or design on an approved topic. The candidate may also be required to undergo such examination and perform such other work as may be prescribed by the Committee.
	(5) The work shall be carried out under the direction of a supervisor appointed from the full-time members of the University staff.
	(6)The progress of a candidate shall be reviewed annually by the Committee following a report by the candidate, the supervisor and the head of the school in which the candidate is enrolled and as a result of such review the Committee may cancel enrolment or take such other action as it considers appropriate.
	(7) No candidate shall be granted the degree until the lapse of three academic sessions in the case of a full-time candidate or four academic sessions in the case of a part-time or external candidate from the date of enrolment. In the case of a candidate who has been awarded the degree of Bachelor with Honours or who has had previous research experience the Committee may approve remission of up to one session for a full-time candidate and two sessions for a part-time or external candidate.
	(8) A full-time candidate for the degree shall present for examination not later than six academic sessions from the date of enrolment. A part-time or external candidate for the degree shall present for examination not later than ten academic sessions from the date of enrolment. In special cases an extension of these times may be granted by the Committee.
Thesis	4. (1) On completing the program of study a candidate shall submit a thesis embodying the results of the original investigation or design.
	(2) The candidate shall give in writing two months notice of intention to submit the thesis.
	(3) The thesis shall present an account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the committee is satisfied about the extent of the candidate's part in the joint research.
	(4) The candidate may also submit any work previously published whether or not such work is related to the thesis.
	(5) Three copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree thesis.
	(6) It shall be understood that the University retains the three copies of the thesis submitted for examination is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the thesis in whole or in part, in photostat or microfilm or other copying medium.
Examination	5. (1) There shall be not fewer than two examiners of the thesis, appointed by the Academic Board on the recommendation of the Committee, at least one of whom shall be external to the University unless the Committee is satisfied that this in not practicable.
	(2) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the merits of the thesis and shall recommend to the Committee that:

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

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

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

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

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

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

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

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

1. The degree of Master of Project Management by formal course work may be awarded by the Council to a candidate who has satisfactorily completed a program of advanced study. The degree shall be awarded at Pass or Honours level.

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

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

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

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

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

(3) The progress of a candidate shall be reviewed at least once annually by the Committee and as a result of its review the committee may cancel enrolment or take such other action as it considers appropriate.

(4) No candidate shall be awarded the degree at Pass level until the lapse of four academic sessions from the date of enrolment for a candidate undertaking the program at Pass level and eight sessions for a candidate undertaking the program at Honours level. In special cases an extension of these times may be granted by the Committee.

4. (1) A candidate who obtains a grade average of Credit or better in the formal subjects in 3.(2) may undertake a project on an approved topic.

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

(3) The candidate shall given in writing to the Academic Registrar two months notice of intention to submit a report on the project.

(4) Three copies of the project report shall be presented in a form which complies with the requirements of the University for the preparation and submission of project reports for higher degrees.

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

Fees

Master of Project Management (MPM)

