The University of New South Wales

Architecture

1984 Faculty Handbook

How to use this Handbook

The information in this book has been divided into **seven parts.**

General Information (the India coloured pages) lists what you need to know about the University as a whole, introduces some of the services available and notes the most important rules and procedures. You should read this part in its entirety.

For further information about the University and its activities, see the University Calendar.

Faculty Information.

Undergraduate Study outlines the courses available in each school in the faculty.

Graduate Study is about higher degrees.

Subject Descriptions lists each subject offered by the schools in the faculty. The schools are listed numerically.

Information includes:

- Subject number, title and description
- Prerequisite, co-requisite and excluded subjects, where applicable
- Additional information about the subject such as unit values, credit hours, teaching hours per week, sessions when taught

Financial Assistance to Students is a list of scholarships and prizes, available at undergraduate and graduate level in the faculty.

Staff list.

For detailed reference, see the list of **Contents.**

The University of New South Wales
PO Box 1 Kensington NSW Australia 2033 Phone 663 0351

Architecture

1984 Faculty Handbook

ISSN 0811-7594

The address of the University of New South Wales is:

PO Box 1, Kensington
New South Wales, Australia 2033

Telephone: (02) 663 0351

Telegraph: UNITECH, SYDNEY

Telex AA26054

Typeset in Australia by Smith & Miles Limited, 433 Kent Street, Sydney, NSW 2000
Printed in Australia by Bridge Printery (Sales) Pty Ltd, 29-35 Dunning Avenue, Rosebery, NSW 2018

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 12 September 1983, but may be amended without notice by the University Council.

Contents

General Information

To obtain the maximum benefit from your studies you should make an effort to learn what facilities the University offers, to investigate the best methods of study and to discover as much as possible about the course for which you are enrolled.

This Handbook has been specially designed as a detailed source of reference for you in all matters related to your Faculty. This **General Information** Section is intended to help you put the Faculty into perspective with the University as a whole, to introduce you to some of the services available to students and to note some of the most important rules and procedures.

For fuller details about some aspects of the University and its activities you might need to consult the University Calendar.

Some people who can help you

If you are experiencing difficulties in adjusting to the requirements of the University you will probably need advice. The best people to talk to on matters relating to progress in studies are your tutors and lecturers. If your problem lies outside this area there are many other people with specialized knowledge and skills who may be able to help you.

The **Deputy Registrar (Student Services)**, Mr Peter O'Brien, and members of his staff, are located on the first floor of the Chancellery. They will help those students who need advice and who have problems but who do not seem to be provided for by the other organizations and services mentioned. As well as dealing with general enquiries they are especially concerned with the problems of overseas, Aboriginal, and physically handicapped and disabled students. Enquire at Room 148E, phone 2482.

Note: All phone numbers below are University extension numbers. If you are outside the University, dial 6630351 and ask for the extension. Alternatively you may dial 662 and then the extension number. This prefix should only be used when you are certain of the extension that you require as callers using 662 cannot be transferred to any other number.

The **Assistant Registrar (Admissions and Examinations)**, Mr Jack Hill, is located on the ground floor of the Chancellery. General inquiries should be directed to 3715. For information regarding examinations, including examination timetables and clash of examinations, contact the **Senior Administrative Officer**, Mr John Grigg, phone 2143.

The **Assistant Registrar (Student Records and Scholarships — Undergraduate and Postgraduate),** Mr Graham Mayne is located on the ground floor of the Chancellery. For particular enquiries regarding illness and other matters affecting performance in examinations and assessment, academic statements, graduation ceremonies, prizes, release of examination results and variations to enrolment programs, phone 3317.

The **Adviser for Prospective Students,** Mrs Fay Lindsay, is located in the Chancellery and is available for personal interview. For an appointment phone 3453.

The **Assistant Registrar (Careers and Employment),** Mr Jack Foley, is located in the Chancellery. Enquiries should be directed to 3259.

The **Off-campus Housing Officer,** Mrs Judy Rawson, is located in Room 148E in the Chancellery. For assistance in obtaining suitable accommodation phone 3260.

Student Loans enquiries should be directed to Mrs Judy Rawson, Room 148E in the Chancellery, phone 3164.

The **Student Health Unit** is located in Hut E15b at the foot of Basser Steps. The Director is Dr Geoffrey Hansen. For medical aid phone 2679, 2678 or 2677.

The **Student Counselling and Research Unit** is located at the foot of Basser Steps. Dr Pat Cleary is the Head of the Unit. For assistance with educational or vocational problems ring 3681 or 3685 for an appointment.

The **University Librarian** is Mr Allan Horton. Library enquiries should be directed to 2048.

The **Chaplaincy Centre** is located in Hut E15a at the foot of Basser Steps.

The **Students' Union** is located on the second floor of Stage III of the University Union, where the SU President, Secretary-Treasurer, Education Vice-President, Women's Officer, Director of Overseas Students and a full-time solicitor employed by the Students' Union are available to discuss any problems you might have.

Cashier's Hours The University Cashier's office is open from 9.30 am to 1.00 pm and from 2.00 pm to 4.30 pm, Monday to Friday. It is open for additional periods at the beginning of Session 1. Consult noticeboards for details.

Calendar of Dates

The Academic Year

The academic year is divided into two sessions, each containing 14 weeks for teaching. There is a recess of five weeks between the two sessions and there are short recesses of one week within each of the sessions.

Session 1 commences on the first Monday of March.

1984

Faculties other than Medicine

Session 1	5 March to 13 May
(14 weeks)	*May Recess:* 14 May to 20 May
	21 May to 17 June
	Midyear Recess: 18 June to 22 July
Examinations	19 June to 4 July
Session 2	23 July to 26 August
(14 weeks)	*August Recess:* 27 August to 2 September
	3 September to 4 November
	Study Recess: 5 November to 11 November
Examinations	12 November to 30 November

Faculty of Medicine

First and Second Years	As for other faculties	
Third and Fourth Years	Term 1 (10 weeks)	23 January to 1 April
	Term 2 (9 weeks)	9 April to 13 May
	May Recess:	14 May to 20 May
		21 May to 17 June
	Term 3 (9 weeks)	25 June to 26 August
	August Recess:	27 August to 2 September
	Term 4 (10 weeks)	3 September to 11 November
Fifth Year	Term 1 (8 weeks)	23 January to 18 March
	Term 2 (8 weeks)	26 March to 20 May
	Term 3 (8 weeks)	28 May to 22 July

	Term 4 (8 weeks)	30 July to 23 September
	Term 5 (8 weeks)	2 October to 25 November

January

Monday 2	Public Holiday — New Year's Day
Friday 13	Last day for acceptance of applications by office of the Admissions Section for transfer to another undergraduate course within the University
Monday 16	Last day for applications for review of results of assessment
Monday 30	Public Holiday — Australia Day

February

Wednesday 1	Enrolment period begins for new undergraduate students and undergraduate students repeating first year
Monday 20	Enrolment period begins for second and later year undergraduate students and graduate students enrolled in formal courses
Tuesday 28	Last day for undergraduate students who have completed requirements for pass degrees to advise the Registrar they are proceeding to an honours degree or do not wish to take out the degree for which they have applied for any other reason

March

Monday 5	**Session 1 begins** — all courses except Medicine III, IV and V
Wednesday 7	List of graduands for April/May ceremonies and 1983 prizewinners published in *The Sydney Morning Herald*
Monday 12	Last day for notification of correction of details published in *The Sydney Morning Herald* on 7 March concerning April/May graduation ceremonies
Friday 16	Last day for acceptance of enrolment by new undergraduate students (late fee payable thereafter)
Friday 30	Last day for acceptance of enrolment by undergraduate students re-enrolling in second and later years (late fee payable thereafter)

April

Thursday 19	Last day for undergraduate students to discontinue without failure subjects which extend over Session 1 only
Friday 20	Good Friday — Public Holiday
Saturday 21	Easter Saturday — Public Holiday
Monday 23	Easter Monday — Public Holiday
Wednesday 25	Anzac Day — Public Holiday

May

Wednesday 2	*Confirmation of Enrolment* forms despatched to all students
Friday 11	Last day for acceptance of corrected *Confirmation of Enrolment* forms
Monday 14	**May Recess begins**
Wednesday 16	Last day for undergraduate students completing requirements for degrees at the end of Session 1 to submit *Application for Admission to Degree* forms
Thursday 17	Publication of provisional timetable for June/July examinations
Sunday 20	**May Recess ends**
Friday 25	Last day for students to advise of examination clashes

June

Tuesday 5	Publication of timetable for June/July examinations
Monday 11	Queen's Birthday — Public Holiday
Sunday 17	**Session 1 ends**
Monday 18	**Midyear Recess begins**
Tuesday 19	Examinations begin

July

Wednesday 4	Examinations end
Monday 16	Examination results mailed to students
Tuesday 17	Examination results displayed on University noticeboards *To Friday 20 July:* Students to amend enrolment programs following receipt of June examination results
Sunday 22	**Midyear Recess ends**
Monday 23	**Session 2 begins**

August

Friday 3	Last day for students to discontinue without failure subjects which extend over the whole academic year
Monday 27	**August Recess begins**
Tuesday 28	Last day for undergraduate students who have completed requirements for pass degrees to advise the Registrar they are proceeding to an honours degree or do not wish to take out the degree for which they have applied for any other reason

September

Sunday 2	**August Recess ends**
Wednesday 5	List of graduands for October graduation ceremonies published in *The Sydney Morning Herald*
Monday 10	Last day for notification of correction of details published in *The Sydney Morning Herald* on 5 September concerning October graduation ceremonies
Friday 14	Last day for undergraduate students to discontinue without failure subjects which extend over Session 2 only
Monday 24	*Confirmation of Enrolment* forms despatched to all students
Friday 28	Last day to apply to UCAC for transfer to another tertiary institution in New South Wales

October

Monday 1	Eight Hour Day — Public Holiday
Wednesday 3	Last day for acceptance of corrected *Confirmation of Enrolment* forms
Thursday 4	Publication of provisional examination timetable
Friday 5	Last day for applications from undergraduate students completing requirements for degrees at the end of Session 2 to submit applications for *Admission to Degree* forms
Friday 12	Last day for students to advise of examination timetable clashes
Thursday 25	Publication of examination timetables

November

Sunday 4	**Session 2 ends**
Monday 5	**Study Recess begins**
Sunday 11	**Study Recess ends**
Monday 12	Examinations begin
Friday 30	Examinations end

December

Monday 17	Examination results mailed to students List of graduands in Medicine for February Graduation Ceremony published in *The Sydney Morning Herald*
Tuesday 18	Examination results displayed on University noticeboards
Tuesday 25	**Christmas Day — Public Holiday**
Wednesday 26	**Boxing Day — Public Holiday**

1985

Faculties other than Medicine and Military Studies

Session 1 (14 weeks)	4 March to 12 May *May Recess:* 13 May to 19 May 20 May to 16 June *Midyear Recess:* 17 June to 21 July
Examinations	18 June to 3 July
Session 2 (14 weeks)	22 July to 25 August *August Recess:* 26 August to 1 September 2 September to 3 November *Study Recess:* 4 November to 10 November
Examinations	11 November to 29 November

Faculty of Medicine

First and Second Years	As for other faculties
Third and Fourth Years	Term 1 (10 weeks) 21 January to 31 March Term 2 (9 weeks) 9 April to 12 May *May Recess:* 13 May to 19 May 20 May to 16 June Term 3 (9 weeks) 24 June to 25 August *August Recess:* 26 August to 1 September Term 4 (10 weeks) 2 September to 10 November
Fifth Year	Term 1 (8 weeks) 21 January to 17 March Term 2 (8 weeks) 25 March to 19 May Term 3 (8 weeks) 27 May to 21 July Term 4 (8 weeks) 29 July to 22 September Term 5 (8 weeks) 30 September to 24 November

January	
Tuesday 1	Public Holiday (New Year)
Friday 11	Last day for acceptance of applications by office of the Admissions Section for transfer to another undergraduate course within the University
Monday 14	Last day for applications for review of results of annual examinations
Monday 28	Australia Day — Public Holiday
February	
Monday 19	Enrolment period begins for second and later year undergraduate students and graduate students enrolled in formal courses
March	
Monday 4	Session 1 begins — all courses except Medicine III, IV and V
April	
Friday 5 to Monday 8	Easter — Public Holiday
Thursday 25	Anzac Day — Public Holiday

Organization of the University

The University of New South Wales was first incorporated by an Act of Parliament in 1949, under the name of the New South Wales University of Technology.

In 1983 the University had 18,376 students and over 3,600 staff who worked in more than eighty buildings. These figures include staff and students at Broken Hill (W.S. and L.B. Robinson University College), Duntroon (the Faculty of Military Studies) and Jervis Bay.

Arms of the University of New South Wales

The arms of the University are reproduced on the front cover of this handbook. The arms were granted by the College of Heralds in London, on 3 March 1952, and the heraldic description is as follows:

'Argent on a Cross Gules a Lion passant guardant between four Mullets of eight points Or a Chief Sable charged with an open Book proper thereon the word SCIENTIA in letters also Sable.

'The lion and the four stars of the Southern Cross on the Cross of St George have reference to the State of New South Wales which brought the University into being; the open book with SCIENTIA across its page reminds us of its original purpose. Beneath the shield is the motto 'Manu et Mente', which is the motto of the Sydney Technical College, from which the University has developed. The motto is not an integral part of the Grant of Arms and could be changed at will; but it was the opinion of the University Council that the relationship with the parent institution should in some way be recorded.'

The University Colours

The colours of the University are black and gold.

The Council

The chief governing body of the University is the Council which has the responsibility of making all major decisions regarding its policy, conduct and welfare.

The Council consists of 44 members from the State Parliament, industry and commerce, agriculture, the trade unions, professional bodies, the staff, the students and the graduates of the University.

The Council meets six times per year and its members also serve on special committees dealing with, for example, academic matters, finance, buildings and equipment, personnel matters, student affairs and public relations.

The Chairman of the Council is the Chancellor, the Hon. Mr Justice Samuels.

The Professorial Board

The Professorial Board is one of the two chief academic bodies within the University and includes all the professors from the various faculties, non-professorial Heads of Schools and Chairmen of Faculty, and several ex-officio and appointed members. It deliberates on all questions such as matriculation requirements, the content of courses, the arrangement of syllabuses, the appointment of examiners and the conditions for graduate degrees. Its recommendations on matters of major policy are presented to Council for its consideration and adoption.

The Faculties/Boards of Studies

The executive head of a faculty or board of studies is the dean, with the exception of the Australian Graduate School of Management, where the executive head is the director. Members of each faculty or board meet regularly to consider matters pertaining to their own areas of teaching and research, the result of their deliberations being then submitted to the Professorial Board.

The term 'faculty' is used in two distinct senses in the University. Sometimes it is used to refer to the group of schools comprising the faculty, and at others to the deliberative body of academic members of the Schools within the faculty.

The eleven faculties are Applied Science, Architecture, Arts, Biological Sciences, Commerce, Engineering, Law, Medicine, Military Studies, Professional Studies and Science. In addition, the Board of Studies of the Australian Graduate School of Management (AGSM) and the Board of Studies in General Education fulfil a function similar to that of the faculties. The Board of Studies in Science and Mathematics, which was established to facilitate the joint academic administration of the Science and Mathematics degree course by the faculties of Biological Sciences and Science, considers and reports to the Professorial Board on all matters relating to studies, lectures and examinations in the science and mathematics degree course.

The Schools

Subjects come under the control of the individual schools (eg the School of Chemistry, the School of Accountancy). The head of the school in which you are studying is the person in this academic structure with whom you will be most directly concerned.

Executive Officers

As chief executive officer of the University, the Vice-Chancellor and Principal, Professor Michael Birt, is charged with managing and supervising the administrative, financial and other activities of the University.

He is assisted in this task by two Pro-Vice-Chancellors, Professor Ray Golding and Professor Athol Carrington, together with the Deans and the three heads of the administrative divisions.

General Administration

The administration of general matters within the University comes mainly within the province of the Registrar, Mr Ian Way, the Bursar, Mr Tom Daly, and the Property Manager Mr Peter Koller.

The Registrar's Division is concerned chiefly with academic matters such as the admission of students, and the administration of examinations as well as the various student services (health, employment, amenities, and counselling).

The Bursar's Division is concerned with the financial details of the day-to-day administration and matters to do with staff appointments, promotions, etc.

The Property division is responsible for the building program and the 'household' services of the University, including electricity, telephones, cleaning, traffic and parking control and maintenance of buildings and grounds.

Student Representation on Council and Faculties/Boards

Three members of the University Council may be students elected by students. All students who are not full-time members of staff are eligible to stand for a two-year term of office. The students who are elected to the Council are eligible for election to the committees of Council.

Students proceeding to a degree or a graduate diploma may elect members for appointment by the Council to their faculty or board of studies. Elections are for a one-year term of office.

Open Faculty/Board Meetings

If you wish you may attend a faculty or board meeting. You should seek advice at the office of the faculty whose meeting you wish to attend, as the faculties have their own rules for the conduct of open meetings.

Award of the University Medal

The University may award a bronze medal to undergraduate students who have achieved highly distinguished merit throughout their degree course.

Identification of Subjects by Numbers

For information concerning the identifying number of each subject taught in each faculty as well as the full list of identifying numbers and subjects taught in the University, turn to the first page of the section **Subject Descriptions.** This list is also published in the Calendar.

Textbook Lists

Textbook lists are issued early in the year and are available from School and Faculty offices for re-enrolling students and from the Unisearch House Enrolment Centre for first year students.

Textbook Costs and Course-Related Costs
Students should allow quite a substantial sum for textbooks. This can vary from $250 to $600 per year depending on the course taken. These figures are based on the cost of new books. The Students' Union operates a secondhand bookshop. Information about special equipment costs, accommodation charges and cost of subsistence on excursions, field work, etc, and for hospital residence (medical students) are available from individual schools.

Co-operative Bookshop
Membership is open to all students, on initial payment of a fee of $12, refundable after 2 years.

General Studies Program
Almost all undergraduates in faculties other than Arts and Law are required to complete a General Studies program. The Department of General Studies within the Board of Studies in General Education publishes its own Handbook which is available free of charge. All enquiries about General Studies should be made to the General Studies Office, Room G56, Morven Brown Building, phone 3476.

Student Services and Activities

Accommodation

Residential Colleges

There are seven residential colleges on campus. Each college offers accommodation in a distinctive environment which varies from college to college, as do facilities and fees. A brief description of each college is given below, and further information may be obtained directly from the individual colleges. In addition to basic residence fees, most colleges make minor additional charges for such items as registration fees, caution money or power charges. Intending students should lodge applications before the end of October in the year prior to the one in which they seek admission. Most colleges require a personal interview as part of the application procedure.

The Kensington Colleges

The Kensington Colleges comprise Basser College, Goldstein College and Philip Baxter College. They house 450 men and women students, as well as tutorial and administrative staff members. Fees are payable on a session basis. Apply in writing to the Master, PO Box 24, Kensington, NSW 2033.

International House

International House accommodates 154 male and female students from Australia and up to thirty other countries. Preference is given to more senior undergraduates and graduate students. Eight tutors are available to help students. Apply in writing to the Warden, International House, PO Box 1, Kensington, NSW 2033.

New College

New College is an Anglican college and it provides accommodation (with all meals) for 220 graduates and undergraduates, without regard to race, religion, or sex. The College has its own resident tutors, and sponsors a wide range of sporting and social activities. Apply to the Master, New College, Anzac Parade, Kensington 2033 (telephone 662 6066).

Shalom College

Shalom College is a Jewish residential college. It provides accommodation for 86 men and women students. Non-resident membership is available to students who wish to avail themselves of the Kosher dining room and tutorial facilities. Fees are payable on a session basis. Conferences are catered for, particularly with Kosher requirements. Rates are available on application. Apply in writing to the Master, Shalom College, the University of New South Wales, PO Box 1, Kensington, NSW 2033.

Warrane College

Warrane College provides accommodation for 200 men and is open to students of all ages, backgrounds and beliefs. The College offers a comprehensive tutorial program along with a wide range of activities, professional orientation and opportunities to meet members of the University staff informally. Non-resident membership is available to male students who wish to participate in College activities and to make use of its facilities. The general spiritual care of the College has been entrusted to Opus Dei. Enquiries: The Master, Warrane College, PO Box 123, Kensington 2033. Telephone (02) 662 6199.

Creston Residence

Creston Residence offers accommodation to 25 undergraduate and graduate women students. Activities and tutorials are open to non-resident students. The spiritual activities offered at Creston are entrusted to the Women's Section of Opus Dei. Enquiries: 36 High Street, Randwick 2031. Telephone (02) 398 5693.

Other Accommodation

Off-campus Accommodation

Students requiring other than College accommodation may contact the Housing Officer in the Chancellery, Room 148E for assistance in obtaining suitable accommodation in the way of rooms with cooking facilities, flats, houses, share flats, etc. Extensive listings of all varieties of housing are kept up-to-date throughout the year and during vacations. Accom

modation in the immediate vicinity of the University is not usually easy to find at short notice, and is expensive.

No appointment is necessary but there may be some delay in February and March. The Housing staff are always happy to discuss any aspect of accommodation.

Special pamphlets on accommodation, lists of estate agents and hints on house-hunting are available on request.

Associations, Clubs and Societies

The Sports Association

The Sports Association is a student organization within the University which caters for a variety of sports for both men and women. In December 1952 the University Council approved the establishment of the Sports Association, which then consisted of five clubs. As the University has grown the Association has expanded, and it now includes thirty-eight clubs.

The Association office is situated on the 3rd floor, Squarehouse, E4, lower campus, and can be contacted on extension 2673. The control of the Association is vested in the General Committee which includes delegates from all the clubs.

Membership is compulsory for all registered students, and the annual fee is as set out later, in **Rules and Procedures, Enrolment Procedures and Fees Schedules,** section **15. Fees.** Membership is also open to all members of staff and graduates of the University on payment of a fee as prescribed in the By-laws of the Association. All members are invited to take part in any of the activities arranged by the Association, and to make use of the University's sporting and recreational facilities.

The Association is affiliated with the Australian Universities Sports Association (AUSA) which is the controlling body for sport in all Australian universities.

School and Faculty Associations

Many schools and faculties have special clubs with interests in particular subject fields. Enquire at the relevant Faculty or School Office for information.

Australian Armed Services

The University maintains links with the Royal Australian Navy, the Australian Army Reserve and the Royal Australian Air Force, and opportunities exist for student participation in their activities. See the **General Information** section of the Faculty Handbooks for details.

Chaplaincy Centre

The University Chapel

The University provides a small chapel for the use of all faiths. In its temporary housing it is located in Hut E15a near the Chemistry Building. The chapel is available for services of worship by arrangement with the full-time chaplains. At other times it is available for private meditation to all members of the University.

Chaplaincy Service

A Chaplaincy Service is available within the University of New South Wales for the benefit of students and staff.

The service offers fellowship, personal counselling and guidance, together with leadership and biblical and doctrinal studies and in worship. The chaplains maintain close liaison with student religious societies.

The chaplains are located in Hut E15a at the foot of Basser steps, which also contains the temporary chapel.

Deputy Registrar (Student Services)

The Deputy Registrar (Student Services), Mr Peter O'Brien, and his Administrative Assistant, Mrs Anne Beaumont, are located on the first floor of the Chancellery.

They will help those students who have problems and need advice but who do not seem to be provided for by the other organizations and services mentioned. As well as dealing with those enquiries, they are especially concerned with the problems of physically handicapped and disabled students, overseas students, and aboriginal students.

All enquiries should be made either at room 148E or by telephoning extension 2482 (general enquiries).

Sport and Recreation Section

The Sport and Recreation Section seeks ways to encourage students and staff to include exercise as an essential part of their daily lives. It does this through Sports Clubs on a competitive basis and by offering physical recreation on a more casual basis to the University community.

The Section serves the Sports Association and its 38 constituent clubs and is responsible for the continuing management of the Physical Education and Recreation Centre at which recreational programs are available for both students and staff.

It makes bookings for use of sporting facilities including tennis courts and playing fields. This section is located on the 3rd Floor, Squarehouse, E4, lower campus. The various services may be contacted by phone on the following extensions: Recreation Program 3271; Grounds Bookings 2235; Tennis Bookings 2617; Sports Association 2673.

Physical Education and Recreation Centre

The Sport and Recreation Section provides a recreational program for students and staff at the Physical Education and Recreation Centre. The Centre consists of eight squash courts, seven tennis courts, a main building, and a 50-metre indoor heated swimming pool. The main building has a large gymnasium and practice rooms for fencing, table tennis, judo, weight-lifting, karate and jazz ballet, also a physical fitness testing room. The recreational program includes intramurals, teaching/coaching, camping. The Centre is located on the lower campus adjacent to High Street. The Supervisor at PERC may be contacted on extension 3271.

Student Counselling and Research Unit

The Student Counselling and Research Unit provides counselling services to students, prospective students, parents and other concerned persons.

The unit is located in the huts near the foot of Basser Steps (access from College Road or Engineering Road).

Appointments are offered throughout the academic year and during recesses between 8 am to 5 pm on week days (up to 7 pm on some evenings). A 'walk-in' service for short interviews is available between 9 am and 5 pm. Appointments may be made by phoning extension 3685 or 3681 between 8.30 am and 5.30 pm.

Counsellors offer assistance in planning, decision-making, problem solving, social and emotional development, and dealing with grievances. Group programs on such topics as study, tutorial and examination skills, stress management, communicating, and self-confidence are offered each session. Brochures are available from the receptionist.

Careers and Employment Section

The Careers and Employment Section provides careers advice and assistance in finding employment.

Assistance with careers and permanent employment opportunities includes: the regular mailing of a *Job Vacancy Bulletin* to registered students and graduates, a Library, and a Campus Interview Program in which final year students have the opportunity to speak to employers regarding employment prospects.

Assistance is also provided in obtaining course-related employment during long vacations as required by undergraduates in Engineering and Applied Science.

The Section is located in Undercroft Room LG05 in the Chancellery.

For further information, telephone as follows: careers and employment assistance 3259 or 3630; long vacation industrial training 2086.

Student Health Unit

A student health clinic and first aid centre is situated within the University. The medical service although therapeutic is not intended to replace private or community health services. Thus, where chronic or continuing conditions are revealed or suspected the student may be referred to a private practitioner or to an appropriate hospital. The health service is not responsible for fees incurred in these instances. The service is confidential and students are encouraged to attend for advice on matters pertaining to health.

The service is available to all enrolled students by appointment, free of charge, between 9 am and 5 pm Mondays to Fridays. For staff members, immunizations are available, and first aid service in the case of injury or illness on the campus.

The centre is located in Hut E15b on the northern side of the campus in College Road at the foot of the Basser Steps.

Appointments may be made by calling at the centre or by telephoning extension 2679, 2678 or 2677 during the above hours.

The Family Planning Association of NSW conducts clinics at the Student Health Unit and at the adjacent Prince of Wales Hospital which are available for both staff and students. Appointments may be made for the Student Health Unit clinic by telephoning 588 2833 or for the Prince of Wales Hospital clinics by telephoning 399 0111.

The Students' Union

The Students' Union was formed in 1952 as an organization, duly recognized by the University Council, to represent the student body and to provide a central organization for the administration of student activities. In the words of its constitution 'The Students' Union is formed for the purpose of advancing the interests of University men and women, facilitating their general scientific and technical education, and fostering a University spirit among them'.

The Students' Union affords a recognized means of communication between the student body and the University administration, and represents its members in all matters affecting their interests. It aims to promote the cultural, educational and recreational life of the University and to encourage a permanent interest among graduates in the life and progress of student activities within the University. The Students' Union also makes representations to government and other bodies outside the University on behalf of its members.

Membership of the Students' Union is compulsory for all registered students of the University; the annual subscription for full-time and part-time students is set out later, in **Rules and Procedures, Enrolment and Procedures and Fees Schedules,** section **15. Fees.** All alumni of the University are eligible for Life Membership.

The Students' Union is governed by a Council consisting in the main of elected student representatives from the various faculties of the University. There are also representatives of the University Council, Life Members, the Staff Association and the Sports Association. The Council is elected annually.

A full-time President, elected each year by popular ballot, directs the entire administration of the Students' Union and its activities, assisted by a Secretary-Treasurer.

Other officers are the Education Vice-President who works towards the implementation of Students' Union education policy; the Welfare-Research Officer concerned with helping students with problems they may encounter in the University; the Electronic Media Officer; and the Director of Overseas Students who deals with specific problems these students may encounter while in Australia.

The Students' Union has three full-time officers who are elected each year by popular ballot. They are the President, who is mainly the political figure-head of the Union; the Secretary/Treasurer, who organizes the smooth operation of the SU offices, keeps the membership rolls up to date, and oversees the financial operations; and the Women's Officer who represents women on campus and formulates, maintains and co-ordinates the Students' Union policy on women's affairs.

Other officers are the Education Vice-President, who works towards the implementation of Students' Union education policy; the Education Officer concerned with helping students with problems relating to TEAS, Show-Cause and other matters relevant to their courses; the Vice-President who ensures the efficient running of CASOC: and the Director of Overseas Students who deals with specific problems these students may encounter while in Australia.

The activities in which the Students' Union is involved include:

1. Publication of the Student Paper *Tharunka.*

2. Production of the student video program *Campuswide.*

3. A free legal service run by a qualified lawyer employed by the Students' Union Council.

4. The Secondhand Bookshop for cheap texts.

5. A child care centre, *House at Pooh Corner.*

6. CASOC (Clubs and Societies on Campus) which provides money from the SU for affiliated clubs and societies on campus.

7. A video service with access for students to equipment and advice.

8. A noticeboard for casual job vacancies.

9. Organization of orientation for new students.

10. Organization of Foundation Day.

The SU has two offices on campus. One is located at the back of the Library Lawn (between the Chancellery and the Morven Brown Building), the other is on the Second Floor of the Squarehouse (above the bar) at the bottom end of campus.

The University Library

The University libraries are mostly situated on the upper campus. The library buildings house the Undergraduate Library on Level 3, the Social Sciences and Humanities Library on Level 4, the Physical Sciences Library on Level 7 and the Law Library on Level 8. The Biomedical Library is in the western end of the Mathews Building and is closely associated with libraries in the teaching hospitals of the University.

For details consult **Faculty Information** in the relevant Faculty Handbook.

There are also library services at other centres:

The Water Reference Library situated at Manly Vale (telephone 948 0261) which is closely associated with the Physical Sciences Library.

The library at the Royal Military College, Duntroon, ACT, serving the Faculty of Military Studies.

Each library provides reference and lending services to staff and students and each of the libraries on the Kensington campus is open throughout the year during the day and evening periods. The exact hours of opening vary during the course of the academic year.

Staff and students normally use a machine-readable identification card to borrow from the University libraries.

The University Union

The University Union provides the facilities students, staff and graduates require in their daily University life and thus an opportunity for them to know and understand one another through associations outside the lecture room, the library and other places of work.

The Union is housed in three buildings near the entrance to the Kensington Campus from Anzac Parade. These are the Roundhouse, the Blockhouse and the Squarehouse. Membership of the Union is compuslory for all registered students and is open to all members of staff and graduates of the University.

The control of the Union is vested in the Board of Management whose Chief Executive Officer is the Warden.

The full range of facilities provided by the Union includes a cafeteria service and other dining facilities, a large shopping centre (including clothing shop and delicatessen); travel service; banking, pharmaceutical, optometrical and hairdressing facilities; showers; common, games, reading, meeting, music, practice, craft and dark rooms. The Union also has shops on Campus which cater for student needs, including art materials and calculators. The Union also operates various Food Service Points on the Upper Campus including the Sciences Cafeteria, Golf House and the Undercroft with a late night service in the Sciences Cafeteria. Photocopying, sign printing, and stencil cutting services are also available. The Union also sponsors special concerts (including lunchtime concerts) and conducts courses in many facets of the arts including weaving, photography, creative dance and yoga. Full information concerning courses is contained in a booklet obtainable from the Union's program department.

The University Union should not be confused with the Students' Union or Students' Representative Council as it is known in some other universities. This latter body has a representative function and is the instrument whereby student attitudes and opinions are crystallized and presented to the University and the community.

Financial Assistance to Students

Tertiary Education Assistance Scheme

Under this scheme, which is financed by the Commonwealth Government, assistance is available for full-time study in approved courses, to students who are not bonded and who are permanent residents of Australia, subject to a means test on a non-competitive basis. The allowances paid are unlikely to be sufficient, even at the maximum rate, for all the living expenses of a student. Family help and/or incomes from vacation or spare-time work would also be needed.

Students in the following types of university courses are eligible for assistance:

- Undergraduate and graduate bachelor degree courses
- Graduate diplomas
- Approved combined bachelor degree courses
- Master's qualifying courses (one year)

The rates of allowance and conditions for eligibility are set out in a booklet obtainable from the Commonwealth Department of Education.

Tertiary students receiving an allowance, and prospective tertiary students, will be sent application forms in January 1984. Forms are also available from the Admissions Section *or* the Careers and Employment Section, *or* from the Director, Department of Education, 59 Goulburn Street, Sydney, NSW 2000 (telephone 218 8800). Continuing students should submit applications as soon as examination results are available. New students should do so as soon as they are enrolled. All students should apply by 31 March 1984, otherwise benefits will not be paid for the earlier months of the year.

It is most important that students advise the TEAS office if at any time they change or discontinue their study programs, as their eligibility for benefits might be affected.

Other Financial Assistance

In addition to the Tertiary Education Assistance Scheme financed by the Australian Government the following forms of assistance are available:

1. *Deferment of Payment of Fees* Deferments may be granted for a short period, usually one month, without the imposition of a late fee penalty, provided the deferment is requested prior to the due date for fee payments.

2. *Short Term Cash Loans* Donations from various sources have made funds available for urgent cash loans not exceeding $100. These loans are normally repayable within one month.

3. Early in 1973 the Commonwealth Government made funds available to the University to provide loans to students in financial difficulty. The loans are to provide for living allowances and other approved expenses associated with attendance at university. Students are required to enter into a formal agreement with the University to repay the loan. The University is unable to provide from the fund amounts large enough for all or even a major part of the living expenses of a student.

From the same source students who are in extremely difficult financial circumstances may apply for assistance by way of a non-repayable grant. In order to qualify for a grant a student must generally show that the financial difficulty has arisen from exceptional misfortune. Grants are rarely made.

The University has also been the recipient of generous donations from the Arthur T. George Foundation, started by Sir Arthur George and his family, for the endowment of a student loan fund.

In all cases assistance is limited to students with reasonable academic records and whose financial circumstances warrant assistance.

Enquiries about all forms of financial assistance should be made at the office of the Deputy Registrar (Student Services), room 148E, in the Chancellery.

Financial Assistance to Aboriginal Students

Financial assistance is available to help Aboriginal students from the Commonwealth Government's Aboriginal Study Grant Scheme. Furthermore, the University may assist Aboriginal students with loans to meet some essential living expenses.

The University has also received a generous bequest from the estate of the late Alice Brooks Gange for the education of Australian aborigines within the University. The University is engaged in consultations with groups and individuals for advice on the most effective ways of using the funds and has established a committee to advise the Vice-Chancellor in the matter.

All enquiries relating to these matters should be made at the office of the Deputy Registrar (Student Services), Room 148E, in the Chancellery.

Rules and Procedures

The University, in common with other large organizations, has established rules and procedures which are designed for the benefit of all members of the University. In some cases there are penalties (eg fines or exclusion from examinations) for non-compliance. Any student who, after carefully reading the rules set out in the following pages, requires further information on their application should seek further advice, in the first instance, at the Enquiry Counter in the North Wing of the Chancellery Building.

General Conduct

The University has not considered it necessary to formulate a detailed code of rules relating to the general conduct of students. Enrolment as a student of the University, however, involves an undertaking to observe the regulations, by-laws and rules of the University, and to pay due regard to any instructions given by any officer of the University.

Appeals

Section 5(c) of Chapter III of the By-laws provides that 'Any person affected by a decision of any member of the Professorial Board (other than the Vice-Chancellor) in respect of breach of discipline or misconduct may appeal to the Vice-Chancellor, and in the case of disciplinary action by the Vice-Chancellor, whether on appeal or otherwise, to the Council'.

Admission and Enrolment

The Student Enquiry Counter, located near the Cashier in the Chancellery on the upper campus, provides information for students on admission requirements, undergraduate and graduate courses and enrolment procedures. Faculty handbooks and the Calendar may be purchased from the Cashier. The Enquiry Counter is open from 9 am to 5 pm, Monday to Friday. During enrolment it is also open for some part of the evening.

Information may be obtained here about special admission, admission with advanced standing and admission on overseas qualifications. Applications are also received from students who wish to transfer from one course to another, resume their studies after an absence of twelve months or more, or seek any concession in relation to a course in which they are enrolled. It is essential that the closing dates for lodgement of applications are adhered to. For further details see the section on **Enrolment Procedures and Fees.**

Applications for admission to undergraduate courses from students who do not satisfy the requirements for admission (see section on **Admission Requirements**) are referred by the Admissions Section to the Admissions Committee of the Professorial Board.

Students wishing to enrol as higher degree candidates should first consult the Head of the School in which they wish to study. An application is then lodged on a standard form and the Postgraduate Section, after obtaining a recommendation from the Head of School, refers the application to the appropriate Faculty or Board of Studies Higher Degree Committee.

Details of the procedure to be followed by students seeking entry to first year undergraduate degree courses at the University may be obtained from the Student Enquiry Counter or the Universities and Colleges Admissions Centre.

An Adviser for Prospective Students, Mrs Fay Lindsay, is located in the Chancellery, and is available for personal interview with those who require additional information about the University.

First Year Entry

Those seeking entry to first year courses in one or more of eighteen institutions in the State including the University of Wollongong and the three universities in the Sydney Metropolitan area (Macquarie University, the University of New South Wales and the University of Sydney) are required to lodge a single application form with the Universities and Colleges Admissions Centre, Challis House, 10 Martin Place,

Sydney 2000 (GPO Box 7049, Sydney 2001). On the application form provision is made for applicants to indicate preferences for courses available in any one of the three universities and fifteen other tertiary institutions. Students are notified individually of the result of their applications and provided with information regarding the procedures to be followed in order to accept the offer of a place at this university. Enrolment is completed at the Enrolment Bureau, Unisearch House, 221 Anzac Parade, Kensington.

Deferment of First Year Enrolment

Students proceeding directly from school to University who have received an offer of a place may request deferment of enrolment for one year and will usually receive permission providing they do not enrol at another tertiary institution in that year.

Enrolment Procedures and Fees Schedules 1984

1. Introduction

All students, except those enrolling in graduate research degree courses (see sections **5.** and **6.** below), must lodge an authorized enrolment form with the Cashier either on the day the enrolling officer signs the form or on the day any required General Studies electives are approved.

All students, except those enrolling in graduate research degree courses and those exempted as set out in section **17.** below, should on that day also either pay the required fees or lodge an enrolment voucher or other appropriate authority.

Such vouchers and authorities are generally issued by the NSW Department of Education and the NSW Public Service. They are not always issued in time and students who expect to receive an enrolment voucher or other appropriate authority but have not done so should pay the student activities fees and arrange a refund later. Such vouchers and authorities are not the responsibility of the University and their late receipt is not to be assumed as automatically exempting a student from the requirements of enrolling and paying fees.

If a student is unable to pay the fees the enrolment form must still be lodged with the Cashier and the student will be issued with a 'nil' receipt. The student is then indebted to the University and must pay the fees by the end of the second week of the session for which enrolment is being effected.

Penalties apply if fees are paid after the time allowed (see section **16.** below) unless the student has obtained an extension of time in which to pay fees from the office of the Deputy Registrar (Student Services) (Room 148E, the Chancellery). Such an application must be made before the fee is due. Payment may be made through the mail, in which case it is important that the student registration number be given accurately. Cash should not be sent through the mail.

2. New Undergraduate Enrolments

Persons who are applying for entry in 1984 must lodge an application for selection with the Universities and Colleges Admissions Centre, GPO Box 7049, Sydney 2001, by 1 October 1983.

Those who are selected will be required to complete enrolment at a specified time before the start of Session 1. Compulsory student activities fees should be paid on the day.

In special circumstances, however, and provided class places are still available, students may be allowed to complete enrolment after the prescribed time.

Application forms and details of the application procedures may be obtained from the Student Enquiries Counter, Ground Floor, North Wing of the Chancellery Building.

3. Re-enrolment

See also sections 4., 6. and 7. below.

Students who are continuing courses (or returning after approved leave of absence) should enrol through the appropriate school in accordance with the procedures set out in the current *Enrolment Procedures* booklet, available from the Student Enquiries Counter in the Chancellery and from School offices. Those who have completed part of a course and have been absent without leave need to apply for entry through the Universities and Colleges Admissions Centre, GPO Box 7049, Sydney 2001, by 1 October 1983.

4. Restrictions Upon Re-enrolling

Students who in 1983 have infringed the rules governing re-enrolment should not attempt to re-enrol in 1984 but should follow the written instructions they will receive from the Registrar.

5. New Research Students

Students enrolling for the first time in graduate research degree courses will receive an enrolment form by post. They have two weeks from the date of offer of registration in which to lodge the enrolment form with the Cashier. Completion of enrolment after this time will incur a penalty (see section **16.** below).

6. Re-enrolling Research Students

Students undertaking purely research degree programs (course codes **0-2999**) will be re-enrolled automatically each year and sent an account for any fees due.

7. Submission of Project Report

Students registered for formal masters degree programs (course codes **8000-9999**) who at the commencement of Session 1 have completed all the work for a degree or diploma except for the submission of the relevant thesis or project report are required to re-enrol by the end of the

second week of Session 1. Completion of enrolment after then will incur a penalty (see section **16.** below).

Information about possible student activities fees exemption is set out in section **17.** (10) below.

8. Enrolments by Miscellaneous Students

Enrolments by Miscellaneous students are governed by the following rules:

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

(2) A student who is under exclusion from any subject in the University may not be permitted to be enrolled as a miscellaneous student in that subject.

(3) A student who is under exclusion from any course in the University may not be permitted to enrol in any subject which forms a compulsory component of the course from which the student is excluded.

(4) A student who is subsequently admitted to a course of the University for which any subjects completed as a miscellaneous student form a part may receive standing for those subjects.

9. Final Dates for Completion of Enrolment

No enrolments for courses extending over the whole year or for Session 1 only will be accepted from new students after the end of the second week of Session 1 (16 March 1984) except with the express approval of the Deputy Registrar (Student Services) and the Heads of the Schools concerned; no later year enrolments for courses extending over the whole year or for Session 1 only will be accepted after the end of the fourth week of Session 1 (30 March 1984) except with the express approval of the Deputy Registrar (Student Services) and the Heads of the Schools concerned. No enrolments for courses in Session 2 only will be accepted after the end of the second week of Session 2 (3 August 1984) except with the express approval of the Deputy Registrar (Student Services) and the Heads of the Schools concerned.