Qualifications

Enrolment and Progression

Project Report

Examination	5. (1) There shall be not fewer than two examiners of the project report, appointed by the Academic Board on the recommendation of the Committee.
	(2) Arrangements shall be made for oral presentation and defence of the project report as part of the examination.
	(3) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the project report and shall recommend to the Committee that:
	(a) the project report be noted as satisfactory; or
	(b) the project report be noted as satisfactory subject to minor corrections being made to the satisfaction of the head of the school; or
	(c) the project report be noted as unsatisfactory but that the candidate be permitted to resubmit it in a revised form after a further period of study and/or research; or
	(d) the project report be noted as unsatisfactory and that the candidate be not permitted to resubmit it.
	(4) The Committee shall, after considering the examiners' reports and the candidate's results of assessment in the prescribed formal subjects, recommend that the csandidate be awarded the degree at Pass or Honours level If it is decided that the project report is unsatisfactory the Committee shall determine whether or not the candidate may resubmit it after a further period of study and/or research,
Fees	6. A candidate shall pay such fees as may be determined from time to time by the Council.
Master of the Built Environment (Building Conservation)(MBenv),	1. The degree of Master of the Built Environment (Building Conservation) or Master of Industrial Design or Master of Science (Acoustics) or Master of Science (Building) or Master of Science (Industrial Design) may be awarded by the Council to a candidate who has completed a
Design (MID), Master of Science (Acoustics) (MSc(Acoustics)), and Master of Science (Industrial Design) (MSc(IndDes))	program of advanced study.
Qualifications	2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor of four full time years duration (or the part time equivalent) from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Higher Degree Committee of the Faculty of Architecture (hereinafter referred to as the Committee).
	(2) In exceptional cases an applicant who submits evidence of such academic and/or professional qualifications as may be approved by the Committee may be permitted to enrol for the degree.
	((3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as the Committee may prescribe, before permitting enrolment.
Enrolment and Progression	3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Academic Registrar at least two calendar months before the commencement of the session in which enrolment is to begin.
	(2) A candidate for the degree shall be required to undertake such formal subjects and pass such assessment as prescribed.
	(3) The progress of a candidate shall be reviewed at least once annually by the Committee and as a result of its review the Committee may cancel enrolment or take such other action as it considers appropriate.
	(4) No candidate shall be awarded the degree until the lapse of two academic sessions from the date of enrolment in the case of a full-time candidate or four sessions in the case of a part-time candidate. The maximum period of candidature shall be four academic sessions from the date of enrolment for a full-time candidate and eight sessions for a part-time candidate. In special cases an extension of these times may be granted by the Committee.
Project Report	4. (1) A candidate shall also be required to undertake a project on an approved topic.
	(2) The work shall be carried out under the direction of a supervisor appointed from the full-time academic members of the University staff.
	(3) The candidate shall give in writing to the Academic Registrar two months notice of intention to submit a report on the project.

(4) Three copies of the project report shall be presented in a form which complies with the requirements of the University for the preparation and submission of project reports for higher degrees.

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

5. (1) There shall be not fewer than two examiners of the project report, appointed by the Academic Board on the recommendation of the Committee.

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

(a) the project report be noted as satisfactory; or

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

(c) the project report be noted as unsatisfactory but that the candidate be permitted to resubmit it in a revised form after a further period of study and/or research; or

(d) the project report be noted as unsatisfactory and that the candidate be not permitted to resubmit it.

(3) The Committee shall, after considering the examiners' reports and the candidate's results of assessment in the prescribed formal subjects, recommend whether or not the candidate may be awarded the degree. If it is decided that the project report is unsatisfactory the Committee shall determine whether or not the candidate may resubmit it after a further period of study and/or research.

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

1. The degree of Master of Engineering or Master of Science by research may be awarded by

the Council on the recommendation of the Higher degree Committee of the appropriate faculty (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original

2. (1) A candidate for the degree shall have been awarded an appropriate degree of Bachelor

from the University of New South Wales or a qualification considered equivalent from another

(2) An applicant who submits evidence of such other academic or professional attainments as

Examination

Fees

Master of Engineering (ME) and Master of Science (MSc)

Qualifications

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

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

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

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

university or tertiary institution at a level acceptable to the Committee.

may be approved by the Committee may be permitted to enrol for the degree.

(a) full-time attendance at the University;

investigation.

(b) part-time attendance at the University;

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

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

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

(6) The progress of a candidate shall be reviewed annually by the Committee following a report by the candidate, the supervisor and the head of the school* in which the candidate is enrolled

*Or department where a department is not within a school or schools or departments where the research is being undertaken in more than one school or department. Enroiment and Progression

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and as a result of such review the Committee may cancel enrolment or take such other action as it considers appropriate.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Fees

Examination

Master of Engineering (ME), Master of Science (MSc) and Master of Surveying (MSurv) without supervision

Qualifications

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

1. The degree of Master of Engineering or Master of Science or Master of Surveying without supervision may be awarded by the Council on the recommendation of the Higher Degree Committee of the apropriate faculty (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation.

2. A candidate for the degree shall have been awarded an appropriate degree of Bachelor from the University of New South Wales with at least three years relevant standing in the case

of Honours graduates and four years relevant standing in the case of Pass graduates, and at a level acceptable to the Committee.

3. An application to enrol as a candidate for the degree without supervision shall be made on the prescribed form which shall be lodged with the Academic Registrar not less than six months before the intended date of submission of the thesis. A graduate who intends to apply in this way should, in his or her own interest, seek at an early stage the advice of the appropriate head of school* with regard to the adequacy of the subject matter and its presentation for the degree. A synopsis of the work should be available.

4. (1) A candidate shall submit a thesis embodying the results of the investigation.

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

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

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

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

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

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

(2) Before the thesis is submitted to the examiners the head of the school* in which the candidate is enrolled shall certify that it is prima facie worthy of examination.

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

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

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

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

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

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

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

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

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

1. The degree of Master of Landscape Planning by formal course work may be awarded by the Council to a candidate who has satisfactorily completed a program of advanced study.

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

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

Enrolment and Progression

Thesis

Examination

Fees

Master of Landscape Planning (MLP)

Qualifications

	(3) If the Committee is not satisfied with the qualifications submitted by an applicant the Committee may require the applicant to undergo such assessment or carry out such work as it may prescribe, before permitting enrolment.
Enrolment and Progression	3. (1) An application to enrol as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Academic Registrar at least two calendar months before the commencement of the session in which enrolment is to begin.
	(2) A candidate for the degree shall be required to undertake such formal subjects and pass such assessment as prescribed.
	(3) The progress of a candidate shall be reviewed at least once annually by the Committee and as a result of its review the committee may cancel enrolment or take such other action as it considers appropriate.
	(4) No candidate shall be awarded the degree until the lapse of three academic sessions from the date of enrolment.
Project Report	4. (1) A candidate who obtains a grade average of Credit or better in the formal subjects in 3.(2) may undertake a project on an approved topic.
	(2) The work shall be carried out under the direction of a supervisor appointed from the full-time academic members of the University staff.
	(3) The candidate shall give in writing to the Academic Registrar two months notice of intention to submit a report on the project.
	(4) Three copies of the project report shall be presented in a form which complies with the requirements of the University for the preparation and submission of project reports for higher degrees.
	(5) It shall be understood that the University retains the three copies of the project report submitted for examination and is free to allow the project report to be consulted or borrowed. Subject to the provisions of the Copyright Act, 1968, the University may issue the project report in whole or in part, in microfilm or other copying medium.raduate Diploma may be awarded by the Council to a candidate who has satisfactorily completed a program of advanced study.
Examination	5. (1) There shall be not fewer than two examiners of the project report, appointed by the Academic Board on the recommendation of the Committee.
	(2) Arrangements shall be made for oral presentation and defence of the project report as part of the examination.
	(3) At the conclusion of the examination each examiner shall submit to the Committee a concise report on the project report and shall recommend to the Committee that:
	(a) the project report be noted as satisfactory; or
	(b) the project report be noted as satisfactory subject to minor corrections being made to the satisfaction of the head of the school; or
	(c) the project report be noted as unsatisfactory but that the candidate be permitted to resubmit it in a revised form after a further period of study and/or research; or
	(d) the project report be noted as unsatisfactory and that the candidate be not permitted to resubmit it.
	(4) The Committee shall, after considering the examiners' reports and the candidate's results of assessment in the prescribed formal subjects, recommend that the csandidate be awarded the degree at Pass or Honours level. If it is decided that the project report is unsatisfactory the Committee shall determine whether or not the candidate may resubmit it after a further period of study and/or research.
Fees	6. A candidate shall pay such fees as may be determined from time to time by the Council.
Graduate Diploma	
Graduate Diploma (Grad Dip)	1. A Graduate Diploma may be awarded by the concil to a candidate who has satisfactorily completed a program of advanced study.
Qualifications	2. (1)A candidate for the diploma shall have been awarded an appropriate degree of Bachelor from the University of New South Wales or a qualification considered equivalent from another university or tertiary institution at a level acceptable to the Higher Degree Committee of the appropriate faculty (hereinafter referred to as the Committee).