10. University of New South Wales and University Union Membership Card

All students enrolled in degree or diploma courses or as miscellaneous students, except those exempt from University Union fees under provisions of section **17.** below, are issued with a University of New South Wales and University Union Membership Card. This card must be carried during attendance at the University and shown on official request.

The number appearing on the front of the card above the student's name is the student registration number used in the University's records. This number should be quoted in all correspondence.

The card must be presented when borrowing from the University libraries, when applying for travel concessions, and when notifying a change of address. It must also be presented when paying fees on re-enrolment each year when it will be made valid for the year and returned. Failure to present the card could result in inconvenience in completing re-enrolment.

Life members of the University Union and those exempt from payment of University Union fees, if enrolled in degree or diploma courses or miscellaneous students use the University's fees receipt in place of the card when applying for travel concessions and when notifying a change of address. The University Library issues a library borrowing card on production of the fees receipt.

A student who loses a card must notify the University Union as soon as possible.

New students are issued with cards on enrolment if eligible.

New graduate students should complete an application for a card when they enrol unless they already possess one from previous study at the University. The card can be collected from the second floor of the University Union Blockhouse approximately three weeks after enrolment. The fees receipt may be used as necessary until the card is available.

11. Payment of Fees

The fees and charges which are payable include those charges raised to finance the expenses incurred in operating activities such as the University Union, the Students' Union, the Sports Association, and the Physical Education and Recreation Centre. Penalty payments are also incurred if a student fails to complete procedures as required. Charges may also be payable, sometimes in the form of a deposit, for the hiring of kits of equipment in certain subjects. Accommodation charges, costs of subsistence on excursions, field work, etc, and for hospital residence (medical students) are payable in appropriate circumstances.

12. Assisted Students

Scholarship holders and sponsored students who have not received an enrolment voucher or appropriate letter of authority from their sponsor at the time when they are enrolling should complete their enrolment by paying their own fees.

A refund of fees will be made when the enrolment voucher or letter of authority is subsequently lodged with the Cashier.

Those unable to pay their own fees in these circumstances can apply to the office of the Deputy Registrar (Student Services) (Room 148E, the Chancellery) for an extension of time in which to pay. Such an application must be made before the fees are due.

13. Extension of Time

Students who are unable to pay fees by the due date may apply to the office of the Deputy Registrar (Student Services) (Room 148E, the Chancellery) for an extension of time, which may be granted in extenuating circumstances. Such applications must be made before the due date.

14. Failure to Pay Fees and Other Debts

Students who fail to pay prescribed fees or charges or are otherwise indebted to the University and who fail either to make a satisfactory settlement of indebtedness upon receipt of due notice or to receive a special exemption ceases to be entitled to the use of University facilities. Such students are not permitted to register for a further session, to attend classes or examinations, or to be granted any official credentials. In the case of students enrolled for Session 1 only or for both Sessions 1 and 2 this disbarment applies if any portion of fees is outstanding after the end of the eighth week of Session 1 (27 April 1984). In the case of students enrolled for Session 2 only this disbarment applies if any portion of fees is outstanding after the end of the sixth week of Session 2 (31 August 1984).

In special cases the Registrar may grant exemption from the disqualification referred to in the preceding paragraph upon receipt of a written statement setting out all relevant circumstances.

15. Fees

Fees and penalties quoted are current at the time of publication but may be amended by the University without notice.

University Union Entrance Fee

Payable on first enrolment $35

Students enrolling for only one session must pay the full University Union entrance fee.

Student Activities Fees

All students (with the exceptions set out in section **17.** below) are required to pay the following fees if enrolling for a program involving two sessions. Those enrolling for only one session will pay the full University Union Entrance Fee, if applicable, and one-half of any other fees due.

Students who consider themselves eligible for life membership of the University Union, the Sports Association, or the Students' Union, should make enquiries about the matter at the offices of those bodies.

Students often seek exemption from some or all of the student activities fees for reasons other than those set out in section **17.** below. It is stressed that the fees charged are a contribution by students towards services and amenities for the University community (both now and in the future) and exemption from them cannot be claimed because a student is unable or unwilling to make use of some of those services or amenities.

Student Activities Fees are adjusted annually by a system of indexation and those set out below are current in 1983 and are therefore subject to an increase in 1984.

University Union annual subscription $101

Sports Association annual subscription $21

Students' Union Annual Subscription

Students enrolling in full-time courses $30
Students enrolling in part-time courses or as miscellaneous students $25

These two fees will be increased for 1984; the amounts have yet to be determined at the time of publication.

Miscellaneous Fund annual fee $35

This fee is used to finance expenses generally of a capital nature relating to student activities and amenities. Funds are allocated for projects recommended by the Student Affairs Committee and approved by the University Council.

Special Examination Fees

Examinations conducted in special circumstances for each subject $20

Review of examination results for each subject $20

Other Charges

In addition to the fees outlined above and depending on the subject being taken, students may be required to make a payment for equipment; money so paid is, in general, refunded if the equipment is returned in satisfactory condition.

16. Penalties

(1) Failure to lodge enrolment form according to enrolment procedure $20

(2) Payment of fees after end of second week of session $20

(3) Payment of fees after end of fourth week of session $40

Penalties (1) and (2) or (1) and (3) may accumulate.

17. Exemptions — fees

Students often seek exemption from the fees for reasons other than those set out below. It is stressed that the fees charged are a contribution by students towards services and amenities for the University community (both now and in the future) and exemption from them cannot be claimed because a student is unable or unwilling to make use of some of those services or amenities.

(1) Life members of the University Union, the Sports Association, and Students' Union are exempt from the relevant fee or fees.

Students who consider themselves eligible for life membership of the University Union, the Sports Association, or the Students' Union, should make enquiries about the matter at the offices of those bodies, not at the office of the Deputy Registrar (Student Services) or at the Cashier's office.

(2) Students enrolled in courses classified as *External* are exempt from all Student Activities Fees and the University Union Entrance Fee.

(3) Students enrolled in courses at the W. S. and L. B. Robinson University College and in the Faculty of Military Studies are exempt from the Student Activities Fees and the University Union Entrance Fee in section **15.** above but shall pay such other fees and charges as the Council may from time to time determine.

(4) University Union fees and subscriptions may be waived by the Deputy Registrar (Student Services) for students enrolled in graduate courses in which the formal academic requirements are undertaken at a part of the University away from the Kensington campus.

(5) Students who while enrolled at and attending another university (or other tertiary institution as approved by the Vice-Chancellor) in a degree or diploma course are given approval to enrol at the University of New South Wales but only as miscellaneous students for subjects to be credited towards the degrees or diplomas for which they are enrolled elsewhere are exempt from all Student Activities Fees and the University Union Entrance Fee.

Institutions approved are: Australian Film and Television School, New South Wales Institute of Technology, Sydney College of Advanced Education and Sydney College of Chiropractic.

(6) Undergraduate students of a recognized university outside Australia who attend the University of New South Wales with the permission of the dean of the appropriate faculty and of the head of the appropriate school or department to take part as miscellaneous students in an academic program relevant to their regular studies and approved by the authorities of their own institution are exempt from all Student Activities Fees and the University Union Entrance Fee.

(7) Graduate students not in attendance at the University and who are enrolling in a project only other than for the first time, are exempt from all Student Activities Fees.

(8) Graduate students resubmitting a thesis or project only are exempt from all Student Activities Fees.

(9) All Student Activities Fees, for one or more sessions, may be waived by the Deputy Registrar (Student Services) for students who are given formal permission to pursue their studies at another institution for one or more sessions.

(10) Graduate students who have completed all the work for a qualification at the commencement of session, except for the submission of the relevant thesis or project report, may be exempted from the payment of Student Activities Fees by the Deputy Registrar (Student Services) on production of an appropriate statement signed by the relevant Supervisor or Head of School.

(11) Students enrolled in a session or sessions devoted entirely to training or experience away from the campus and its associated laboratories, hospitals, centres, institutes, and field stations are exempt from all Student Activities Fees for that session or sessions.

(12) Students whose registration is cancelled or suspended by the University shall receive refunds of fees paid in accordance with the provisions of section **18.** (5) below except that a refund of one half of the fees shall be made if such cancellation or suspension takes place between the end of the fourth week of Session 1 and the end of the fourth week of Session 2.

18. Variations in Enrolment (including Withdrawal)

(1) Students wishing to vary an enrolment program must make application on the form available from the appropriate Course Authority.

(2) Students withdrawing from courses (and see also information about withdrawal from subjects below) are required to notify the Registrar in writing. In some cases such students will be entitled to fee refunds (see below).

(3) Enrolment in additional subjects

Applications for enrolment in additional subjects must be submitted by:

30 March 1984 for Session 1 only and whole year subjects;
17 August 1984 for Session 2 only subjects.

(4) Withdrawal from subjects

Applications to withdraw from subjects may be submitted throughout the year but applications lodged after the following dates will result in students being regarded as having failed the subjects concerned, except in special circumstances:

(a) for one session subjects, the end of the seventh week of that session (20 April or 7 September)

(b) for whole year subjects, the end of the second week of Session 2 (3 August).

(5) Withdrawal from Course – Refunds – Student Activities Fees

Whether or not a student's withdrawal entails academic penalties (covered in item (4) above) there are rules governing Student Activities Fees refunds in the case of complete withdrawal from a course as follows:

(a) If notice of withdrawal from a course is received by the Student Records and Scholarships Office before the first day of Session 1, a refund of all Student Activities Fees paid will be made.

(b) If notice of withdrawal is received on or after the first day of Session 1, a partial refund of the University Union Entrance Fee will be made on the following basis: any person who has paid the entrance fee in any year and who withdraws from membership of the University Union after the commencement of Session 1 in the same year, or who does not renew membership in the immediately succeeding year may on written application to the Warden receive a refund of half the entrance fee paid.

(c) If the notice of withdrawal is given before the end of the fourth week of Session 1 (30 March 1984) a full refund of Student Activities Fees paid will be made; if notice is given before the end of the seventh week of Session 1 (20 April 1984) a refund of three-quarters of the Student Activities Fees paid will be made; if notice is given before the beginning of Session 2 (23 July 1984) a refund of one-half of the

Student Activities Fees paid will be made; if notice is given before the end of the seventh week of Session 2 (7 September 1984) a refund of one-quarter of Student Activities Fees paid will be made; thereafter no refund will be made except that provided for in (d) below.

(d) If a student's enrolment in any year is for one session only and the student gives notice of withdrawal prior to the end of the fourth week of that session (30 March or 17 August 1984) a full refund of Student Activities Fees paid will be made; if notice is given before the end of the seventh week of that session (20 April or 7 September 1984) a refund of one-half of the Student Activities Fees paid will be made; thereafter no refund will be made.

(e) The refunds mentioned in (c) and (d) above may be granted by the Deputy Registrar (Student Services) to a student unable to notify the Student Records and Scholarships Office in writing by the times required provided evidence is supplied that the student has ceased attendance by those times.

(6) Acknowledgements

The Student Records and Scholarships Office will acknowledge each application for a variation in enrolment (including withdrawals from subjects) as follows:

(a) variations lodged before the Friday of the seventh week of each session (20 April or 7 September) will be incorporated in the *Confirmation of Enrolment Program* notice forwarded to students on 30 April or 20 September as appropriate

(b) variations lodged after those dates will be acknowledged by letter

(c) withdrawals from a course are acknowledged individually whenever they are lodged.

(7) It is emphasized that failure to attend for any assessment procedure, or to lodge any material stipulated as part of an assessment procedure, in any subject in which a student is enrolled will be regarded as failure in that assessment procedure unless written approval to withdraw from the subject without failure has been obtained from the Student Records and Scholarships Office.

19. Exemption – Membership

The Registrar is empowered to grant exemption from membership of any or all of the University Union, the Students' Union and the Sports Association to students who have a genuine conscientious objection to such membership, subject to payment of the prescribed fees to the Miscellaneous Fund.

Leave of Absence

Leave of absence from an undergraduate course of study may be granted to students other than those in the first year of a course. Leave of absence has generally been restricted to one year but in special circumstances two years have been granted.

To apply for such leave of absence, a letter should be submitted to the Registrar immediately following the release of annual examination results and must include the student's full name, registration number, the course and stage in which enrolled in the previous year and, most important, the reason *why* leave is being sought. The letter advising the result of the application will provide details about how to re-enrol.

Students who withdraw from the first year of their course *are not* granted leave of absence and must again apply for a place through the Universities and Colleges Admissions Centre.

Course Transfers

Students wishing to transfer from one course to another must complete and submit an application form, obtainable from the office of the Admissions Section, the Chancellery, by Friday 13 January 1984.

Students whose applications to transfer are successful, and who are transferring from one school to another are required to comply with the enrolment procedure laid down for new students with advanced standing. *Students transferring* from one course to another *within the same school* are required to attend the appropriate enrolment session for the course to which they have approval to transfer.

Students must present the approval to transfer to the enrolling officer, and those who have not received advice regarding their application to transfer before the date on which they are required to enrol should check with the office of the Admissions Section.

Students should also advise the enrolling officer in the school in which they were enrolled in 1983 of their intention to transfer.

Admission with Advanced Standing

Any persons who make application to register as a candidate for any degree or other award granted by the University may be admitted to the course of study leading to such degree or award with such standing on the basis of previous attainments as may be determined by the Professorial Board provided that:

1. the Board shall not grant such standing under these rules as is inconsistent with the rules governing progression to such degree or award as are operative at the time the application is determined;

2. where students transfer from another university such students shall not in general be granted standing in this Univer-

sity which is superior to what they have in the University from which they transfer;

3. the standing granted by the Board in the case of any application based on any degree/s or other awards already held by the applicants, shall not be such as will permit them to qualify for the degree or award for which they seek to register without completing the courses of instruction and passing the examinations in at least those subjects comprising the later half of the course, save that where such a program of studies would involve them repeating courses of instruction in which the Board deems them to have already qualified, the Board may prescribe an alternative program of studies in lieu thereof;

4. the standing granted by the Board in the case of any application based on partial completion of the requirements for any degree or other award of another institution shall not be such as will permit the applicants to qualify for the degree or award for which they seek to register by satisfactory completion of a program of study deemed by the Board to be less than that required of students in full-time attendance in the final year of the course in which the applicants seek to register;

5. the standing granted by the Board in the case of any application based on the partial completion of the requirements for any degree or other award of the University may be such as to give full credit in the course to which the applicants seek to transfer for work done in the course from which they transfer.

Where the identity between the requirements for any award of the University already held and that of any other award of the University is such that the requirements outstanding for the second award are less than half the requirements of that award, students who merely complete such outstanding requirements shall not thereby be entitled to receive the second award but shall be entitled to receive a statement over the hand of the Registrar in appropriate terms.

Resumption of Courses

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

If students have not obtained leave of absence from their course and have not been enrolled in the course over the past twelve months or more, they should apply for admission to the course through the Universities and Colleges Admissions Centre before 1 October in the year preceding that in which they wish to resume studies.

Examinations

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

Provisional timetables indicating the dates and times of examinations are posted on the University noticeboards.

Students must advise the Examinations Section (the Chancellery) of any clash in examinations. Final timetables indicating the dates, times, locations, and authorized aids are available for students two weeks before the end of each session.

Misreading of the timetable is not an acceptable excuse for failure to attend any examination.

Assessment of Course Progress

In the assessment of a student's progress in a course, consideration may be given to work in laboratory and class exercises and to any term or other tests given throughout the year as well as to the results of written examinations.

Examination Results

Grading of Passes

Passes are graded as follows:

High Distinction	an outstanding performance
Distinction	a superior performance
Credit	a good performance
Pass	an acceptable level of performance
Satisfactory	satisfactory completion of a subject for which graded passes are not available

Pass Conceded

A pass conceded may be granted provided that the overall performance is considered to warrant such a concession. A pass conceded in a subject will allow progression to another subject for which the former subject is a prerequisite.

Pass Terminating

A pass terminating may be granted provided that the overall performance is considered to warrant such a concession. A pass terminating does not allow progression to another subject for which the former subject is a prerequisite.

Availability of Results

Final examination results will be posted to a student's term address, or vacation address if requested. Forms requesting that results be posted to a vacation address are included in the examination timetable (November/December only) and change of address forms are obtainable at the Student Enquiry Counter, the Chancellery. Forms can be accepted up to Friday 1 July for Session 1 results and Friday 2 December for Session 2 and whole year results. Results are

also posted on School noticeboards and in the University Library. Results on noticeboards are listed *by Student Registration Number.*

No examination results are given by telephone.

Review of Results

A student may make application to the Registrar for the review of a result. The application form, accompanied by an appropriate fee, must be submitted not later than fifteen working days after the date of issue of the *Notification of Result of Assessment* form.

In reviewing a result, the subject authorities shall ensure that all components of the assessment have been assessed and a mark assigned.

A review of a result is not a detailed reassessment of a student's standard of knowledge and understanding of, and skills in, the subject. It is rather a search for arithmetic error in arriving at the composite mark and for gross and obvious error in assignment of marks in components of the final composite mark.

When a change in grade is recommended, the application fee will be refunded by the Registrar.

Special Consideration

Students who believe that their performance in a subject, either during session or in an examination, has been adversely affected by sickness or any other reason should inform the Registrar and ask for special consideration in the determination of their standing.

Such requests should be made as soon as practicable after the occurrence. Applications made more than seven days after the final examination in a subject will only be considered in exceptional circumstances.

When submitting a request for special consideration students should provide all possible supporting evidence (eg medical certificates) together with their registration number and enrolment details.

Physical Disabilities

Students suffering from a physical disability which puts them at a disadvantage in written examinations should advise Student Records (Ground Floor, the Chancellery) immediately their disability is known. If necessary, special arrangements will be made to meet the student's requirements.

Students who are permanently disabled and need the Examinations Section to make special arrangements for their examinations, should contact Student Records as soon as the final timetable becomes available.

Use of Electronic Calculators

Where the use of electronic calculators has been approved by a faculty or school, examiners may permit their use in examinations. Authorized electronic calculators are battery operated with the minimum operations of addition, subtraction, multiplication and division and are of a type in common use by university students. They are not provided by the University, although some schools may make them available in special circumstances.

Examinations Held Away from the Campus

Except in the case of students enrolled on external courses, examinations will not be permitted away from the campus unless the candidate is engaged on *compulsory industrial training*. Candidates must advise the Officer-in-charge, Examinations Section, immediately the details of the industrial training are known. Special forms for this purpose are available at the Student Enquiry Counter in the north wing of the Chancellery.

Arrival at Examinations

Examination Rooms will be open to students twenty-five minutes before the commencement of the examination. Candidates are requested to be in their places at least fifteen minutes before the commencement to hear announcements. The examination paper will be available for reading ten minutes before commencement.

Use of Linguistic Dictionaries

The answers in all examinations and in all work submitted must be in English unless otherwise directed. Students may apply for permission to use standard linguistic dictionaries in the presentation of written work for assessment. Such applications should be made in writing to the Examinations Section not later than 14 days prior to the need to use the linguistic dictionary.

Academic Misconduct

Students are reminded that the University regards academic misconduct as a very serious matter. Students found guilty of academic misconduct are usually excluded from the University for two years. Because of the circumstances in individual cases the period of exclusion can range from one session to permanent exclusion from the University.

The following are some of the actions which have resulted in students being found guilty of academic misconduct in recent years: use of unauthorized aids in an examination; submitting work for assessment knowing it to be the work of another person; improperly obtaining prior knowledge of an examination paper and using that knowledge in the examination; failing to acknowledge the source of material in an assignment.

Conduct of Examinations

Examinations are conducted in accordance with the following rules and procedure:

1. Candidates are required to obey any instruction given by an examination supervisor for the proper conduct of the examination.

2. Candidates are required to be in their places in the examination room not less than fifteen minutes before the time for commencement.

3. No bag, writing paper, blotting paper, manuscript or book, other than a specified aid, is to be brought into the examination room.

4. Candidates shall not be admitted to an examination after thirty minutes from the time of commencement of the examination.

5. Candidates shall not be permitted to leave the examination room before the expiry of thirty minutes from the time the examination commences.

6. Candidates shall not be re-admitted to the examination room after they have left it unless, during the full period of their absence, they have been under approved supervision.

7. Candidates shall not by any improper means obtain, or endeavour to obtain, assistance in their work, give, or endeavour to give, assistance to any other candidate, or commit any breach of good order.

8. All answers must be in English unless otherwise stated. Foreign students who have the written approval of the Registrar may use standard linguistic dictionaries.

9. Smoking is not permitted during the course of examinations.

10. A candidate who commits any infringement of the rules governing examinations is liable to disqualification at the particular examination, to immediate expulsion from the examination room and to such further penalty as may be determined in accordance with the By-Laws.

Acknowledgement of Sources

Students are expected to acknowledge the source of ideas and expressions used in submitted work. To provide adequate documentation is not only an indication of academic honesty but also a courtesy enabling the marker to consult sources with ease. Failure to do so may constitute plagiarism, which is subject to a charge of academic misconduct.

Further Assessment

In special circumstances further assessment including assessment or further assessment on medical or compassionate grounds may be granted.

Further assessment may be given by the subject authority at his or her discretion at any time prior to the meeting of the relevant faculty assessment committee (normally the fourth week of the Midyear Recess and the second week of December). Further assessment may also be awarded at the faculty assessment committee and students affected may need to be free to undertake that further assessment in the last week in the Midyear Recess and in the period up to the end of the second week in January; students should consult their subject authority for details of further assessment immediately their results are known.

Restrictions upon Student Re-enrolling

The University Council has adopted the following rules governing re-enrolment with the object of requiring students with a record of failure to show cause why they should be allowed to re-enrol and retain valuable class places.

First Year Rule

1. Students enrolled in the first year of any undergraduate course of study in the University shall be required to show cause why the should be allowed to continue the course if they do not pass the minimum number of subjects, units or credits prescribed for this purpose by the relevant faculty or board of studies.

The prescribed minimum for each undergraduate course may be found in **Schedule A** below; the schedule may be varied from time to time by the Professorial Board.

Repeated Failure Rule

2. Students shall be required to show why they should be allowed to repeat a subject which they have failed more than once. Where the subject is prescribed as part of the course they shall also be required to show cause why they should be allowed to continue that course.

General Rule

3. (1) Students shall be required to show cause why they should be allowed to repeat a subject they have failed if the assessment committee of the faculty or board of studies so decides on the basis of previous failures in that subject or in a related subject. Where the subject is prescribed as part of the course they shall also be required to show cause why they should be allowed to continue their course.

(2) Students shall be required to show cause why they should be allowed to continue their course if the assessment committee of the faculty or board of studies so decides on the basis of their academic record.

The Session-Unit System

4. (1) Students who infringe the provisions of Rules **1.** or **2.** at the end of Session 1 of any year will be allowed to repeat the subject(s) (if offered) and/or continue the course in Session 2 of that year, subject to the rules of progression in the course.

(2) Such students will be required to *show cause* at the end of the year, except that students who infringe Rule **2.** at the end of Session 1, and repeat the subjects in question in Session 2, and pass them, will not be required to *show cause* on account of any such subjects.

Exemption from Rules by Faculties

5. (1) A faculty or board of studies examinations committee may, in special circumstances, exempt students from some or all of the provisions of Rules **1.** and **2.**

(2) Such students will not be required to *show cause* under such provisions and will be notified accordingly by the Registrar.

Showing Cause

6. (1) Students wishing to *show cause* must apply for special permission to re-enrol. Application should be made on the form available from the Registrar and must be lodged with the Registrar by the dates published annually by the Registrar. A late application may be accepted at the discretion of the University.

(2) Each application shall be considered by the Admissions and Re-enrolment Committee of the relevant faculty or board of studies which shall determine whether the cause shown is adequate to justify the granting of permission to re-enrol.

Appeal

7. (1) Students who are excluded by the Admissions and Re-enrolment Committee from a course and/or subject under the provisions of the Rules will have their applications to re-enrol reconsidered automatically by the Re-enrolment Committee of the Professorial Board.

(2) Students whose exclusion is upheld by the Re-enrolment Committee may appeal to an Appeal Committee constituted by Council for this purpose with the following membership:

A Pro-Vice-Chancellor, nominated by the Vice-Chancellor who shall be Chairman.

The Chairman of the Professsional Board, or if its chairman is unable to serve, a member of the Professorial Board, nominated by the Chairman of the Professorial Board, or when the Chairman of the Professorial Board is unable to make a nomination, nominated by the Vice-Chairman.

One of the category of members of the Council elected by the graduates of the University, nominated by the Vice-Chancellor.

The decision of the Committee shall be final.

(3) The notification to students of a decision which has been upheld by the Re-enrolment Committee of the Professorial Board to excude them from re-enrolling in a course and/or subject shall indicate that they may appeal against that decision to the Appeal Committee. The appeal must be lodged with the Registrar within fourteen days of the date of notification of exclusion; in special circumstances a late appeal may be accepted at the discretion of the chairman of the Appeal Committee. In lodging such an appeal with the Registrar students should provide a complete statement of all grounds on which the appeal is based.

(4) The Appeal Committee shall determine appeals after consideration of each appellant's academic record, application for special permission to re-enrol, and stated grounds of appeal. In particular circumstances, the Appeal Committee may require students to appear in person.

Exclusion

8. (1) Students who are required to *show cause* under the provisions of Rules **1.** or **3.** and either do not attempt to *show cause* or do not receive special permission to re-enrol from the Admissions and Re-enrolment Committee (or the Re-enrolment Committee on appeal) shall be excluded, for a period not in excess of two years, from re-enrolling in the subjects and courses on account of which they were required to *show cause*. Where the subjects failed are prescribed as part of any other course (or courses) they shall not be allowed to enrol in any such course.

(2) Students required to *show cause* under the provisions of Rule **2.** who either do not attempt to *show cause* or do not receive special permission to re-enrol from the Admissions and Re-enrolment Committee (or the Re-enrolment Committee on appeal) shall be excluded, for a period not in excess of two years, from re-enrolling in any subject they have failed twice. Where the subjects failed are prescribed as part of a course they shall also be excluded from that course. Where the subjects failed are prescribed as part of any other course (or courses) they shall not be allowed to enrol in any such course.

Re-admission after Exclusion

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

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

(b) Applications for re-admission to a subject should be made to the Registrar before 30 November in the year prior to that in which re-admission is sought. Such applications will be considered by the relevant subject authority.

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

(4) Students whose applications for re-admission to a course or subject are unsuccessful (see **9.** (2) (a), (b) respectively) will be invited to appeal to the Re-Enrolment Committee of the Professorial Board. The decision of the Re-Enrolment Committee will be final.

10. Students who fail a subject at the examinations in any year or session and re-enrol in the same course in the following year or session must include in their programs of studies for that year or session the subject which they failed. This requirement will not be applicable if the subject is not offered the following year or session, is not a compulsory component of a particular course, or if there is some other cause which is acceptable to the Professorial Board for not immediately repeating the failed subject.

Restrictions and Definitions

11. (1) These rules do not apply to students enrolled in programs leading to a higher degree or graduate diploma.

(2) A subject is defined as a unit of instruction identified by a distinctive subject number.

Schedule A

(See First Year Rule **1.** above)

Where the minimum requirement is half the program, this is defined as half the sum of the unit values of all the subjects in the program where the unit value for each subject in a course is defined as follows:

Faculty/Board of Studies	Minimum Requirement	Course	Unit Values (UV)
Applied Science	Half the program	3000-3220 4190-4220	One-session subjects: UV 1 Two-session subjects: UV 2
Architecture	Half the program	3270, 3330	Elective subjects: UV 0 All other subjects: appropriate UV corresponding to credit points*
		3320, 3360, 3380	All subjects: UV equal to the allocated hours* Elective subjects: UV 0 All other subjects: UV equal to the allocated hours*
Arts	18 first-level credit points	3400, 3420	
Biological Sciences		3430	Science subjects: appropriate UV* Arts subjects: • 6 credit points = UV 1 • 12 credit points = UV 2
Commerce	Three subjects	3490-3595 FT in both sessions	
	Two subjects	3490-3595 PT in either session	
Engineering	Half the program including Physics I or Mathematics I	3610, 3660, 3680, 3700	5.061: UV 0 One-session subjects: UV 1 Two-session subjects: UV 2
	Half the program including Mechanics of Solids or Mathematics I	3620, 3730	All subjects: UV equal to the allocated hours*
	Half the program including Physics I or Mathematics I	3640, 3720	One-session subjects: UV 1 Two-session subjects: UV 2
	Half the program	3740-3760	One-session subjects: UV 1 Two-session subjects: UV 2
Law	Half the program	4710-4790	One-session subjects: UV 1 Two-session subjects: UV 2
Medicine	Half the program	3800	80.010: UV 3 81.001: UV 3 81.002: UV 6 70.001: UV 4 General Studies: UV 1
Military Studies	Half the program	BA, BSc	All subjects: UV 1
		BE	All subjects: appropriate weighted mark*
Professional Studies	Half the program	4030, 4040	All subjects: UV 1
		4070-4080	All subjects: appropriate UV* One General Studies elective: UV1
Science	Half the program	3910, 3950	All subjects: appropriate UV* General Studies: UV 1
Science and Mathematics	2 units	3970	All subjects: appropriate UV* One General Studies elective: UV 1

*For details see the appropriate Faculty Handbook.

*For details see the appropriate Faculty Handbook.

Admission to Degree or Diploma

Students whose current program will enable them to complete all requirements for the degree or diploma, including industrial training where necessary, should lodge with the Registrar the form *Application for Admission to Degree/ Diploma* and return it to the Registrar by the second Monday in May for the October ceremonies, and the first Tuesday in October for all other ceremonies. The forms are available from the Student Enquiry Counter in the north wing of the Chancellery.

Students who have indicated on their enrolment form that they are potential graduands are forwarded an application form with their Enrolment Details form in September (or, in the case of students who expect to satisfy requirements at the end of Session 1, with the form issued in April). Students who do not complete an application form will not graduate; students who do not return their application form by the due date will graduate at a later series of ceremonies.

Students enrolled in courses **3400, 3910** and **3970** who have completed an application form to graduate at the pass level and who then decide to proceed to an honours year should advise the Registrar, in writing before 1 September for those completing requirements at the end of Session 1, or before 28 February for those completing requirements at the end of Session 2.

A list of graduands in Medicine who have applied for their degree is published in *The Sydney Morning Herald* in December.

A list of graduands other than Medicine who have applied for their degree/diploma and who expect to graduate in October is published in *The Sydney Morning Herald* on the second Wednesday in September.

A list of graduands other than Medicine who have applied for their degree/diploma and who expect to graduate in April/ May the following year is published in *The Sydney Morning Herald* on the second Wednesday in March.

Students who are potential graduands and who wish to notify the Registrar of a change of address should submit an addition form *Final Year Students' Graduation: Change of Address.*

Attendance at Classes

Students are expected to be regular and punctual in attendance at all classes in the subjects in which they are enrolled. All applications for exemption from attendance at classes of any kind must be made in writing to the Registrar.

In the case of illness or of absence for some other unavoidable cause students may be excused by the Registrar for non-attendance at classes for a period of not more than one month or, on the recommendation of the Dean of the appropriate faculty, for a longer period.

Absence from Classes

Explanations of absences from classes, or requests for permission to be absent from forthcoming classes, should be addressed to the Registrar and, where applicable, should be accompanied by a medical certificate. If examinations or other forms of assessment have been missed, this should be stated in the application.

If students attend less than eighty per cent of their possible classes they may be refused final assessment.

Student Records

Confirmation of Enrolment Program notices are sent to all students on 30 April and 24 September. It is not necessary to return these forms unless any of the information recorded is incorrect. If amendments need to be made, students should contact the appropriate course office.

Release of Information to Third Parties

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

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

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

Change of Address

The Student Records and Scholarships Office of the Registrar's Division should be notified as soon as possible of any change of address. Failure to do this could lead to important correspondence (including results of assessment) going astray. The University cannot accept responsibility if official communications fail to reach students who have not given notice of their change of address. *Change of Address Advice* forms are available at Faculty and School offices and from the Student Enquiry Counter in the north wing of the Chancellery.

All communications from the University will be sent to the Session or Term address except when arrangements are made otherwise in the case of results of assessment (see **Examinations: Availability of Results,** earlier in this section). *Change of Address Advice* forms will be accepted up to Friday 25 November, except for final-year students wishing to change their *Application for Admission for Degree/Diploma* form. Changes to this form will be accepted up to a date four weeks before the student's graduation ceremony.

Ownership of Students' Work

The University reserves the right to retain at its own discretion the original or one copy of any drawings, models, designs, plans and specifications, essays, theses or other work executed by students as part of their courses, or submitted for any award or competition conducted by the University.

Notices

Official University notices are displayed on the noticeboards and students are expected to be acquainted with the notices which concern them. These boards are in the Biological Sciences Building, the Mathews Building, the Chancellery (lower ground floor), Central Lecture Block, Dalton Building (Chemistry), Main Building (Physics and Mining) and in the Western Grounds Area.

Parking within the University Grounds

A limited amount of parking is available on campus. Copies of the University's parking rules may be obtained on application to Room 240, the Chancellery.

Academic Dress

Information about the University's academic dress requirements may be obtained from the Alumni and Ceremonials Section, Room 148E, the Chancellery (phone extension 2998).

Further Information

Lost Property

All enquiries concerning lost property should be made to the Superintendent on extension 3892 or to the Lost Property Office at the Union.

The Calendar

Please consult the Calendar for a more detailed account of the information contained in this section.

Vice-Chancellor's Official Welcome to New Students

All students initially enrolling in the University are officially welcomed by the Vice-Chancellor and Principal at the following times:

Faculties of Architecture, Arts, Biological Sciences, Commerce, Law:

Tuesday 28 February 1984
9 am in the Clancy Auditorium

Faculties of Applied Science, Engineering, Medicine, Professional Studies, Science, and the Board of Studies in Science and Mathematics:

Tuesday 28 February 1984
11 am in the Clancy Auditorium

Meeting for Parents of New Students

Friday 2 March 1984
7.30 pm in the Clancy Auditorium

Foreword

Since the beginning of recorded history man has sought to endow his environment with physical and spiritual qualities appropriate to his way of life. He has developed the materials and techniques available to him to adapt the natural environment to his own purposes, and in so doing has endeavoured to create buildings of enduring beauty. In each great culture of the past this search produced characteristic architecture which reflected the aspirations and the capabilities of its age.

Today all of those concerned with the quality of our physical environment are faced with problems of increasing difficulty, resulting from the complexity of modern requirements and the range and diversity of the new materials and techniques available to them. For the first time in history material progress threatens to outstrip man's visionary and creative powers and to overwhelm his capacity for assimilation.

The professions working in the field of the built environment will be called upon to provide new solutions to problems resulting from the accelerating rate of population growth and from man's impact on the environment. They will have to strive to create a built environment worthy of the opportunities which science and technology are placing at their disposal.

The courses offered by the Faculty are designed to combine education in the specific professional field selected by the student with a broad general education in the environmental fields. The undergraduate courses aim to prepare the student for the vocation of his choice, and opportunities for further study and research at graduate level are available for those who seek to enrol for higher degrees.

Faculty Information

Who to Contact

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

Mr Paul Johnson, Executive Assistant to the Dean, Faculty of Architecture
Room 502, Architecture Building. Extension 3608.

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

Professor Eric Daniels, School of Architecture
Room 100, Architecture Building. Extension 3454.

Professor Richard Clough, School of Landscape Architecture
Room 208, Old Main Building. Extension 3425.

Ms Diana Kazemi, School of Building
Room 407A, Architecture Building. Extension 3607.

Professor Hans Westerman, School of Town Planning
Room 205, Old Main Building. Extension 2307.

Dr Bill Lawson, Department of Industrial Arts
Room 101, Hut 34, Western Campus. Extension 2496.

Professor John Haskell, Graduate School of the Built Environment
Room 212, Sir Robert Webster Building. Extension 2301.

Faculty of Architecture Enrolment Procedures

Architecture Degree Course

All students re-enrolling in Architecture courses in 1984 should obtain a copy of the free booklet *Architecture Enrolment Procedures 1984* 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 1984*.

Building students who elect to take their industrial semester 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.

In addition, in the School of Town Planning and School of Landscape Architecture, where the academic record of students is not of a satisfactory standard, the Head of School may recommend a restricted program.

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 Library.

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 students and senior 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 or Undergraduate Libraries. 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 Library for associated reading.

Physical Sciences Librarian **Marian Bate**

The Undergraduate Library

This library caters for the library needs of students in Years 1 and 2 and other groups where large numbers require mass teaching.

The Undergraduate Library provides a reader education program and reader assistance service aimed at teaching students the basic principles of finding information.

Services of particular interest to undergraduates and academic staff are:

- **The Open Reserve Section,** housing books and other material which are required reading.
- **The Audio-Visual Section,** containing cassette tapes mainly lectures and other spoken word material. The Audio-Visual Section has wired study carrels and cassette players for student use.

Undergraduate Librarian **Pat Howard**

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, a weatherometer, an artificail sky and sun, a structural modelling facility, a structural testing bay and a controlled atmosphere chamber. The equipment and facilities of the laboratories are continually being expanded.

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

Efficiency of tiled roofs of various pitch, under extreme weather conditions.

Study of the performance of bricks and brickwork.

Condensation behaviour of double-glazed windows.

Abrasion properties of floor materials.

Transfer of heat and moisture through wall elements.

Vibration characteristics of large prestressed concrete structures.

Applications of motor-mesh (ferro-cimento) structures in building.

Penetration of moisture into and through concrete.

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

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

Development of techniques for earth-wall construction. 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 several 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 environmental 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 Registrar for approval by the University Council.

Industrial Arts Society

The Industrial Arts Society aims at providing opportunities for students to meet staff and fellow students through both social functions and educational activities such as films, lectures, seminars and visits to promote awareness of the opportunities available in the field of Industrial Arts.

Membership is open to all students of the Department of Industrial Arts including graduate students. The Annual General Meeting is held in March. Further details regarding membership and activities may be obtained by contacting the Secretary of the Society, c/- Department of Industrial Arts, Western Grounds Area.

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 cities, in landscape and in industrial arts. In addition to professional and vocational training the courses include general studies subjects to provide graduates with a broad understanding of the humanities and the social sciences.

School of Architecture

Head of School
Professor Eric C. Daniels

Senior Administrative Officer
Mr R. Watkins

Architecture is concerned with the design and construction of buildings. Today the process of design and construction reflects the increasingly technological age in which we live, and contemporary architects require a wide range of knowledge and skills if they are to fulfil their important role in society. Foremost amongst the architect's skills is the ability to design, for it is as designers that architects make their greatest contribution to society. But the practice of architecture involves knowledge in such diverse fields as economics, technology and law, and an understanding of broad social and environmental factors. Architecture is a synthesis of art and science and, while it is essential for the courses offered by the School to reflect the advances in science and technology on the one hand and the changing needs of society on the other, it is also important that they encourage students to develop their own interests and creative abilities within the framework of the undergraduate courses offered by the School.

The courses in Architecture currently offered are the:
Bachelor of Architecture Course (3270/3280)
and the
Bachelor of Science (Design Studies) course (3270/3295).

The Bachelor of Science (Design Studies) degree course **(3270/3295)** replaces the previously offered Bachelor of Science (Architecture) degree course **(3270/3290)**.

Bachelor of Science (Design Studies) and Bachelor of Architecture Degree Courses

These undergraduate courses lead to the award of the BSc(DesStudies) degree at Pass level, the BSc(DesStudies) degree at Honours level, and the BArch degree for which Honours may be awarded based on performance throughout the course.

The subjects in these courses are offered on a semester-unit credit-point basis. Credit points generally correspond to class hours per week per semester, and it is expected that students take a program of 26 credit points per semester. The minimum time, and the credit points required to complete the degree courses offered by the School are as follows:

	Minimum time (semesters)	Credit points
BSc(DesStudies) degree at Pass level	6	156
BSc(DesStudies) degree at Honours level	8	208
BArch degree	10	234
BSc(DesStudies) and BArch degrees	11	260

Students commencing their studies in architecture enrol in the BSc(DesStudies)/BArch program (Course **3270**) and undertake a mandatory program of study in the first two semesters. Thereafter students may, with the approval of the Head of School, take subjects in the order best suited to their individual preferences, subject to prerequisite requirements and provided the subjects are being offered in the appropriate semester. On acquiring 130 credit points, and after the completion of at least five semesters of study, students proceeding to the award of the BArch degree transfer into the BArch program (Course **3280**) and students proceeding to the award of the BSc(DesStudies) degree transfer into the BSc(DesStudies) degree program (Course **3295**).

Students may, with the approval of the Head of School, transfer from the BArch program to the BSc(DesStudies) program or from the BSc(DesStudies) to the BArch program. It should be noted that credit points gained in the BSc(DesStudies) program (Course **3295**) cannot be credited towards the award of the BArch degree, and that credit points gained in the BArch program (Course **3280**) cannot be credited towards the award of the BSc(DesStudies) degree.

Subjects are offered in accordance with a program to be approved annually. The program of study for students in the BSc(DesStudies) degree course requires that not less than 70 per cent of the subjects taken be offered by the Faculty of Architecture, and not more than 30 per cent of the subjects taken be offered by universities and approved institutions, other than the Faculty of Architecture, and approved by the Head of School. The program of study for students in the BArch degree course seeking professional qualification provides for 60 per cent of study time being devoted to mandatory core subjects and 40 per cent to elective subjects. Normally core subjects are offered in alternate semesters and elective subjects according to demand and the availability of staff and resources.

3295
Bachelor of Science (Design Studies) Course at Pass Level

Bachelor of Science (Design Studies) BSc(DesStudies)

The BSc(DesStudies) degree course aims to provide students with the opportunity to specialise in particular fields of architecture, design, and heritage conservation studies in accordance with approved programs. These programs include studies in design, technology, architectural and materials sciences, conservation, history, communication and management. Details of recommended programs are available from the School. Provision is also made for students to study subjects in other faculties of the University for credit in their course.

The BSc(DesStudies) degree course at Pass level may be completed in a minimum of six semesters of full-time study and with the gaining of 156 credit points. The program of study is as follows:

Mandatory Subjects

	Credit points
First semester	25
Second semester	24
Graduation semester (including 11.4701 Graduation Project of 8 credit points)	26

Elective Subjects

Minimum credit points which must be taken from subjects offered by the Department of General Studies	6
Minimum credit points which must be taken from subjects offered by the Faculty of Architecture. These may be either core or elective subjects	34
Maximum credit points which may be taken from subjects offered by universities and approved institutions, other than the Faculty of Architecture, and approved by the Head of School.	41
	156

The 26 credit points gained in the graduation semester may only be credited to the BSc(DesStudies) degree program.