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(2) An applicant who submits evidence of such other academic or professional attainments as may be approved by the Committee may be permitted to enrol for the diploma.

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

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

(2) A candidate for the diploma shall be required to undertake such formal subjects and pass such assessment as prescribed.

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

(4) No candidate shall be awarded the diploma until the lapse of two academic sessions from the date of enrolment in the case of a full-time candidate or four sessions in the case of a part-time candidate. The maximum period of candidature shall be four academic sessions from the date of enrolment for a full-time candidate and six sessions for a part-time candidate. In special cases an extension of these times may be granted by the Committee.

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

Fees

Scholarships and Prizes

The scholarships and prizes listed below are available to students whose courses are listed in this handbook. Each faculty handbook contains in its Scholarships and Prizes section the scholarships and prizes available with that faculty. The General information section of the Calendar contains a comprehensive list of scholarships and prizes offered throughout the University.

Scholarships

Undergraduate Scholarships

Listed below is an outline only of a number of scholarships available to students. Full information may be obtained from Room G20, located on the Ground Floor of the Chancellery.

Unless otherwise indicated in footnotes, applications for the following scholarships should be made to the Academic Registrar by 14 January each year. Please note that not all of these awards are available every year.

Donor	Value	Year/s of Tenure	Conditions
General			
Bursary Endowment Board*	\$200 pa	Minimum period of approved degree/ combined degree course	Merit in HSC and total family income not exceeding \$6000.
Sam Cracknell Memorial	Up to \$3000 pa payable in fortnightly instalments	1 year	Prior completion of at least 2 years of a degree or diploma course and enrolment in a full-time course during the year of application; academic merit; participation in sport both directly and administratively; and financial need

* Apply to The Secretary, Bursary Endowment Board, PO Box 460, North Sydney 2060, immediately after sitting for HSC.

Donor	Value	Year/s of Tenure	Conditions
General (continued)			······································
Girls Realm Guild	Up to \$1500 pa	1 year renewable for the duration of the course subject to satisfactory progress and continued demonstration of need	Available only to female students under 35 years of age who are permanent residents of Australia enrolling in any year of a full- time undergraduate course on the basis of academic merit and financial need.
W.S. and L.B. Robinson**	Up to \$4200 pa	1 year renewable for the duration of the course subject to satisfactory progress	Available only to students who have completed their schooling in Broken Hill or whose parents reside in Broken Hill; for a course related to the mining industry. Includes courses in mining engineering, geology, electrical and mechanical engineering, metallurgical process engineer chemical engineering and science.
Universities Credit Union	\$500 pa	1 year with the possibility of renewal	Prior completion of at least 1 year of any undergraduate degree course. Eligibility limited to members of the Universities Credi Union Ltd of more than one year's standing or members of the family of such members.
** Applications close 30 September eacl	h ye ar.		

Undergraduate Scholarships (continued)

Graduate Scholarships

Application forms and further information are available from the Student Enquiry Counter, located on the Ground Floor of the Chancellery unless an alternative contact address is provided. Information is also available on additional scholarships which may become available from time to time, mainly from funds provided by organizations sponsoring research projects.