3295
Bachelor of Science (Design Studies) Course at Honours Level

Bachelor of Science (Design Studies) BSc(DesStudies)

Enrolment in this course normally follows completion of the BSc(DesStudies) course at Pass level. Selection into the Honours program is based upon performance in the BSc(DesStudies) degree course at Pass level, especially upon achievement in the graduation semester. It involves a minimum of two semesters of full-time study of an approved program. To qualify for the degree at this level the program of study is as follows:

	Credit points
BSc(DesStudies) degree at Pass level to be obtained in accordance with the program set out above	156
Honours semester I	26
11.4705 Honours Project	26
	208

The 52 credit points gained in the Honours semester may be credited only to the BSc(DesStudies) degree at Honours level. Honours for this degree are awarded on the performance in the Honours program.

3280
Bachelor of Architecture Course

Bachelor of Architecture
BArch

This course provides the academic education and training necessary to obtain professional qualifications in architecture. It aims to provide students with both practical and theoretical training, and to develop the skills and techniques involved in the design and construction of buildings and also contains a balance of building technology, science, history, practice, management and architectural design. The following program of study offers a range of elective subjects which enables students to major in areas of study of their choice:

Mandatory Subjects

	Credit points
First semester	25
Second semester	24
The core subjects listed in the schedule of subjects	92
Elective Subjects	
Minimum credit points which must be taken from subjects offered by the Department of General Studies	12
Minimum credit points which must be taken from subjects offered by the Faculty of Architecture	53
Maximum credit points which may be taken from subjects offered by universities and approved institutions, other than the Faculty of Architecture, and approved by the Head of School	16
Research Methods	2
Dissertation	10
Practical Experience	
Approved practical experience	nil
	234

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 for this degree may be awarded based on performance throughout the course.

The course has been arranged in the following five subject areas:

	Credit points for core subjects
1. Architectural Design	14
General	36
Specific	
2. Architectural Environment	29
3. Technology	34
4. Practice	11
5. Communication	17
	141

The arrangement of the course in five subject areas identifies the main fields of study. The study of architecture involves the synthesis of these areas of study and, in the program leading to the award of the BArch degree, the synthesis is achieved in the studio through the design projects included in the syllabus for *Architectural Design — Specific,* as set out in the schedule of subjects (see following pages).

Mandatory Subjects of the First Two Semesters

Students commencing their studies in architecture enrol in the BSc(DesStudies)/BArch program (Course **3270**) and undertake the following program of mandatory subjects in the first two semesters:

		Credit points
First Semester		
11.4101	Principles of Design	4
11.4301	Contextual Studies	5
11.4401	Principles of Construction	6
11.4402	Structures and Materials	4
11.4601	Introduction to Communication	6
		25
Second Semester		
11.4201	Living Unit	4
11.4303	Introduction to Architectural Science	4
11.4307	History of Architecture and Design	3
11.4403	Principles of Structures	4
11.4510	Practice and Management	2
11.4602	Introduction to Computing	2
11.4603	Graphic Communication	5
		24

In addition students may, in the second semester, take elective subjects up to the value of 3 credit points.

Progression and Re-Enrolment

Re-enrolment is subject to normal University regulations which are set out in the Calendar. Subjects which have prerequisites may not be attempted until the appropriate prerequisite has been passed. In particular circumstances prerequisite requirements may be waived by the Head of School.

Honours

The Bachelor of Science (Design Studies) degree and the old Bachelor of Science (Architecture) degree may be awarded with Honours after completion of the BSc(DesStudies) or the old BSc(Arch) Honours program, in accordance with current Faculty regulations. Honours are Class I *or* Class II Division I *or* Class II Division II.

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 I *or* Class II Division I *or* Class II Division II.

Registration and Professional Recognition

Only students enrolled in the BSc(DesStudies)/BArch program (Course **3270**) or the BArch program (Course **3280**) are eligible to become Student Members of the Royal Australian Institute of Architects.

The degree of Bachelor of Science (Design Studies) is not recognized by the Board of Architects of NSW for registration for practice as an architect.

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 successful 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.

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.

Courses 3270, 3280 and 3295: Schedule of Subjects

No.	Subject Name	Credit Points	Prerequisites
Architectural Design — General			
Core Subjects			
11.4101	Principles of Design	4	nil
11.4102	Design Theory I	5	11.4101, 11.4201
11.4103	Design Theory II	5	11.4102
Elective Subjects			
11.4120	Design Theory III	4	11.4103
11.4121	Theory of Form	4	11.4103
11.4122	Theory of Architecture I	4	11.4103
11.4123	Theory of Architecture II	4	11.4122
11.4124	Geometry & Design	4	11.4103
11.4125	Interior Design I	4	nil
11.4126	Interior Design II	4	11.4125
11.4127	Design for Conservation	4	11.4328
11.4128	Computer-Aided Design	6	11.4632
11.4129	Research & Survey Methods	4	11.4103
11.4130	Criticism & Evaluation	4	11.4103
11.4131	Principles of Dwellings	3	11.4102
Architectural Design — Specific			
Core Subject			
11.4201	Living Unit	4	nil

Courses 3270, 3280 and 3295: Schedule of Subjects

No.	Subject Name	Credit Points	Prerequisites

Architectural Design — Specific (continued)

Group A

one *subject compulsory. A student who has passed a Group A subject may take another Group A as an elective before proceeding to Group B.*

11.4211	Cultural Facilities I	6	11.4102, 11.4303, 11.4401, 11.4403
11.4212	Commercial Facilities I	6	
11.4213	Health and Welfare Facilities I	6	
11.4214	Educational Facilities I	6	

Group B

one *subject compulsory, the others may be taken as electives except by students who have passed subjects in* **both** *groups C and D*

11.4221	Detached Houses	6	**one** from Group A, 11.4414
11.4222	Group Dwellings	6	

Group C

one *subject compulsory, the others may be taken as electives*

11.4230	Community Facilities II*	12	**one** from Group B, 11.4103, 11.4408
11.4231	Commercial Facilities II	6	
11.4232	Industrial Facilities	6	
11.4233	Health and Welfare Facilities II	6	
11.4234	Government Facilities I	6	

Group D

one *subject compulsory, the others may be taken as electives*

11.4240	Residential Facilities II**	12	**one** from Group B, 11.4103, 11.4415, 11.4407 *plus* 11.4304, 11.4305, 11.4306 for 11.4244
11.4241	Urban Housing	6	
11.4242	Low-Cost Housing	6	
11.4243	Tourist Facilities	6	
11.4244	Housing for Special Climates	6	

Group E

one *subject compulsory, the others may be taken as electives*

11.4250	Community Facilities III***	16	**one** from Group D *and* **one** from Group C, *each* at Credit grade or better
11.4251	Educational Facilities II	8	**one** from Group D, **one** from Group C, *plus* 11.4345 *or* 36.411 for 11.4254 *and* 11.4256 *and* 11.4123 for 11.4257
11.4252	Government Facilities II	8	
11.4253	Cultural Facilities II	8	
11.4254	Urban Development	8	
11.4255	Recreational Facilities	8	
11.4256	Transport Buildings	8	
11.4257	Ecclesiastical Architecture	8	

*A student who has not previously passed any subject in Group C is, on passing 11.4230, awarded 6 core credit points and 6 elective credit points. A student who has previously passed one or more subjects in Group C is, on passing 11.4230 awarded 12 elective credit points.

**A student who has not previously passed any subject in Group D is, on passing 11.4240, awarded 6 core credit points and 6 elective credit points. A student who has previously passed one or more subjects in Group D is, on passing 11.4240 awarded 12 elective credit points.

***A student who has not previously passed any subject in Group E is, on passing 11.4250, awarded 8 core credit points and 8 elective credit points. A student who has previously passed one or more subjects in Group E is, on passing 11.4250 awarded 16 elective credit points.

Courses 3270, 3280 and 3295: Schedule of Subjects (continued)

No.	Subject Name	Credit Points	Prerequisites
Architectural Environment			
Core Subjects			
11.4301	Contextual Studies	5	nil
11.4303	Introduction to Architectural Science	4	nil
11.4304	Thermal Design of Buildings	3	11.4303
11.4305	Lighting of Buildings	3	11.4303
11.4306	Acoustics of Buildings	3	11.4303
11.4307	History of Architecture and Design	3	nil
11.4308	Western Architecture	3	11.4307
11.4309	Australian Architecture	3	11.4308
36.411	Town Planning	2	11.4309
Elective Subjects			
11.4320	Geometry	3	nil
11.4321	Physics	4	nil
11.4322	Solar Energy	2	11.4304, 11.4407
11.4323	Room Acoustics	2	11.4306
11.4324	Lighting Design	2	11.4305
11.4325	Tropical Architecture	2	11.4303
11.4326	Acoustics Studies	4	11.4323
11.4327	Lighting Research	4	11.4324
11.4330	Modern Architecture	2	11.4308
11.4331	The Australian House since 1900	2	11.4309
11.4332	Historical Research A	3	11.4309, 145 credit points
11.4333	Historial Research B	3	11.4309, 145 credit points
11.4334	Historical Research C	3	11.4309, 145 credit points
11.4335	Eastern Architecture	2	11.4307
11.4336	Measured Studies of Historic Structures	3	11.4308, 11.4603
11.4339	Introduction to Building Conservation	5	11.4309, 11.4414
11.4340	Cognition & Behaviour A	3	11.4301
11.4341	Cognition & Behaviour B	3	11.4340
11.4342	Transport Systems	4	36.411
11.4343	Urban Planning	4	36.411
11.4344	Landscape Planning	4	11.4303
11.4345	Urbanism	2	11.4309
11.4346	Australian House (Measured Drawing)	2	11.4331
11.4347	Australian House (Report)	2	11.4331
Technology			
Core Subjects			
11.4401	Principles of Construction	6	nil
11.4402	Structures & Materials	4	nil
11.4403	Principles of Structures	4	nil
11.4407	Services A	3	11.4303, 11.4414
11.4408	Services B	3	11.4304, 11.4415
11.4414	Construction A	5	11.4401, 11.4402
11.4415	Construction B	5	11.4414, 11.4416
11.4416	Structures	4	11.4402, 11.4403
Elective Subjects			
11.4420	Technology for Low-rise Buildings	5	11.4414
11.4421	Technology for High-rise Buildings	5	11.4415
11.4422	Technology for Low-cost Housing	5	11.4416
11.4423	Rationalized Building Systems	5	11.4415

Courses 3270, 3280 and 3295: Schedule of Subjects (continued)

No.	Subject Name	Credit Points	Prerequisites
Technology (continued)			
11.4424	Const. Planning & Management	3	11.4407, 11.4408
11.4425	Earth Construction A	3	11.4402, 11.4303
11.4426	Earth Construction B	3	11.4425
11.4430	Integration of Services	4	11.4407, 11.4408
11.4440	Building Materials A	2	11.4414
11.4441	Building Materials B	5	11.4440
11.4450	Advanced Structural Analysis	4	11.4416, 11.4602
11.4451	Advanced Structural Design	4	11.4415
11.4452	Models Analysis & Form-finding	3	11.4403
11.4453	Surface & Spatial Structures A	5	11.4320, 11.4416
11.4454	Surface & Spatial Structures B	5	11.4453
11.4455	Technology Research A	5	156 credit points *and* 11.4416
11.4456	Technology Research B	5	11.4455
11.4457	Workshop Practice	1	nil
11.4458	Construction Documentation	5	11.4407, 11.4415
Practice			
Core Subjects			
11.4510	Practice and Management	2	nil
11.4511	Building Economics and Specifications	3	11.4414, 11.4510
11.4512	Contract Administration A	2	11.4414, 11.4510
11.4513	Contract Administration B	2	11.4512 *and* 130 credit points
11.4514	Management for Architects	2	11.4513, 11.4703
Elective Subjects			
11.4520	Management Systems & Finance	2	11.4514
11.4521	Documentation	3	11.4511
11.4522	Building Economics & Development	3	11.4511
11.4524	The Architect and the Law	2	11.4513
11.4525	Project Management	3	11.4513
11.4526	Industrial Relations	2	11.4512
Communication			
Core Subjects			
11.4601	Introduction to Communication	6	nil
11.4602	Introduction to Computing	2	nil
11.4603	Graphic Communication	5	nil
11.4604	Graphic Communication Theory	4	11.4601
Elective Subjects			
11.4620	Presentation Graphics	3	11.4603, 11.4604
11.4621	Oral & Written Communication	2	11.4601
11.4622	Spatial Communication	2	nil
11.4623	Models & Materials	3	nil
11.4624	Architectural Photography	3	nil
11.4625	Constructional Geometry	3	11.4603, **one** from Design Specific, Group A
11.4626	Architectural Ceramics & Sculpt.	3	nil
11.4627	Computer Graphics	4	11.4632
11.4628	Contemporary Styles in Art	4	11.4629
11.4629	Graphic Art	4	11.4604

Courses 3270, 3280 and 3295: Schedule of Subjects (continued)

No.	Subject Name	Credit Points	Prerequisites
Communication (continued)			
11.4630	Drawing & Painting	4	11.4601
11.4631	Advanced Graphic Concepts	4	11.4629 *or* 11.4620
11.4632	Computer Programming and Graphics	6	11.4602 *and* 100 credit points Excluded 11.4627 (1982 or earlier)
11.4633	Architectural Drawing and Rendering	4	11.4603, **one** from Design Specific, Group A

Other Required Studies

BSc(DesStudies) Degree Course at Pass Level

11.4701	Graduation Project	8	130 credit points
	General Studies Subjects	6	

BSc(DesStudies) Degree Course at Honours Level

11.4705	Honours Project	26	156 credit points

BArch Degree Course

11.4703	Practical Experience	nil	130 credit points
11.4707	Research Methods*	2	156 credit points
11.4708	Dissertation*	10	11.4707
	General Studies Subjects	12	

*From Session 1, 1984, 11.4707 Research Methods and 11.4708 Dissertation replace 11.4702 Thesis as a compulsory requirement of Course **3280** for all students except for those who have had their Thesis topic approved prior to Session 1, 1984. These students may, with the permission of the Head of School, elect to enrol in 11.4702 Thesis as an alternative to 11.4707 and 11.4708. Students enrolling in 11.4332 Historical Research A in 1984 have the option of extending their work in 11.4332, 11.4333 and 11.4334 into the existing subject 11.4702 Thesis.

Other Elective Studies

11.4702	Thesis	12	156 credit points
11.4704	Architectural Research	4	156 credit points
11.4706	Architecture Graduation Project	20	208 credit points. Selection on merit
11.4720	Appropriate Technology I	3	40 credit points including 11.4301, 11.4303, 11.4402
11.4721	Appropriate Technology II	4	11.4720
11.4722	Appropriate Technology III	10	100 credit points including 11.4721, 11.4457
11.4730	Industrial Archaeology I	4	40 credit points
11.4731	Industrial Archaeology II	4	11.4730
11.4732	Traditional Technology I	4	40 credit points
11.4733	Traditional Technology II	5	11.4732
11.4734	Traditional Building Technology	4	11.4732
11.4735	Traditional Technologies of Pakistan	4	11.4732
11.4736	Traditional Technology III	10	11.4733, 11.4734 *or* 11.4735, 4.951 *and* 4.911 *or* their equivalents
11.4740	Industrial Design I	6	40 credit points
11.4741	Industrial Design Methods A	2	nil
11.4742	Industrial Design Methods B	5	11.4740, 11.4741
11.4743	Industrial Design Case Histories	2	11.4740, 11.4741
11.4744	Industrial Design II	7	11.4740
11.4745	Industrial Design IIIA	10	11.4742, 11.4743, 11.4744
11.4746	Industrial Design IIIB	10	11.4742, 11.4743, 11.4744
11.4747	Industrial Design Special Project	10	156 credit points. Selection on merit
11.4750	Pottery and Ceramics	5	11.4402
11.4751	History of Ceramics	4	11.4307
11.4752	Pottery and Ceramic Technology	10	11.4750 *or* 11.4626, 2.951 *or* equivalent
11.4753	Ceramic Kilns	10	11.4752
11.4754	Pottery Management	10	11.4752

Department of Industrial Arts

Acting Head of Department
Dr W. R. Lawson

The Department of Industrial Arts offers a BSc(IndArts) DipEd course (**3320**) available through full-time study in the general field of Industrial Arts. The subjects required to qualify for the degree are set out below. This course is being 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.

The Subject Matter of Industrial Arts

Through the ages, man has used his intellect, imagination and skill to create useful things. The term 'industrial arts' has come to be used to describe these activities.

Man-made objects form a large part of the human environment: shelter, furniture, fabrics, vessels, tools, machines, vehicles and labour-saving devices of many kinds. Although these objects are designed and made primarily for some practical purpose, each individually makes some contribution to the total quality of the environment. Well-designed, well-made things of the practical kind may be considered 'works of art' thus the best products, whether handmade or factory-produced are evidence of the industrial arts.

Before the growth of modern industrial society, it was possible to identify the industrial arts with certain skilled occupations, for example, gold and silversmithing, weaving, metalworking, woodworking and pottery. Industrial methods and mass production have changed the forms of intellect, imagination and skill required for the creation of useful objects. Products are now seldom the result of the activity of single individuals, rather they reflect the skills of many people applied through an industrial organization. The study basic to Industrial Arts is the relationship between man and his material environment. The important elements in this study are man himself, the materials of his environment, the objects he produces and the processes he uses for production.

Such studies can be concerned as much with the useful objects of antiquity as with those of contemporary industrial civilization. Thus the research activities of the Department of Industrial Arts range from investigations into the traditional technologies of ancient cultures to an analysis of the problems of industrial design in contemporary technological society.

The Industrial Arts Course

The course offered by the Department of Industrial Arts is intended to provide a broad understanding of the man-product relationship with studies in depth of the most relevant areas of knowledge drawn from natural science, technology, social science and other fields. Of central importance is the subject Industrial Arts. The core study in this subject is Design. Design is the process whereby materials, functional requirements, appearance, mechanical factors, cost etc are related and integrated into products which satisfy human needs. The design strand is supported by parallel studies in graphics, materials, education. Graphics— the 'visual language' of design—includes a variety of methods of drawing as well as other methods of visual representation, communication and analysis. The other subjects provide specialized information which is needed for the study and teaching of design, in particular, and of industrial arts generally.

Also included are First Year Engineering and Science Units and elective studies in the sciences and general studies.

The Industrial Arts course covers the major subject areas included in both the secondary and senior secondary school curricula. After completion of the degree, graduates will be eligible to become certificated by the Department of Education as four-year trained teachers.

The undergraduate degree also provides a sound basic education for people intending to seek employment in the design field.

In general, the Industrial Arts course provides a broad education which embraces the sciences, technological studies, the humanities, social sciences, and the arts. Education of this type is becoming increasingly important for employment in semi-technical fields such as technical sales, engineering administration, work study, technical writing, information services and personnel management.

3310
Industrial Arts Course — Full-time

Bachelor of Science
BSc

This course is being discontinued from 1977 and no new students may be enrolled. Students already enrolled in the course may continue with their studies until completion of the degree.

3320
Industrial Arts Course — Full-time

Bachelor of Science (Industrial Arts)/
Diploma in Education
BSc(IndArts) DipEd

This course is being discontinued from 1982 and no new students may be enrolled. Students already enrolled may continue with their studies until completion of the degree. The course is normally of four years' duration but may extend over five years if Honours in Education is undertaken.

Year 3		Hours per session S1	S2
4.951	Materials Technology	4	4
12.201	Basic Psychological Processes II	4	
12.202	Complex Psychological Processes II		4
12.200	Research Methods II	3	3
21.3131	Traditional Technology II*	4	3
21.3132	Craft IIA*	4	3
21.3133	Industrial Design I*	4	3
21.3134	Graphics II*	4	3
21.3135	Industrial and Social Organization II		2
58.703	Theory of Education II	2½	2
58.723	Industrial Arts Curriculum and Instruction II	3	3
58.713	Teaching Practice II	15 days	

*Two units to be chosen from 21.3131, 21.3132, 21.3133 and 21.3134.

Year 4			
	Psychology III**	8	8
21.3141	Traditional Technology III***	5	5
21.3142	Craft IIIA***	5	5
21.3143	Industrial Design III***	5	5
21.3144	Graphics III***	5	5
21.3145	Industrial and Social Organization III	1	1
21.3146	Advanced Project	3	3
21.3147	Appropriate Technology	1	1
58.704	Theory of Education III	1½	3
58.724	Industrial Arts Curriculum and Instruction III	4	4
58.714	Teaching Practice III	15 days	

**Psychology III comprises four units selected in consultation with the School of Psychology.

***One unit only to be chosen from 21.3141, 21.3142, 21.3143 and 21.3144.

Honours in Education

Year	Subject	Hours per week
3	58.793	1½
4****	58.794	1
5****	58.795	4
	58.799	

****Students in Years 4 and 5 in 1984 should refer to the 1982 Architecture Handbook since minor modifications introduced in 1983 only apply to students in Years 2 and 3.

Industrial Arts Course — Part-time

Bachelor of Science (Technology) BSc

This course is being progressively discontinued. Students should consult pages B319-B320 in the 1972 Calendar for the course outline.