The following publications may also be of assistance: 1. Awards for Postgraduate Study in Australia and Awards for Postgraduate Study Overseas, published by the Graduate Careers Council of Australia, PO Box 28, Parkville, Victoria 3052°; 2. Study Abroad, published by UNESCO;* 3. Scholarships Guide for Commonwealth Postgraduate Students, published by the Association of Commonwealth Universities.*

Details of overseas awards and exchanges administered by the Department of Employment, Education and Training can be obtained from: Awards and Exchanges Section, Department of Employment, Education and Training, PO Box 826, Woden, ACT 2606.

Where possible, the scholarships are listed in order of faculty.

* Available for reference in the University Library.

Donor	Value	Year/s of Tenure	Conditions
General			х.
University	Living allowance		Applicants must be honours graduates (or
Postgraduate Research	of \$7600 pa.		equivalent). Applications to Dean of relevant
Scholarships	Other allowances	1-2 years for a	Faculty.
	may also be paid.	Masters and 3-4 years	•
Commonwealth Postgraduate	<i>·</i> · ·	for a PhD degree	Applicants must be honours graduates (or
Research Awards		Ū	equivalent) or scholars who will graduate
			with honours in current academic year, and
			who are domiciled in Australia. Applications
			to Academic Registrar by 31 October.

Donor	Value	Year/s of Tenure	Conditions
General (continued) Commonwealth Postgraduate Course Awards	Living allowance of \$8882 pa. Other allowances may also be paid.	1-2 years; minimum duration of course	Applicants must be graduates or scholars who will graduate in current academic year, and who have not previously held a Commonwealth Post-graduate Award. Applicants must be domiciled in Australia. Preferece is given to applicants with employment experience. Applications to Academic Registrar by 30 September.
Australian American Educational Foundation Fulbright Award	Travel expenses and \$A2000 as establishment allowance.	1 year renewable	Applicants must be graduates who are domiciled in Australia and wish to undertake research or study for a higher degree in America. Applications close 30 September with The Secretary, DEET, AAEF Travel Grants, PO Box 826, Woden ACT 2606.
Australian Federation of University Women	Amount varies, depending on award	Up to 1 year	Applicants must be female graduates who are members of the Australian Federation of University Women.
Commonwealth Scholarship and Fellowship Plan	Varies for each country. Generally covers travel, living, tuition fees, books and equipment, approved medical expenses. Marriage allowance may be payable.	Usually 2 years, sometimes 3.	Applicants must be graduates who are Australian Citizens and who are not older than 35 years of age. Tenable in Commonwealth countries other than Australia. Applications close with Academic Registrar in September or October each year.
The English-Speaking Union (NSW Branch)	\$5000	1 year	Applicants must be residents of NSW or ACT. Awarded to young graduates to further their studies outside Australia. Applications close mid-April with The Secretary, Ground Floor, Sydney School of Arts, 275C Pitt Street, Sydney NSW 2000.
Frank Knox Memorial Fellowships tenable at Harvard University	Stipend of US\$7000 pa plus tuition fees	1, sometimes 2 years	Applicants must be British subjects and Australian citizens, who are graduates or near graduates of an Australian university. Applications close with the Academic Registrar mid October.
Robert Gordon Menzies Scholarship to Harvard	Up to US\$15,000	1 year	Tenable at Harvard University. Applicants must be Australian citizens and graduates o an Australian tertiary institution. Applications close 31 December with the Registrar, A.N.U., GPO Box 4, Canberra ACT 2601.
Gowrie Scholarship Trust Fund	\$4000 pa. Under special circumstances this may be increased.	2 years	Applicants must be members of the Forces or children of members of the Forces who were on active service during the 1939-45 War. Applications close with Academic Registrar by 31 October

Graduate Scholarships (continued)

Donor	Value	Year/s of Tenure	Conditions
General (continued) Harkness Fellowships of the Commonwealth Fund of New York	Living and travel allowances, tuition and research expenses, health insurance, book and equipment and other allowances for travel and study in the USA	12 to 21 months	Candidates must be Australian citizens and 1. Either members of the Commonwealth or a State Public Service or semi-government Authority. 2. Either staff or graduate students at an Australian university. 3. Individuals recommended for nomination by the Local Correspondents. The candidate will usually have an honours degree or equivalent, or an outstanding record of achievement, and be not more than 36 years of age. Applications close 29 August with the Academic Registrar. Forms available from Mr J Larkin, Bureau of Agriculture and Resource Economics, GPO Box 1563, Canberra ACT 2601.
The Packer, Shell and Barclays Scholarships to Cambridge University	Living and travel allowances, tuition expenses.	1-3 years	Applicants must be Australian citizens who are honours graduates or equivalent, and under 26 years of age. Applications close 15 October with The Secretary, Cambridge Commonwealth Trust, PO Box 252, Cambridge CB2 ITZ, England.
The Rhodes Scholarship to Oxford University	Approximately £4200 stg pa	2 years, may be extended for a third year	Unmarried Australian citizens aged betweer 19 and 25 who have an honours degree or equivalent. Applications close in August eac year with The Secretary. University of Sydney, NSW 2006.
Architecture The Associated Hardware Manufacturers Scholarship	\$1500 ps or such other amount as the Dean may determine.	1 year. Where a recipient is enrolled in a higher degree program and is making satisfactory progress the scholarship may be extended subject to the availability of funde	Applicants shall have qualified for the degree of Bachelor of Architecture with honours or Bachelor of Building with honours at the University of New South Wales and such graduates shall be of not more than five (5) years standing at the time of taking up the scholarship. Tenable at any approved institution. Applications Registrar by 31 October.
Byera Hadley Travelling Scholarships*	\$5000 pa	1 year.	Awarded to outstanding graduates of a school of architecture in New South Wales for a course of study or research, or other activity contributing to the advancement of architecture. Graduates must be Australian citizens and awards are eligible up to 8 years from graduation.
The Lindsay Robertson Memorial Travel Award	A maximum of \$1500	1 year	Candidates should be Landscape Architecture graduates of the University of New South Wales. The award is to undertake full-time graduate study or research in Landscape Architecture at an approved institution overseas or in Australia. Applications close 30 May.

Graduate Scholarships (continued)

Donor	Value	Year/s of Tenure	Conditions
Architecture (continued)			
The Master Builders' Association of NSW	\$500	1 year	Applicants must be graduates who have enrolled in the Master of Science
Wightman/University Scholarship	\$2000 pa	1 year	(Building) degree course. Best final year student in BArch degree course proceeding to graduate study. Applications close 30 September.

* Applications to the Registrar, Board of Architects of New South Wales, 33a McLaren Street, North Sydney 2060, not later than 31 March each year.

Prizes

Undergraduate University Prizes

The following table summarizes the undergraduate prizes awarded by the University. Prizes which are not specific to any School are listed under General. All other prizes are listed under the Faculty or Schools in which they are awarded.

Information regarding the establishment of new prizes may be obtained from the Examination Section located on the Ground Floor of the Chancellery.

Donor/Name of Prize	Value\$	Awarded for
General		
Sydney Technical College Union Award	150.00 and medal	Leadership in the development of student affairs, and academic proficiency throughout the course
University of New South Wales Alumni	Statuette	Achievement for community benefit – students in their final or graduating year
School of Architecture	· · · · · · · · · · · · · · · · · · ·	
Board of Architects of New South Wales	250.00	An outstanding graduand in the School of Architecture.
Eric Daniels in Residential Design	500.00	Best performance in design for Residential
•		Accomodation by a student in the bachelor of
		Architecture degree course
Frank Fox Memorial	150.00	11.4334 Historial Research C.
Frank W. Peplow	100.00	Church Architecture or Design
James Hardie & Co Pty Ltd	150.00	General proficiency throughout the Bachelor of
		Architecture degree course.
Morton Herman Memorial	100.00	Best performance in 11.4336 Measured Studies of Historic Structures in the Bachelor of Architecure degree course
Royal Australian Institute of Archtects	250./00	Outstanding performance by a student Architectural design and related subjects in the final two years of the course.
School of Building		
Builders Licensing Board	250.00	Root thesis in the final year of the Recheler of Duilding
Durders Elcerion y Doard	250.00	degree course
Institute of Wood Science (Australian Branch) – Timber in Building	Book and cheque to the value of \$100.00	35.609 Building Science 9 (Timber)