School of Building

Head of School
Professor A. R. Toakley

Undergraduate Course Co-ordinator
Mr D. N. Hassall

Administrative Assistant
Diana Kazemi

Building Degree Course 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, construction 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) including one semester of appropriate industry experience. The course leads to the award of the degree of Bachelor of Building (BBuild).

Credit Points

To qualify for a Bachelor of Building degree a student must have obtained a minimum of 196 credit points (including 158 credit points from compulsory subjects offered by the School of Building and 10 credit points of General Studies subjects). Credit points are allocated to all compulsory and elective subjects.

Provided that they can satisfy the prerequisite requirements for subjects to be attempted, students may choose that pattern and order of subjects which best suits individual requirements. Credit points generally correspond to work load in subjects. A maximum of 12 elective points may be obtained by passing approved subjects offered by other schools in the University.

Attention is drawn to the fact that Physics and Mathematics are included among the compulsory subjects. It is highly desirable that intending students have successfully completed these subjects at HSC level.

Practical Experience

Students are required to be in employment related to their course during at least six months of their program. In this period they must be formally enrolled in 35.910 Industry Semester. The proposal for employment must be submitted to the Professor of Building for approval. See **Subject Descriptions** for details.

Award of Honours

Honours are awarded on the basis of the quality of student performance in the subjects of the course and in the thesis.

Professional Recognition

The award of the degree, Bachelor of Building, is recognized for admission to membership by: (1) the Australian Institute of Building; and (2) the Australian Institute of Quantity Surveyors, subject to completion of all the Quantity Surveying subjects.

3330
Building Course

Bachelor of Building
BBuild

Note: The timetabling of subjects depends on the number of enrolments and on the number of students wishing to specialize in particular areas. While the intention is to offer each subject in every alternate semester, students should realize that the full range may not be offered in any one year.

Schedule of Subjects

Construction Studies Stream

Compulsory Subjects

		Credit points	Prerequisites
29.411	Surveying for Architects and Builders	2	nil
35.202	Soil Mechanics for Building	2	nil
35.500	Building Graphics	6	nil
35.501	Construction I (Domestic Buildings)	5	nil
35.502	Construction II (Building Practice)	5	35.501
35.503	Construction III (Low-rise Buildings)	5	35.502
35.504	Construction IV (Factory Buildings)	5	35.503
35.505	Construction V (High-rise Buildings)	5	35.504
35.551	Structures I	5	nil
35.552	Structures II	5	35.551
35.553	Structures III	5	35.552
35.591	Built Environment I	2	nil

Elective Subjects

35.506	Construction VI (Techniques)	4	35.505, 35.703
35.517	Construction VII (Industrialization and Technological Change)	4	35.505, 35.703
35.518	Construction VIII (Special Project)	4	35.505, 35.704
35.580	Building Design Analysis	3	35.505, 35.704
35.592	Built Environment II	2	nil

Building Science Stream

Compulsory Subjects

1.931	Physics I (Building)	4	nil
35.601	Building Science (Materials)	4	nil
35.602	Building Science II (Energy)	5	1.931
35.605	Building Science V (Concrete)	3	nil
35.606	Building Science VI (Metals)	3	nil
35.651	Services I (Hydraulics)	3	nil
35.652	Services II (Mechanical)	3	35.602
35.670	Mathematics for Builders	4	nil

Elective Subjects

35.604	Building Science IV (Plastics)	3	nil
35.607	Building Science VII (Thermal)	3	35.602
35.609	Building Science IX (Timber)	3	nil
35.653	Services III (Integration)	4	35.651, 35.652

Management Studies Stream

Compulsory Subjects

35.701	Management I (Management Principles)	4	nil
35.702	Management II (Professional Practice)	4	35.701
35.703	Management III (Planning)	4	35.502, 35.603 *or* 35.751, 35.702
35.704	Management IV (Contracts, Site Administration)	4	35.703
35.705	Management V (Project Management)	4	35.704
35.707	Management VII (Corporate Strategy)	4	35.704, 35.832 *or* 35.842

		Credit points	Prerequisites
35.721	Law for Builders I	2	nil
35.722	Law for Builders II	2	35.721
35.751	Introduction to Computing	2	nil
35.752	Computer Applications in Building	3	35.751

Elective Subjects

35.706	Management VI (Personnel Management)	4	35.704
35.708	Management VIII (Marketing)	4	35.704, 35.832 *or* 35.842
35.720	Commercial Arbitration	4	35.704
35.753	Systems Analysis and Modelling	4	35.703
35.754	Building Information Systems	4	14.001, 35.603 *or* 35.752

Building Economics Stream

Compulsory Subjects

35.801	Quantity Surveying I	4	35.503
35.831	Building Economics I	4(3)*	nil
35.867	Estimating I	4(3)*	35.503
35.871	Building Specifications	3(2)*	35.503
14.001	Introduction to Accounting A	2	nil
14.002	Introduction to Accounting B	2	14.001
35.802	Quantity Surveying II	4	35.504, 35.870 *or* 35.871
35.832	Building Economics II	4(3)*	35.831 *or* 35.840, 14.002
35.880	Development Project	4	35.504, 35.832 *or* 35.842

*Credit points shown in brackets are the old values which will be credited to those students first enrolled prior to 1984 and who require 192 points to qualify for their degree.

Elective Subjects

35.813	Quantity Surveying III	4	35.802
35.833	Building Economics III	5	35.832 *or* 35.842, 35.866 *or* 35.868
35.868	Estimating II	3	35.603 *or* 35.752, 35.865 *or* 35.867
35.890	Property Valuation	2	35.503, 35.831 *or* 35.840

Others

Compulsory Subjects

		Credit points	Prerequisites
35.900	Thesis	10	100 credit points
35.910	Industry Semester*	3	35.503, 35.702
	General Studies	10	nil

*This subject must not be taken in final semester. It must be taken at a stage which will enable students to subsequently complete a minimum of 12 credit points, apart from any credit points obtained for 35.900 Thesis.

General Studies subjects totalling 10 credit points are compulsory. Two credit points are awarded for Half Electives (28 hours) and four credit points are awarded for Electives (56 hours). The subjects are to be selected from the list of General Studies electives available in the General Studies handbook.

School of Landscape Architecture

Head of School
Professor R. Clough

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 encompasses all external spaces comprising natural topography and vegetation as well as modified environments constructed for man'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 man'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 man in his 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 21 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 and Town Planning, and the Department of 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 outdoor 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 log-book 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 37.6588 Professional Practice IV.

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 I or Class II Division I or Class II Division II.

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** will be 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.

Schedule of Subjects

No.	Subject Name	Hours Per Week	Prerequisites
Year 1			
Session 1			
27.801	Introduction to Physical Geography*	4½	nil
37.6041	Landscape Graphics I	5	nil
37.7011	Landscape Graphics (Art) I	3	nil
37.7101	Theory of Landscape Architecture	2	nil
43.202	Plant Structure and Function*	5	nil
General Studies Elective		2	
		21½	

Schedule of Subjects (continued)

No.	Subject Name	Hours Per Week	Prerequisites
Session 2			
37.6042	Landscape Graphics II	5	37.6041
37.6352	Plants and Planting Methods I	3	43.202
37.7012	Landscape Graphics (Art) II	3	37.7011
37.7101	Theory of Landscape Architecture	2	nil
37.9112	Prehistory of Landscape and Man	1	nil
37.9192	Environment and the Landscape*	6	27.801, 43.202
General Studies Elective		2	
		22	

Students may be required to participate in a practical construction program outside the metropolitan area, involving a field exercise of approximately one week's duration.

*The course in Plant Structure and Function, Introduction to Physical Geography as well as Environment and the Landscape include a number of lectures and field trips for the purpose of practical observation. Field trips range from local trips within the metropolitan area to points as far afield as Moss Vale, Glenbrook and Gosford. The Faculty provides transport wherever possible, but in the majority of cases, students are expected to make their own transport arrangements for these trips.

Year 2

Session 1

37.3013	Man in His Environment	3	37.9112
37.6043	Landscape Graphics III	3	37.6042, 37.7012
37.6203	Landscape Technology I	3	27.801, 37.6042, 37.9192
37.6353	Plants and Planting Methods II	3	37.6352, 37.9192
37.7013	Landscape Graphics (Art) III	3	37.7012
37.7133	Landscape Design I	4	37.6042, 37.7012, 37.9192
37.9013	History of Landscape Architecture	1½	37.9112
General Studies Elective		2	nil
		22½	

Session 2

37.0014	Introduction to Computer Applications	2	nil
37.6044	Landscape Graphics IV	3	37.6043
37.6204	Landscape Technology II	4	37.6203
37.7014	Landscape Graphics (Art) IV	3	37.7013
37.7134	Landscape Design II	8	37.7133
General Studies Elective		2	nil
		22	

Year 3

Session 1

36.411	Town Planning	2	nil
37.6235	Landscape Engineering I	4	27.801, 37.6204
37.6585	Professional Practice I	1½	37.7134, 37.6204
37.7135	Landscape Design III	8	37.6044, 37.6204, 37.7134
37.7145	Landscape Planning I	4	37.3013
General Studies Elective		2	
		21½	

Schedule of Subjects (continued)

No.	Subject Name	Hours Per Week	Prerequisites
Session 2			
37.5816	Land Systems	3	37.6353
37.6246	Landscape Engineering II	2	37.6235
37.6586	Professional Practice II	1½	37.6585
37.7136	Landscape Design IV	8	37.7135
37.7146	Landscape Planning II	4	37.7145
37.8086	Research Methods	1	nil
General Studies Elective		2	
		21½	
Year 4			
Session 1			
37.5817	Land Management	2	37.5816
37.6587	Professional Practice III	1½	37.6586
37.7137	Landscape Design V	8	37.7136
37.7147	Landscape Planning III	4	37.7146
37.8087	Landscape Thesis	6	37.8086, 37.7136
		21½	
Session 2			
37.6588	Professional Practice IV	1½	37.6587, four months practical experience
37.7138	Landscape Design VI	12	37.7137
37.7148	Landscape Planning IV	4	37.7147
37.8087	Landscape Thesis	4	See Session 1
		21½	

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 co-ordinate 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 Professor 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: A major planning subject is 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			
36.211	**Introduction to Planning**	10	12
29.901	Introduction to Mapping	1½	2
36.134	Graphic Communication	4	4
36.453	History of Cities	2	3
36.243	Building and Land Development	2	3
		19½	24
Session 2			
36.212	**Planning Studies**	10	12
36.131	Communication Techniques	3	3
36.222	Computers and Information Systems	2	3
36.232	Environmental Science I	2	4
36.242	Land Economy	2	3
		19	25

Year 2			
Session 1			
36.213	**Local Planning**	10	12
36.461	Engineering	4	5
36.233	Environmental Science II	2	3
26.000	General Studies Elective	4	5
		20	25
Session 2			
36.214	**Development Planning**	10	12
37.224	Landscape Architecture	2	3
36.253	Environmental Science III	2	3
36.452	History of Town Planning	2	3
26.000	General Studies Elective	4	5
		20	26

Year 3			
Session 1			
36.215	**Statutory Planning**	12	14
36.225	Public Policy and Urban Government	2	3
36.234	Urban Design	3	4
36.235	Urban Sociology	2	3
36.299	Introduction to Social Planning	1	2
		20	26
Session 2			
36.503	Practical Experience	3	—

Year 4			
Session 1			
36.503	Practical Experience	3	—
Session 2			
36.218	**Metropolitan Planning**	12	14
36.228	Transportation Planning	2	3
36.224	Economic Issues in Planning	2	3
36.300	Planning Elective(s)*	4	4
		20	24

		Hours per week	Credit points for Honours
Year 5			
Session 1			
36.219	**Regional Planning**	12	14
36.437	Regional Survey Camp	2	—
36.491	Thesis	3	—
36.300	Planning Elective(s)*	4	4
		21	18
Session 2			
36.491	**Thesis**	16	26
36.210	Professional Practice	1	2
36.300	Planning Elective(s)*	4	4
		21	32

*The following planning electives are offered subject to demand and availability. Students have the option to take half electives, provided the total time for planning electives (12 hours) is achieved.

		Hours per week	Credit Points
36.3012	Third World Planning	2	2
36.3014	Third World Planning	4	4
36.3022	Urban Conservation	2	2
36.3024	Urban Conservation	4	4
36.3032	Subdivision Design	2	2
36.3034	Subdivision Design	4	4
36.3042	Development Planning II	2	2
36.3044	Development Planning II	4	4
36.3052	Urban Studies	2	2
36.3054	Urban Studies	4	4
36.3062	Statutory Planning II	2	2
36.3064	Statutory Planning II	4	4
36.3072	Metropolitan Planning II	2	2
36.3074	Metropolitan Planning II	4	4
36.3082	Metropolitan Planning III	2	2
36.3084	Metropolitan Planning III	4	4
36.3092	Regional Planning II	2	2
36.3094	Regional Planning II	4	4
36.3102	Social Planning	2	2
36.3104	Social Planning	4	4
36.3112	Environmental Psychology	2	2
36.3114	Environmental Psychology	4	4
36.3122	Impact Assessment and Evaluation	2	2
36.3124	Impact Assessment and Evaluation	4	4
36.4402	Planning (Special Subject)	2	2
36.4404	Planning (Special Subject)	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 may be phased in progressively. Details will be provided prior to enrolment.

Graduate Study

Faculty of Architecture Graduate Enrolment Procedures

All students enrolling in graduate courses should obtain a copy of the free booklet *Enrolment Procedures 1984* 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 cashiers and late enrolments.

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 the 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 of Doctor of Philosophy. For details concerning this 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 Professorial 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 Science (Building)
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. Graduate Diploma in Housing and Neighbourhood Planning
8. Graduate Diploma in Landscape Design

Duration

Each course is programmed over two years of part-time study in the University, involving attendance on two or three evenings per week. In the case of Housing and Neighbourhood Planning a one-year full-time program may be offered subject to demand.

Graduate School of the Built Environment

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 South-east Asia, at a high level of academic excellence, critical objectivity and perceptive innovation.

The School undertakes a range of activities within the areas of: acoustics, architectural history, building conservation, health facilities design, industrial design, lighting design, lightweight structure, solar architecture, urban design and continuing education.

Research

The School currently has active research units working under its aegis 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 in 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 Professorial 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	2 credit points
(3) 39.303G	Directed Studies	3 credit points

(4) Preparation and structuring of a doctoral research topic

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 practice 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 an applicant may be registered as a candidate for the degree if he submits 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(DesStudies) (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 is normally taken over four part-time sessions (two academic years) 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 Points	Core/ Elective	Usual Session Offered
1.927G	Acoustic Theory	2	Core	S1
39.651G	Mechanical Shock and Vibration	2	Core	S1
39.652G	Noise Control in Industry	4	Elective	S3
39.901G	Acoustic Measuring Systems and Electroacoustics	2	Core	S1
39.902G	Advanced Physical Acoustics	4	Elective	S3
39.993G	The Ear, Hearing and Hearing Conservation	2	Core	S1
39.995G	Community Noise	4	Elective	S2
39.994G	Graduate Project A (prerequisite 10 credit points)	5	Compulsory	S3
39.996G	Graduate Project B (prerequisite 39.994G)	10	Compulsory	S4
39.997G	Auditorium Acoustics	3	Elective	S3
39.998G	Noise Control in Buildings	4	Elective	S2

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

	Total 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

		S1		S2	
		Hrs	Credits	Hrs	Credits
39.101G	Contextual Studies	14	1		
39.102G	Architectural History	42	3		
39.103G	Conservation Management			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		
39.107G	Conservation Technology B			70	5
39.108G	Conservation Technology C	56	4		
39.109G	Conservation Technology D			56	4
39.110G	Graduate Project	56	—	56	—
				Upon Completion	8
		252	14	252	22

Typical Pattern of Part-time Study

		S1		S2		S3		S4	
		Hrs	Credits	Hrs	Credits	Hrs	Credits	Hrs	Credits
39.101G	Contextual Studies	14	1						
39.102G	Architectural History	42	3						
39.103G	Conservation Management							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						
39.107G	Conservation Technology B			70	5				
39.108G	Conservation Technology C					56	4		
39.109G	Conservation Technology D							56	4
39.110G	Graduate Project			28	—	56	—	28	—
								Upon Completion	8
		140	10	126	7	112	4	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 specialization.

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 compulsory 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 to a degree with a 'major' in industrial design of at least four years' full-time duration, or its equivalent. Candidates who have completed part or all of the requirements for the award of the degree of the MSc(IndDes) course may elect to apply for admission to the MID degree course, subject to the recommendation of the School and the approval of the Higher Degree Committee of the Faculty of Architecture.

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 and 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 Session Offered
Common 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	
MID only			
39.502G	Graduate Project (MID)	14	S1 S2
39.512G	Design Theory	4	S1 S2
39.522G	Industrial Design	4	S1
	Approved Electives**	6	
		28	

MSc(IndDes) 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
39.543G	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 students' 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 students' industrial design knowledge and skill. At least 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 orientated courses, eg architecture, are normally exempt.

The School will propose electives in the areas of design ideologies, history of artefact design, product analysis, health and rehabilitation design, ethnotechnology and ceramics. These will be run depending upon student demand, course requirements and Faculty resources.

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.

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

		Hours per week S1	S2
Common Core			
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	
39.541G	Industrial Experience*		
MID only			
39.502G	Graduate Project (MID)	3**	12**
39.512G	Design Theory	1	3
39.522G	Industrial Design	4	
	Approved Electives	4	2
Ten hours per week MID		17	20

MSc(IndDes) only			
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)		17	20

*A four week period during the recess. Part-time students in approved employment are normally exempt.
**Nominal hours.
***Graduates of visually orientated courses, eg architecture, are normally exempt.

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

		Hours per week			
Common Core		**S1**	**S2**	**S3**	**S4**
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			
39.541G	Industrial Experience*				
MID only					
39.502G	Graduate Project (MID)		3**	3**	9**
39.512G	Design Theory		2	2	
39.522G	Industrial Design	4			
	Approved Electives		2	3	1
Total hours per week MID		7	10	10	10
MSc(IndDes) only					
39.503G	Design Media and Communication	2			
39.513G	Visual Thinking***	2			
39.523G	Industrial Design A		6		
39.533G	Industrial Design B			6	
39.543G	Graduate Project (MSc(IndDes))				8**
	Approved Electives	1	1	1	1
Total hours per week MSc(IndDes)		8	10	9	9

*A four week period during the recess. Part-time students in approved employment are normally exempt.
**Nominal hours.
***Graduates of visually orientated courses, eg architecture, are normally exempt.

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 of Philosophy (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.

2. 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

	Credit points S1	S2
Architectural Synthesis I and II (core)	9	11
Electives	6	4
	8	8
	15	15
Course Award		30

		Credit points
Core Subjects		
11.901G	Architectural Synthesis I	9
11.902G	Architectural Synthesis II	11
Electives		
11.930G	Architectural Theory	2
11.931G	Ideologies of Modern Architecture	2
11.932G	Architectural Impact Studies	2
11.933G	Cultural Influences in Civic Design	2
11.934G	Structural and Architectural Space	2
11.935G	Design for Industrialized Buildings	2
11.936G	Resources for Buildings	2
35.296G	Construction Techniques	3
35.297G	Developments in Building Materials	2
35.426G	Building Services	3
35.390G	Co-ordination of Structures and Services	2
35.360G	Computer Techniques and Applications	3
35.361G	Computer Techniques and Applications II	2
35.355G	Computer Graphics	2
35.381G	Building Physics	2
35.382G	Building Psychophysics	2
35.330G	Cost Planning and Analysis	2
35.460G	Applied Building Economics	2
35.470G	Analysis and Valuation of Property	2
36.924G	Urban Sociology	2
39.997G	Auditorium Acoustics	3

Subject to approval of the appropriate Head of School and the Head of School of 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 mid-career courses* which are designed to provide practical on-going education for experienced members of the building industry.

*For further information, contact Mr M. Marosszeky, 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.

8110
Master of Science (Building) Course

Master of Science (Building)
MSc(Building)

Course Co-ordinator
Dr J. M. Hutcheson

This four-session part-time course has been designed to provide opportunities for advanced study in management, economics, construction and building science. It allows a certain amount of specialization in four interrelated areas:

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

3. Problems concerned with thermal conditions, illumination, noise, humidity and air purity; the interrelation of the building envelope and structure with the services and the performance of the building as a whole.

4. Development and research aspect of construction with relevance to design, construction, product manufacture or research.

The course aims at attracting the practising qualified architect, engineer or builder who wishes to widen his/her knowledge and understanding of construction planning, operation and development.

Admission Requirements

The general conditions governing registration as a candidate for the degree Master of Science (Building) 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.

2. Graduates with a Bachelor of Engineering who have worked in the building industry may be admitted to the preparatory year or to the course proper depending on the individual case.

3. BSc(Arch) and BSc(DesStudies) graduates are required to complete a program of preparatory subjects set out by the Higher Degree Committee of the Faculty of Architecture.

4. Eligible applicants other than those under **1.**, **2.** & **3.** may be required to complete a program of preparatory subjects set out by the Higher Degree Committee of the Faculty of Architecture, 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 Science (Building) is a formal four semester part-time degree course comprising 39 credit points. Each credit point consists of class contact of one hour for one semester, except for the Project Report which is rated at 10 credit points.

The subject program comprises studies in computations, environmental requirements, building economics, operations planning, contract law and documentation and the interaction of the architecture, the structure and the services.

The Project Report is compulsory and students must be enrolled in this subject in all sessions of the course. All other subjects are *electives*. Students may choose elective subjects from the list below to make up a minimum of 39 credit points including a Project Report of 10 credit points.

Subject to the approval of the appropriate Head of School, students may enrol in graduate subjects in other schools and faculties of the University to a maximum contributing total of 9 credit points.

With the approval of the Head of the School of Building, students may also enrol in undergraduate subjects. Undergraduate subjects are counted at half credit points to a maximum contributing total of 9 credit points. Qualifying or preparatory subjects cannot contribute towards the total.

Course Program

Subjects are offered on a four-semester cycle, but when there is sufficient demand, they may be offered more often. While the intention is to offer as many subjects as possible, the full range may not be offered in any one year. A subject may not be offered if enrolment in that subject is less than eight students. Subjects are normally timetabled on four evenings per week.

		Credit Points per Semester			
		Even S1	Yrs S2	Odd S3	Yrs S4
Management Studies					
35.212G	Pre-Construction Management	2			
35.213G	Building Contract Management		2		
35.231G	Operations Planning			4	
35.254G	Personnel Management		3		
35.275G	Property Management		2		
Construction and Building Services					
35.296G	Construction Techniques	3			
35.297G	Developments in Building Materials	2			
35.426G	Building Services				3
35.390G	Co-ordination of Structures and Services				2
Building Science and Computations					
35.360G	Computer Techniques and Applications I			3	
35.361G	Computer Techniques and Applications II				2
35.355G	Computer Graphics		2		
35.370G	Experimental Techniques				2
35.232G	Systems Modelling		2		
35.381G	Building Physics			2	
35.382G	Building Psychophysics	2			
Building Economics					
35.330G	Cost Planning and Analysis	2			
35.400G	Economics of Services				2
35.460G	Applied Building Economics		2		
35.470G	Analysis and Valuation of Property			2	
35.480G	Managerial Economics in Building				2
35.242G	Project Report (Compulsory)		10 points on completion		

School of Landscape Architecture

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 a thesis embodying the results of an original investigation or design.

5210
Landscape Design Graduate Diploma Course

Graduate Diploma
GradDip

Not offered in 1984.

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 recommendation 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.

5200
Housing and Neighbourhood Planning Graduate Diploma Course†

Graduate Diploma
GradDip

This course provides for graduate study in the design and layout of residential areas. It is concerned with the study of the physical structure and form of new and old residential neighbourhoods; and of the elements of the neighbourhood including dwellings, open spaces, shopping and community centres. In addition to design considerations, specific study will be made of social and economic factors in the provision of public and private housing.

Admission Requirements

An applicant for admission to the Housing and Neighbourhood Planning course shall be:

1. a graduate in Architecture of the University of New South Wales; or
2. a person with such other qualifications as may be approved by Faculty.

Part-time
Year 1

		Hours per week S1	S2
36.930G	Theory of Neighbourhood Planning I	1	
36.931G	Theory of Neighbourhood Planning II		1
36.940G	Practice of Neighbourhood Planning I	3	
36.941G	Practice of Neighbourhood Planning II		3
36.923G	Land and Housing Economics		2
36.924G	Urban Sociology	2	
		6	6

Year 2

36.942G	Practice of Neighbourhood Planning II	4	
36.943G	Practice of Neighbourhood Planning IV		4
36.922G	Communications and Public Utilities		2
36.925G	Housing Law and Administration	2	
		6	6

†This course is under review, and intending applicants are advised to contact the School at the first opportunity to obtain further information.

Graduate Study

Conditions for the Award of Higher Degrees

First Degrees

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

For the list of undergraduate courses and degrees offered see **Disciplines of the University: Faculty Table (Undergraduate Study)** in the Calendar.

Higher Degrees

The following is the list of higher degrees and graduate diplomas of the University, together with 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 **Disciplines of the University: 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 the Calendar.

Higher Degrees

Title	Abbreviation	Calendar/Handbook
Doctor of Science	DSc	Calendar
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 Architecture	**MArch**	**Architecture**
Master of Archives Administration	MArchivAdmin	Professional Studies

Title	Abbreviation	Calendar/Handbook
Master of Arts	MA	Arts Military Studies
Master of Biomedical Engineering	MBiomedE	Engineering
Master of Building	**MBuild**	**Architecture**
Master of the Built Environment **Master of the Built Environment (Building Conservation)**	**MBEnv**	**Architecture**
Master of Business Administration	MBA	AGSM
Master of Chemistry	MChem	Sciences*
Master of Commerce (Honours)	MCom(Hons)	Commerce
Master of Commerce	MCom	Commerce
Master of Education	MEd	Professional Studies
Master of Educational Administration	MEdAdmin	Professional Studies
Master of Engineering Master of Engineering *without supervision*	ME	Applied Science Engineering Military Studies
Master of Engineering Science	MEngSc	Engineering Military Studies
Master of Environmental Studies	MEnvStudies	Applied Science
Master of General Studies	MGenStud	General Studies
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**
Master of Landscape Architecture	**MLArch**	**Architecture**
Master of Laws	LLM	Law
Master of Librarianship	MLib	Professional Studies
Master of Mathematics	MMath	Sciences*
Master of Nursing Administration	MNA	Professional Studies
Master of Optometry	MOptom	Sciences*
Master of Paediatrics	MPaed	Medicine
Master of Physics	MPhysics	Sciences*
Master of Psychology	MPsychol	Sciences§
Master of Public Administration	MPA	AGSM
Master of Safety Science	MSafetySc	Engineering
Master of Science Master of Science *without supervision*	**MSc**	Applied Science **Architecture** Engineering Medicine Military Studies Sciences*§
Master of Science (Acoustics)	**MSc(Acoustics)**	**Architecture**

Title	Abbreviation	Calendar/Handbook
Master of Science and Society	MScSoc	Sciences*
Master of Science (Biotechnology)	MSc(Biotech)	Sciences§
Master of Science (Building)	**MSc(Building)**	**Architecture**
Master of Science (Industrial Design)	**MSc(IndDes)**	**Architecture**
Master of Science (Psychology)	MSc(Psychol)	Sciences§
Master of Social Work	MSW	Professional Studies
Master of Statistics	MStats	Sciences*
Master of Surgery	MS	Medicine
Master of Surveying Master of Surveying *without supervision*	MSurv	Engineering
Master of Surveying Science	MSurvSc	Engineering
Master of Town Planning	**MTP**	**Architecture**
Graduate Diploma	**GradDip**	Applied Science **Architecture** Engineering Sciences*§
	DipFDA	Sciences*
	DipEd	Professional Studies
	DipIM-ArchivAdmin	
	DipIM-Lib	

*Faculty of Science.
§Faculty of Biological Sciences.

Graduate Diplomas

Doctor of Philosophy (PhD)

1. The degree of Doctor of Philosophy may be granted by the Council on the recommendation of the Professorial Board to a candidate who has made an original and significant contribution to knowledge and who has satisfied the following requirements:

Qualifications

2. A candidate for registration for the degree of Doctor of Philosophy shall:

(1) hold an honours degree from the University of New South Wales; or

(2) hold an honours degree or equivalent standing from another approved university; or

(3) if the candidate holds a degree without honours from the University of New South Wales or other approved university, have achieved by subsequent work and study a standard recognised by the Higher Degree Committee of the appropriate faculty or board of studies (hereinafter referred to as the Committee) as equivalent to honours; or

(4) in exceptional cases, submit such other evidence of general and professional qualifications as may be approved by the Professorial Board on the recommendation of the Committee.

3. When the Committee is not satisfied with the qualifications submitted by a candidate, the Committee may require the candidate, before being permitted to register, to undergo such examination or carry out such work as the Committee may prescribe.

Registration

4. A candidate for registration for a course of study leading to the degree of Doctor of Philosophy shall apply to the Registrar on the prescribed form at least one calendar month before the commencement of the session in which registration is to begin.

5. Subsequent to registration the candidate shall pursue a program of advanced study and research for at least six academic sessions, save that:

(1) a candidate fully engaged in advanced study and research for the degree, who before registration was engaged upon research to the satisfaction of the Committee, may be exempted from not more than two academic sessions;

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

(3) in exceptional cases, the Professorial Board on the recommendation of the Committee may grant permission for a candidate to be exempted from not more than two academic sessions.

6. A candidate who is fully engaged in research for the degree shall present for examination not later than ten academic sessions from the date of registration. A candidate not fully engaged in research shall present for examination not later than twelve academic sessions from the date of registration. In special cases an extension of these times may be granted by the Committee.

7. The candidate shall be fully engaged in advanced study and research, save that:

(1) the Committee may permit a candidate to undertake a limited amount of University teaching or outside work which in its judgment will not interfere with the continuous pursuit of the proposed course of advanced study and research;

(2) a member of the full-time staff of the University may be accepted as a part-time candidate for the degree, in which case the Committee shall prescribe a minimum period for the duration of the program;

(3) in special circumstances, the Committee may, with the concurrence of the Professorial Board, accept as a part-time candidate for the degree a person who is not a member of the full-time staff of the University and is engaged in an occupation which, in its opinion, leaves the candidate substantially free to pursue a program in a school* of the University. In such a case the Committee shall prescribe for the duration of the program a minimum period which, in its opinion, having regard to the proportion of the time which the candidate is able to devote to the program in the appropriate University school* is equivalent to the six sessions ordinarily required.

(4) the Committee may permit a candidate to transfer to part-time enrolment where that candidate has completed the research work, is writing the thesis, and has been registered as a full-time candidate for at least six academic sessions.

8. Every candidate shall pursue a program under the direction of a supervisor appointed by the Committee from the full-time members of the University staff. The work other than field work shall be carried out in a school* of the University save that in special cases the Committee may permit a candidate to conduct the work at other places where special facilities not possessed by the University may be available. Such permission will be granted only if the direction of the work remains wholly under the control of the supervisor.

9. Not later than two academic sessions after registration the candidate shall submit the topic of research for approval by the Committee. After the topic has been approved it may not be changed except with the permission of the Committee.

10. A candidate may be required by the Committee to attend a formal course of appropriate study.

Thesis

11. On completing the course of study every candidate must submit a thesis which complies with the following requirements:

(1) the greater proportion of the work described must have been completed subsequent to registration for the PhD degree;

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

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

(4) it must reach a satisfactory standard of expression and presentation.

12. The thesis must present the candidate's own account of the research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied on the candidate's part in the joint research.

*Or department where a department is not within a school.

13. Every candidate shall be required to submit with the thesis a short abstract of the thesis comprising not more than 350 words.

The abstract shall indicate:

(1) the problem investigated;

(2) the procedures followed;

(3) the general results obtained;

(4) the major conclusions reached;

but shall not contain any illustrative matter, such as tables, graphs or charts.

14. A candidate may not submit as the main content of the thesis any work or material which has previously been submitted for a university degree or other similar award.

15. The candidate shall give in writing two months' notice of intention to submit the thesis.

Entry for Examinations

16. Four copies of the thesis shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree theses. The candidate may also submit any work previously published whether or not such work is related to the thesis.

17. 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.

18. There shall normally be three examiners of the thesis appointed by the Professorial Board on the recommendation of the Committee, at least two of whom shall be external to the University.

19. 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:

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

(2) 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

(3) 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

(4) 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

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

20. If the performance at the further examination recommended under Rule **19.** (3) 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 them but not exceeding eighteen months.

21. 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 admitted to the degree.

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

Fees

*Or department where a department is not within a school.

Master of Architecture (MArch)

1. The degree of Master of Architecture 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.

Qualifications

2. (1) An applicant for registration shall have been admitted to the degree of Bachelor of Architecture in the University of New South Wales, or other approved university, at a standard acceptable to the Committee.

(2) In special circumstances a person may be permitted to register as a candidate for the degree if the person submits evidence of such academic and professional attainments as may be approved by the Committee.

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

Registration

3. (1) An application to register as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least one full calendar month before the commencment of the session in which the candidate desires to register.

(2) In every case, before permitting an applicant to register as a candidate, the Committee shall be satisfied that adequate supervision and facilities are available.

(3) An approved applicant shall register in one of the following categories:

(a) student in full-time attendance at the University;

(b) student in part-time attendance at the University;

(c) student working externally to the University.

(4) 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 Committee which shall include the preparation and submission of a thesis embodying the results of an original investigation or design relative to Architecture. The work shall be carried out under the direction of a supervisor appointed by the Committee or under such conditions as the Committee may determine.

(5) No candidate shall be considered for the award of the degree until the lapse of four complete sessions from the date from which registration becomes effective, save that in the case of a candidate who obtains the degree of Bachelor with Honours, or who has had previous research experience this period may, with the approval of the Committee be reduced by up to two sessions.

Thesis

4. (1) A candidate for the degree shall be required to submit three copies of the thesis referred to in paragraph **3.** (4) above which shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree theses. The candidate may submit also for examination any work the candidate has published, whether or not such work is related to the thesis.

(2) For each candidate there shall be at least two examiners appointed by the Professorial Board on the recommendation of the Committee, one of whom shall, if possible, be an external examiner.

(3) 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.

Recommendation for Admission to Degree

5. Having considered the examiners' reports the Committee shall recommend whether or not the candidate should be admitted to the degree.

Fees

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

Master of Architectural Design (MArchDes)

1. The degree of Master of Architectural Design by formal course work 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 satisfactorily completed an approved program of advanced study.

Qualifications

2. (1) An applicant for registration for the degree shall:

(a) have been admitted to the Bachelor of Architecture degree with Honours in the University of New South Wales, or other approved university; and,

(b) have spent at least one year in professional practice subsequent to completion of the Bachelor's degree.

(2) An applicant for registration with a Bachelor of Architecture pass degree may be admitted only on the recommendation of the Head of School and with the confirmation of the Committee.

(3) In exceptional cases an applicant may be registered as a candidate for the degree by submitting evidence of such academic and professional attainment as may be approved by the Committee.

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

Registration

3. (1) An application to register as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least two months before the commencement of the course. The Committee shall determine the date of registration.

(2) A candidate for the degree shall be required to undertake such course of formal study, pass such examinations as may be prescribed, and undertake specified projects, the satisfactory completion of which shall be regarded as part of the examinations.

(3) No candidate shall bve considered for the award of the degree until the lapse of two sessions in the case of a full-time candidate or three sessions in the case of a part-time candidate from the date of registration.

(4) The progress of a candidate shall be reviewed annually by the Committee on the recommendation of the Head of the School and as a result of its review the Committee may cancel registration or take such other action as it considers appropriate.

Recommendation for Admission to Degree

4. Having considered the candidate's results in the prescribed course of study including projects, the Committee shall recommend whether the candidate may be admitted to the degree.

Fees

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

Master of Building (MBuild)

1. The degree of Master of Building 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.

Qualifications

2. (1) An applicant for registration for the degree shall have been admitted to the degree of Bachelor in the University of New South Wales, or other approved university, in an appropriate school, and at a standard acceptable to the Committee.

(2) In special circumstnces a person may be permitted to register as a candidate for the degree by submitting evidence of such academic and professional attainments as may be approved by the Committee.

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

Registration

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

(2) In every case, before permitting an applicant to register as a candidate, the Committee shall be satisfied that adequate supervision and facilities are available.

(3) An approved applicant shall register in one of the following categories:

(a) student in full-time attendance at the University;

(b) student in part-time attendance at the University;

(c) student working externally to the University.

(4) 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 Committee which shall include the preparation and submission of a thesis embodying the results of an original investigation or design relative to building. The work shall be carried out under the direction of a supervisor appointed by the Committee or under such conditions as the Committee may determine.

(5) No candidate shall be considered for the award of the degree until the lapse of four complete sessions from the date from which registration becomes effective, save that in the case of a candidate who obtains the degree of Bachelor with Honours, or who has had previous research experience, this period may, with the approval of the Committee be reduced by up to two sessions.

Thesis

4. (1) A candidate for the degree shall be required to submit three copies of the thesis referred to in paragraph **3.** (4) which shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree theses. The candidate may submit also for examination any work he has published, whether or not such work is related to the thesis.

(2) For each candidate there shall be at least two examiners appointed by the Professorial Board on the recommendation of the Committee, one of whom shall, if possible, be an external examiner.

(3) 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.

Recommendation for Admission to Degree

5. Having considered the examiners' report the Committee shall recommend whether or not the candidate should be admitted to the degree.

Fees

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

Master of the Built Environment (MBEnv) (by Research)

1. The degree of Master of the Built Environment 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.

Qualifications

2. (1) An applicant for registration for the degree shall have been admitted to a minimum four year full-time degree of Bachelor in the University of New South Wales, or other approved degree from another University, at a standard acceptable to the Committee.

(2) In special circumstances a person may be permitted to register as a candidate for the degree by submitting evidence of such academic and professional attainments as may be approved by the Committee.

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

Registration

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

(2) In every case, before permitting an applicant to register as a candidate, the Committee shall be satisfied that adequate supervision and facilities are available.

(3) An approved applicant shall register in one of the following categories:

(a) student in full-time attendance at the University;

(b) student in part-time attendance at the University;

(c) student working externally to the University.

(4) 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 Committee which shall include the preparation and submission of a thesis embodying the results of an original investigation or design in the field of the built environment. The work shall be carried out under the direction of a supervisor appointed by the Committee or under such conditions as the Committee shall determine.

(5) No candidate shall be considered for the award of the degree until the lapse of four complete sessions from the date from which registration becomes effective, save that in the case of a candidate who obtains the degree of Bachelor with Honours, or who has had previous research experience this period may, with the approval of the Committee be reduced by up to two sessions.

Thesis

4. (1) A candidate for the degree shall be required to submit three copies of the thesis referred to in paragraph **3.** (4) above which shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree thesis. The candidate may submit also for examination any published work whether or not such work is related to the thesis.

(2) For each candidate there shall be at least two examiners appointed by the Professorial Board on the recommendation of the Committee, one of whom shall, if possible, be an external examiner.

(3) 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.

Recommendation for Admission to Degree

5. Having considered the examiners' reports the Committee shall recommend whether or not the candidate should be admitted to the degree.

Fees

6. An approved 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) by formal course work 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 satisfactorily completed an approved program of advanced study.

Qualifications

2. (1) An applicant for registration for the degree shall normally be a graduate from an appropriate four-year, full-time undergraduate course in the University of New South Wales, or other approved university or tertiary institute, at a standard acceptable to the Committee.

(2) In exceptional cases an applicant may be registered as a candidate for the degree by submitting evidence of such academic and professional attainment as may be approved by the Committee.

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

Registration

3. (1) An application to register as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least two months before the commencement of the course.

(2) A candidate for the degree shall be required to undertake such course of formal study, pass such examinations and submit a graduate project as prescribed by the Committee.

(3) No candidate shall be considered for the award of the degree until the lapse of two sessions in the case of a full-time candidate or four sessions in the case of a part-time candidate.

(4) The progress of a candidate shall be reviewed annually by the Committee on the recommendation of the Head of School in which the candidate is registered and as a result of such review the Committee may terminate the candidature.

Graduate Project

4. (1) A graduate project approved by the Committee may be submitted at the completion of the formal section of the course, but in any case shall be submitted not later than one year after the completion of the course.

(2) The format of the graduate project shall accord with the instructions of the Head of School and shall comply with the requirements of the Committee for the submission of project reports.

(3) (a) The report shall be examined by two examiners appointed by the Professional Board on the recommendation of the Committee.

(b) A candidate may be required to attend for an oral or written examination.

Recommendation for Admission to Degree

5. Having considered the examiners' reports, and the candidate's other results in the prescribed course of study, the Committee shall recommend whether the candidate may be admitted to the degree.

Fees

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

Master of Industrial Design (MID)

1. The degree of Master of Industrial Design by formal coursework 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 satisfactorily completed an approved program of advanced study.

Qualifications

2. (1) An applicant for registration for the degree shall have been admitted to a professional degree in industrial design (not less than four years' full-time duration or its equivalent) at an approved university or tertiary institute, at a standard acceptable to the Committee.

(2) In exceptional cases an applicant may be registered as a candidate for the degree by submitting evidence of such academic and professional attainment as may be approved by the Committee.

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

3. (1) An application to register as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least two months before the commencement of the course. **Registration**

(2) A candidate for the degree shall be required to undertake such course of formal study, pass such examinations and submit a project report as prescribed by the Committee.

(3) No candidate shall be considered for the award of the degree until the lapse of two sessions in the case of a full-time candidate or four sessions in the case of a part-time candidate.

(4) The progress of a candidate shall be reviewed annually by the Committee on the recommendation of the Head of School. As a result of such review the Committee may terminate the candidature.

4. (1) A graduate project approved by the Committee may be submitted at the completion of the formal section of the course but in any case shall be submitted not later than one year after the completion of the course. **Graduate Project**

(2) The format of the project shall accord with the instructions of the Head of the School and shall comply with the requirements of the Committee for the submission of project reports.

(3) (a) The project shall be examined by two examiners appointed by the Professorial Board on the recommendation of the Committee.

(b) A candidate may be required to attend for an oral or written examination.

5. An approved candidate shall pay such fees as may be determined from time to time by the Council. **Fees**

1. The degree of Master of Landscape Architecture 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. **Master of Landscape Architecture (MLArch)**

2. (1) An applicant for registration for the degree shall have been admitted to the degree of Bachelor of Landscape Architecture in the University of New South Wales, or other approved university, at a standard acceptable to the Committee. **Qualifications**

(2) In special circumstances a person may be permitted to register as a candidate for the degree by submitting evidence of such academic and professional attainments as may be approved by the Committee.