Undergraduate University Prizes (continued)

Donor/Name of Prize	Value\$	Awarded for
School of Building (continued)		
James Hardie & Co Pty Ltd	100.00	Bachelor of Building degree course
Master Builders' Association of New South	350.00	Merit performance in the Bachelor of Building degree
Wales		COURSE
Multiplex Constructions	1000.00	Best performance in Construction 1 to 5.
School of Landscape Architecture		
Lindsay Robertson Memorial	300.00	37.134 Landscape Design 2
School of Town Planning	···· · · · · · · · · · · · · · · · · ·	
John Shaw Memorial	400.00	Best result in Thesis in the Bachelor of Town Planning degree course
The NSW Department of Environment and Planning	350.00	Bachelor of Town Planning degree course, Year 5
NSW Local Government Association of Planners	150.00	Best thesis produced by a final year student on a topic related to local government planning.
Royal Aust Planning Institute, NSW Division	150,00	Bachelor of Town Planning degree course, Year 3

Graduate University Prizes

The following table summarizes the undergraduate prizes awarded by the University.

Donor/Name of Prize	Value\$	Awarded for
School of Building Alex Rigby	250.00	Best overall performance in the Master of Building
T.W. Crow	300.00	Management course Best performance in Year 2 of Building Management

The University of New South Wales Kensington Campus

Theatres

Biomedical Theatres E27 Central Lecture Block E19 Classroom Block (Western Grounds) H3 Rex Vowels Theatre F17 Keith Burrows Theatre J14 Main Building (Physics) Theatrette K14 Mathews Theatres D23 Parade Theatre E3 Science Theatre F13 Sir John Clancy Auditorium C24

Buildings

Affiliated Residential Colleges New (Anglican) L6 Shalom (Jewish) N9 Warrane M7 Applied Science F10 Architecture H14 Arts (Morven Brown) C20 Banks F22 Barker Street Gatehouse N11 Basser College C18 Biological Sciences D26 Central Store B13 Chancellery C22 Chemistry Dalton F12 Robert Heffron E12 Civil Engineering H20 Commerce and Economics (John Goodsell) F20 Dalton (Chemistry) F12 Electrical Engineering G17 Geography and Surveying K17 Goldstein College D16 Golf House A27 Gymnasium 85 House at Pooh Corner N8 International House C6 Io Myers Studio D9 John Goodsell (Commerce and Economics) F20 Kanga's House 014 Kensington Colleges C17 (Office) Basser C18 Goldstein D16 Philip Baxter D14

Link B6 Maintenance Workshop 813 Materials Science and Engineering E8 Mathews F23 Mechanical and Industrial Engineering J17 Medicine (Administration) B27 Menzies Library E21 Morven Brown (Arts) C20 New College (Anglican) L6 Newton J12 NIDA D2 Parking Station H25 Philip Baxter College D14 Robert Heffron (Chemistry) E12 Sam Cracknell Pavilion H8 Shalom College (Jewish) N9 Sir Robert Webster (Textile Technology) G14 Squash Courts B7 Swimming Pool 84 Unisearch House L5 University Regiment J2 University Union (Roundhouse) - Stage | E6 University Union (Blockhouse) - Stage II G6 University Union (Squarehouse) - Stage III E4 Wallace Wurth School of Medicine C27 Warrane College M7

General

Academic Staff Office C22 Accounting F20 Admissions C22 Adviser for Prospective Students F15 Anatomy C27 Applied Economic Research G14 Applied Geology F10 Applied Science (Faculty Office) F10 Architecture (including Faculty Office) H14 Arts (Faculty Office) C20 Audio Visual Unit F20 Australian Graduate School of Management G27 Banking and Finance F20 Biochemistry D26 **Biological and Behavioural Sciences** (Faculty Office) D26 Biomedical Engineering A28 Biomedical Library F23 Biotechnology D26

Bookshop G17 Building H14 Careers and Employment F15 Cashier's Office C22 Chaplains E15 Chemical Engineering and Industrial Chemistry F10 Chemistry E12 Child Care Centres N8. 014 Civil Engineering H20 Commerce and Economics (Faculty Office) F20 Community Medicine D26 Computing Services Department F21, D26 Continuing Education Support Unit F23 Counselling and Careers Service F15 Economics F20 Education G2 Education Testing Centre E15 Electrical Engineering and Computer Science G17 Energy Research, Development and Information Centre F10 Engineering (Faculty Office) K17 English C20 Ethics Committees Secretariat B8 Examinations C22 Fees Office C22 Food Science and Technology F10 French C20 General Staff Office C22 Geography K17 German Studies C20 Graduate Office and Alumni Centre E4 Graduate School of the Built Environment H14 Groundwater Management and Hydrogeology F10 Health Administration C22 History C20 Industrial Arts H14 Industrial Relations and Organizational Behaviour F20 Information Systems F20 Kanga's House 014 Kindergarten (House at Pooh Corner) N8 Landscape Architecture K15 Law (Faculty Office) F21 Law Library F21 Legal Studies and Taxation F20 Liberal and General Studies C20 Librarianship F23 Library E21

Lost Property C22 Marine Science D26 Marketing F20 Materials Science and Engineering E8 Mathematics F23 Mechanical and Industrial Engineering J17 Medical Education C27 Medicine (Faculty Office) 827 Microbiology D26 **Mineral Processing and Extractive** Metallurgy E8 Mining Engineering K15 Music B11 National Institute of Dramatic Art D2 Off-campus Housing C22 Optometry J12 Pathology C27 Patrol and Cleaning Services C22 Petroleum Engineering D12 Philosophy C20 Physics K15 Physiology and Pharmacology C27 Political Science C20 Printing Unit C22 Psychology F23 Public Affairs Unit C22 Publications Section C22 Remote Sensing K17 Russian Studies C20 Safety Science J17 Science and Mathematics Course Office D26 Science and Technology Studies C20 Social Work G2 * Sociology C20 Spanish and Latin American Studies C20 Sport and Recreation Centre B6 Student Health E15 Student Records C22 Students' Union E4 and C21 Survevina K17 Tertiary Education Research Centre E15 Textile Technology G14 Theatre Studies **B10** Town Planning K15 Union Shop (Upper Campus) D19 University Archives E21 University Press A28 University Union (Blockhouse) G6 Waste Management H20 WHO Regional Training Centre C27 Wool and Animal Science B8

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This Handbook has been specifically designed as a source of reference for you and will prove useful for consultation throughout the year.

For fuller details about the University - its organization, staff membership, description of disciplines, scholarships, prizes, and so on, you should consult the Calendar.

The Calendar and Handbooks also contain a summary list of higher degrees as well as the conditions for their award applicable to each volume. For detailed information about courses, subjects and requirements of a particular faculty you should consult the relevant Faculty Handbook.

Separate Handbooks are published for the Faculties of Applied Science, Architecture, Arts, Commerce and Economics, Engineering, Law, Medicine, Professional Studies, Science (including Biological and Behavioural Sciences and the Board of Studies in Science and Mathematics), and the Australian Graduate School of Management (AGSM).

The Calendar and Handbooks, which vary in cost, are available from the Cashier's Office.