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

3. (1) An applicant to register for the degree shall apply on the prescribed form which shall be lodged with the Registrar at least one full calendar month before the commencement of the session in which the candidate desires to register. **Registration**

(2) In every case, before permitting an applicant to register as a candidate, the Committee shall be satisfied that adequate supervision and facilities are available.

(3) An approved applicant shall register in one of the following categories:

(a) student in full-time attendance at the University;

(b) student in part-time attendance at the University;

(c) student working externally to the University.

(4) 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 Committee which shall include the preparation and submission of a thesis embodying the results of an original investigation or design relative to Landscape Architecture. The work shall be carried out under the direction of a supervisor appointed by the Committee or under such conditions as the Committee may determine.

(5) No candidate shall be considered for the award of the degree until the lapse of four complete sessions from the date from which registration becomes effective, save that in the case of a candidate who obtains the degree of Bachelor with Honours or who has had previous research experience, this period may, with the approval of the Committee be reduced by up to two sessions.

Thesis

4. (1) A candidate for the degree shall be required to submit three copies of the thesis referred to in paragraph **3.** (4) which shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree theses. The candidate may submit also for examination any work the candidate has published, whether or not such work is related to the thesis.

(2) For each candidate there shall be at least two examiners appointed by the Professorial Board on the recommendation of the Committee, one of whom shall, if possible, be an external examiner.

(3) 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.

Recommendation for Admission to Degree

5. Having considered the examiners' reports the Committee shall recommend whether or not the candidate should be admitted to the degree.

Fees

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

Master of Science (MSc)

1. The Degree of Master of Science may be awarded by the Council on the recommendation of the Higher Degree Committee of the appropriate Faculty or Board of Studies (hereinafter referred to as the Committee) to a candidate who has demonstrated ability to undertake research by the submission of a thesis embodying the results of an original investigation.

Qualifications

2. (1) An applicant for registration for the degree shall have been admitted to the degree of Bachelor in the University of New South Wales, or other approved university or tertiary institution in an appropriate School or Department, and at a standard acceptable to the Committee.

(2) In exceptional cases a person may be permitted to register as a candidate for the degree if the person submits evidence of such academic and professional attainments as may be approved by the appropriate Committee.

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

Registration

3. (1) An application to register as a candidate for the degree of Master of Science shall be made on the prescribed form which shall be lodged with the Registrar at least one full calendar month before the commencement of the session in which the candidate desires to register.

(2) In every case before permitting an applicant to register as a candidate the Committee shall be satisfied that adequate supervision and facilities are available.

(3) An approved applicant shall register in one of the following categories:

(a) student in full-time attendance at the University

(b) student in part-time attendance at the University

(c) student working externally to the University

(4) Every candidate for the degree shall be required to submit three copies of a thesis embodying the results of an original investigation or design, to take such examinations and to perform such other work as may be prescribed by the Committee. This work shall be carried out under the direction of a supervisor appointed by the Committee or under such conditions as the Committee may determine.

(5) At least once a year and at any other time that the Committee sees fit the candidate's supervisor shall present to the Head of School or Department in which the candidate is registered a report on the progress of the candidate. The Committee shall review the report and may if it decides as a result of its review that the progress of a candidate is unsatisfactory, cancel registration or take such other action as it considers appropriate.

(6) Unless otherwise recommended by the Committee, no candidate shall be awarded the degree until the lapse of four complete sessions from the date of registration, save that the case of a candidate who obtained the degree of Bachelor with Honours or who has had previous research experience, this period may be reduced by up to two sessions with approval of the Committee. A candidate who is fully engaged in research for the degree shall present for examination not later than six academic sessions from the date of registration. A candidate not fully engaged in research shall present for examination not later than twelve academic sessions from the date of registration. In special cases an extension of these times may be granted by the Committee.

Thesis

4. (1) A candidate shall give two months' notice in writing to the Registrar of intention to submit a thesis.

(2) A candidate for the degree shall be required to submit three copies of the thesis referred to in paragraph **3.** (4) which shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree theses. The candidate may submit also for examination any work the candidate has published whether or not such work is related to the thesis.

(3) For each candidate there shall be at least two examiners, appointed by the Professorial Board on the recommendation of the Committee, one of whom, if possible, shall be external to the University.

(4) 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.

Recommendation for Admission to Degree

5. Having considered the examiners' reports the Committee shall recommend whether or not the candidate should be admitted to the degree.

Fees

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

Master of Science (MSc) *without supervision*

1. Where it is not possible for candidates to register under the normal conditions for the degree of Master of Science, Master of Engineering or Master of Surveying by reason of their location at centres which are distant from University Schools or where effective supervision is not practicable registration may be granted in these categories under the following conditions:

Qualifications

2. An applicant for registration shall have been admitted to a degree of Bachelor in the University of New South Wales at a standard acceptable to the Higher Degree Committee of the appropriate Faculty (hereinafter referred to as the Committee).

Registration

3. (1) An application to register as an external candidate for the degree of Master of Science, Master of Engineering or Master of Surveying without supervision shall be lodged with the Registrar for recommendation by the Head of School and consideration by the Higher Degree Committee of the appropriate Faculty (hereinafter referred to as the Committee) 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 the graduate's own interest at an early stage, seek the advice of the appropriate School with regard to the adequacy of the subject matter for the degree. A synopsis of the work should be enclosed.

(2) A candidate shall not be considered for the award of the degree until the lapse of six sessions in the case of honours graduates and eight sessions in the case of pass graduates from the date of graduation.

Thesis

4. (1) (a) Every candidate for the degree shall be required to submit three copies of a thesis embodying the results of an investigation or design. 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. A candidate may submit also for examinatin any work the candidate has published, whether or not such work is related to the thesis.

(b) Every candidate shall submit with the thesis a statutory declaration that the material contained therein is the candidate's own work, except where otherwise stated in the thesis.

(2) For each candidate there shall be at least two examiners appointed by the Professorial Board on the recommendation of the Committee, one of whom shall be an internal examiner.

(3) If the thesis reaches the required standard, the candidate shall be required to attend for an oral examination at a time and place nominated by the Committee. The examiners may also arrange at their discretion for the examination of the candidate by written and/or practical examinations on the subject of the thesis and/or subjects related thereto.

(4) 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.

Recommendation for Admission to Degree

5. Having considered the examiners' reports the Committee shall recommend whether or not the candidate should be admitted to the degree.

Fees

6. An approved applicant shall pay such fees as may be determined from time to time by the Council.

Master of Science (Acoustics) (MSc(Acoustics))

1. The degree of Master of Science (Acoustics) by formal course work 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 satisfactorily completed an approved program of advanced study.

Qualifications

2. (1) An applicant for registration for the degree shall have been admitted to an appropriate degree (not less than four years' duration) of the University of New South Wales or an equivalent degree of another approved university or tertiary institution, and at a standard acceptable to the Committee.

(2) In exceptional cases an applicant may be registered as a candidate for the degree by submitting evidence of such academic and professional attainment as may be approved by the Committee.

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

3. (1) An application to register as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least two months before the commencement of the course. **Registration**

(2) A candidate for the degree shall be required to undertake such course of formal study, pass such examinations and submit a project report as prescribed by the Committee.

(3) No candidate shall be considered for the award of the degree until the lapse of two sessions in the case of a full-time candidate or four sessions in the case of a part-time candidate.

(4) The progress of a candidate shall be reviewed annually by the Committee on the recommendation of the Head of the School in which the candidate is registered and as a result of such review the Committee may terminate the candidature.

4. (1) A report on a project approved by the Committee may be submitted at the completion of the formal section of the course, but in any case shall be submitted not later than one year after the completion of the course. **Project**

(2) The format of the report shall accord with the instructions of the Head of the School and shall comply with the requirements of the Committee for the submission of project reports.

(3) (a) The report shall be examined by two examiners appointed by the Professorial Board on the recommendation of the Committee.

(b) A candidate may be required to attend for an oral or written examination.

5. Having considered the examiners' reports, and the candidate's other results in the prescribed course of study, the Committee shall recommend whether the candidate may be admitted to the degree. **Recommendation for Admission to Degree**

6. An approved candidate shall pay such fees as may be determined from time to time by the Council. **Fees**

1. The degree of Master of Science (Building) by formal course work 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 satisfactorily completed an approved program of advanced study. **Master of Science (Building) (MSc(Building))**

2. (1) An applicant for registration for the degree shall have been admitted to an appropriate degree in the University of New South Wales or other approved university at a level approved by the Committee. **Qualifications**

(2) In exceptional cases an applicant may be registered as a candidate for the degree if he submits evidence of such academic and professional attainments as may be approved by the Committee.

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

3. (1) An application to register as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least two months before the commencement of the course. **Registration**

(2) A candidate for the degree, shall be required to undertake such course of formal study, pass such examinations and, where specified, submit a project report, as prescribed by the Committee.

(3) No candidate shall be considered for the award of the degree until the lapse of two sessions in the case of a full-time candidate, or four sessions in the case of a part-time candidate from the date from which registration becomes effective.

(4) The progress of a candidate shall be reviewed annually by the Committee on the recommendation of the Head of School in which the candidate is registered and as a result of such review the Committee may terminate the candidature.

Project

4. (1) A project report approved by the Committee shall be submitted at the completion of the formal section of the course, not later than one year after the completion of the course.

(2) The format of the report shall accord with the instructions of the Head of School and shall comply with the requirements of the Committee for the submission of project reports.

(3) (a) The report shall be examined by two examiners appointed by the Professorial Board on the recommendation of the Committee.

(b) A candidate may be required to attend for an oral or written examination.

Recommendation for Admission to Degree

5. Having considered the examiners' reports where appropriate and the candidate's other results in the prescribed course of study, the Committee shall recommend whether the candidate may be admitted to the degree.

Fees

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

Master of Science (Industrial Design) MSc(IndDes)

1. The degree of Master of Science (Industrial Design) by formal course work 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 satisfactorily completed an approved program of advanced study.

Qualifications

2. (1) An applicant for registration for the degree shall have been admitted to an appropriate degree (not less than four years' full-time duration or its equivalent) of the University of New South Wales or other approved university or tertiary institute, at a standard acceptable to the Committee.

(2) In special cases an applicant may be registered as a candidate for the degree if the applicant submits evidence of such academic and professional attainment as may be approved by the Committee.

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

Registration

3. (1) An application to register as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar at least two months before the commencement of the course.

(2) A candidate for the degree shall be required to undertake such course of formal study, pass such examinations and submit a project report as prescribed by the Committee.

(3) No candidate shall be considered for the award of the degree until the lapse of two sessions in the case of a full-time candidate or four sessions in the case of a part-time candidate.

(4) The progress of a candidate shall be reviewed annually by the Committee on the recommendation of the Head of School. As a result of such review the Committee may terminate the candidature.

Graduate Project

4. (1) A graduate project approved by the Committee may be submitted at the completion of the formal section of the course, but in any case shall be submitted not later than one year after the completion of the course.

(2) The format of the project shall accord with the instructions of the Head of the School and shall comply with the requirements of the Committee for the submission of project reports.

(3) (a) The project shall be examined by two examiners appointed by the Professorial Board on the recommendation of the Committee.

(b) A candidate may be required to attend for an oral or written examination.

Fees

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

Master of Town Planning (MTP)

1. The degree of Master of Town Planning 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.

Qualifications

2. (1) An applicant for registration shall have been admitted to the Degree of Bachelor of Town Planning in the University of New South Wales, or to a Bachelor's degree in Town or Regional Planning of an approved university, and at a standard acceptable to the Committee.

(2) In special circumstances a person may be permitted to register as a candidate for the degree by submitting evidence of such academic and professional attainments as may be approved by the Committee.

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

Registration

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

(2) In every case, before permitting an applicant to register as a candidate, the Committee shall be satisfied that adequate supervision and facilities are available.

(3) An approved applicant shall register in one of the following categories:

(a) student in full-time attendance at the University;

(b) student in part-time attendance at the University;

(c) student working externally to the University.

(4) 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 Committee which shall include the preparation and submission of a thesis embodying the results of an original investigation or design relative to Town or Regional Planning. The work shall be carried out under the direction of a supervisor appointed by the Committee or under such conditions as the Committee may determine.

(5) No candidate shall be considered for the award of the degree until the lapse of four complete sessions from the date from which registration becomes effective, save that in the case of a candidate who obtains the degree of Bachelor with Honours or who has had previous research experience, this period may, with the approval of the Committee be reduced by up to two sessions.

Thesis

4. (1) A candidate for the degree shall be required to submit three copies of the thesis referred to in paragraph **3.** (4) which shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degree theses. The candidate

may submit also for examination any work he has published, whether or not such work is related to the thesis.

(2) For each candidate there shall be at least two examiners appointed by the Professorial Board on the recommendation of the Committee one of whom shall, if possible be an external examiner.

(3) 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.

Recommendation for Admission to Degree

5. Having considered the examiners' reports the Committee shall recommend whether or not the candidate should be admitted to the degree.

Fees

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

Graduate Diploma

Graduate Diploma (GradDip)

1. An application for admission to a graduate diploma course shall be made on the prescribed form which should be lodged with the Registrar at least two full calendar months before the commencement of the course.

2. An applicant for admission to a graduate diploma course shall be:

(1) a graduate of the University of New South Wales or other approved university,

(2) a person with other qualifications as may be approved by Faculty.

3. Notwithstanding clause **2.** above, Faculty may require an applicant to take such other prerequisite or concurrent studies and/or examinations as it may prescribe.

4. Every candidate for a graduate diploma shall be required to undertake the appropriate course of study, to pass any prescribed examinations, and if so laid down in the course, to complete a project or assignment specified by the Head of the School. The format of the report on such project or assignment shall accord with the instructions laid down by the Head of the School.

5. An approved applicant shall be required to pay the fee for the course in which he desires to register. Fees shall be paid in advance.

Subject Descriptions

Identification of Subjects by Number

A subject is defined by the Professorial 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 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.

3. Subject numbers which have not been used for some time are not used for new subject titles.

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 and are published at the end of **Undergraduate Study** and **Graduate Study** of the relevant school. Their subject descriptions 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 Studies subjects. For General Studies 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, ie which session taught is not known at time of publication); L (Lecture, followed by hours per week); T (Laboratory/ Tutorial, followed by hours per week); Sem (Seminar, followed by hours per week); hpw (hours per week); C (Credit *or* Credit units); CR (Credit Level); DN (Distinction).

	School, Department etc	Faculty	Page
	*Subjects also offered for courses in this handbook		
1	School of Physics*	Science	77
2	School of Chemistry*	Science	
4	School of Metallurgy*	Applied Science	77
5	School of Mechanical and Industrial Engineering	Engineering	
6	School of Electrical Engineering and Computer Science	Engineering	
7	School of Mining Engineering	Applied Science	
8	School of Civil Engineering	Engineering	
9	School of Wool and Pastoral Sciences	Applied Science	
10	School of Mathematics	Science	
11	**School of Architecture**	**Architecture**	**77**
12	School of Psychology*	Biological Sciences	91
13	School of Textile Technology	Applied Science	
14	School of Accountancy*	Commerce	91
15	School of Economics	Commerce	
16	School of Health Administration	Professional Studies	
17	Biological Sciences	Biological Sciences	
18	School of Mechanical and Industrial Engineering (Industrial Engineering)	Engineering	
21	**Department of Industrial Arts**	**Architecture**	**92**
23	School of Nuclear Engineering	Engineering	
25	School of Applied Geology	Applied Science	
26	Department of General Studies	Board of Studies in General Education	
27	School of Geography*	Applied Science	94
28	School of Marketing	Commerce	
29	School of Surveying*	Engineering	94
30	Organizational Behaviour	Commerce	
31	School of Optometry	Science	
32	Centre for Biomedical Engineering	Engineering	
35	**School of Building**	**Architecture**	**94**
36	**School of Town Planning**	**Architecture**	**101**
37	**School of Landscape Architecture**	**Architecture**	**106**
38	School of Food Technology	Applied Science	
39	**Graduate School of the Built Environment**	**Architecture**	**110**
40	Professorial Board		
41	School of Biochemistry	Biological Sciences	
42	School of Biotechnology	Biological Sciences	
43	School of Botany*	Biological Sciences	113
44	School of Microbiology	Biological Sciences	
45	School of Zoology	Biological Sciences	
46	Faculty of Applied Science	Applied Science	
47	Faculty of Engineering	Engineering	
48	School of Chemical Engineering and Industrial Chemistry	Applied Science	
50	School of English	Arts	
51	School of History	Arts	
52	School of Philosophy	Arts	
53	School of Sociology	Arts	
54	School of Political Science	Arts	
55	School of Librarianship	Professional Studies	
56	School of French	Arts	
57	School of Drama	Arts	
58	School of Education*	Professional Studies	113
59	Department of Russian	Arts	
60	Faculty of Arts	Arts	
61	Department of Music	Arts	
62	School of History and Philosophy of Science	Arts	
63	School of Social Work	Professional Studies	
64	School of German Studies	Arts	
65	School of Spanish and Latin American Studies	Arts	
66	Subjects Available from Other Universities		
67	Faculty of Science	Science	
68	Board of Studies in Science and Mathematics	Board of Studies in Science and Mathematics	
70	School of Anatomy	Medicine	
71	School of Medicine	Medicine	
72	School of Pathology	Medicine	
73	School of Physiology and Pharmacology	Medicine	
74	School of Surgery	Medicine	
75	School of Obstetrics and Gynaecology	Medicine	
76	School of Paediatrics	Medicine	
77	School of Psychiatry	Medicine	
79	School of Community Medicine	Medicine	
80	Faculty of Medicine	Medicine	
81	Medicine/Science/Biological Sciences	Medicine	
85	Australian Graduate School of Management	AGSM	
90	Faculty of Law	Law	
97	Division of Postgraduate Extension Studies		

Physics

Undergraduate Study

1.931 Physics I (Building)

4 credit points; compulsory. Prerequisites: nil.

Mechanics of solids: kinematics. Newton's Law of motion, work and energy. Atomistic description of mechanical properties of matter. Atomic structure of matter. Elasticity. Plasticity: dislocations, fracture, viscosity. Electrostatics, electromagnetism and DC circuits: Coulomb's Law. Electric field. Electric potential. Capacitance. Electrical energy sources. Conductors. Resistivity. Atomic view of conduction. EMF. Kirchoff's Laws. Magnetic induction. Torque on a coil in magnetic field. Moving coil meter. Wheatstone's bridge. Potentiometer. Faraday's Law. Transient circuits.

Wave motion, heat light and sound: simple harmonic motion. Wave motion. Interference, Doppler effect. Energy transfer. Heat, heat capacity. Joule's equivalent. Thermometry. Convenction. Conduction. Radiation. Black body. Emittance. Absorptance. Light. Electro-magnetic spectrum. Huygens' Principle. Curved mirrors. Lenses. Dispersion. Interference. Polarization. Photometry. Colorimetry Sound. Longitudinal waves. Overtones. Intensity levels. Decibels. Quality of sound.

Graduate Study

1.927G Acoustic Theory — S1 L1½T½

2 credit points.

Sources of acoustic radiation; simple, dipole, quadrupole, plane, impulsive source, random source, aerodynamic sources. Free field propagation in fluids, interference and diffraction, absorption, shock waves. Boundary effects; reflection and transmission at fluid/fluid and fluid/solid interfaces, fluid waveguides, solid waveguides. Reception and analysis; transducers, Fourier analysis, statistical methods, impulse measurement.

Metallurgy

Undergraduate Study

4.951 Materials Technology — F L2T2

Materials selection, based on structure and properties. Equilibrium and kinetics in metallic systems. The structure of ceramics with particular reference to silicates. Structural changes. Electroplating processes considered from a theoretical and practical standpoint. Structure and testing of electro-deposits; electrochemical protection. The structure, properties and technology of wood.

Architecture

Undergraduate Study

Architectural Design — General

11.4101 Principles of Design — C4

Prerequisites: nil.

The meaning of design as the process of designation for a purpose. Selection, making, art. The origin and cause of human aims in general. Motivations: need, desire, aspiration. Motivations affecting the field of architecture on the physical, mental and spiritual level. Introduction to aim-possibility-act-fulfilment, the four cornerstones of the design process. The meaning and role of analysis in the understanding and exploration of the above. The relationship between possibility and act: the principle of successive limitation. The design process and the physical and human context in which it is destined to fit. Practical studio projects in problem-solving exercises in two and three dimensions taken from all the disciplines of the built environment.

11.4102 Design Theory I — C5

Prerequisites: 11.4101, 11.4201.

Introduction to methodology, especially design methodology. Development of methodical analysis and research applied to the comprehension of design aims, possibilities and acts. Introduction to complete design methods in general and study of simple models followed by contemporary architects. Practical studio projects to apply design methods in problem-solving exercises leading to simple architectural synthesis.

11.4103 Design Theory II — C5

Prerequisite: 11.4102.

Development of systematic design processes; identification of different methods and their influences. Investigation and comparison of various tools and techniques, their respective limitations and suitability for problem types. Investigation of human sciences techniques and their application to the design process. Introduction to computer-aided design and more complex design systems. Introduction to problems of anticipation, user-participation, survey methods. Consideration of principles of composition and means of architectural expression. Practical studio projects to apply various design processes to projects leading to architectural synthesis.

11.4120 Design Theory III C4

Prerequisite: 11.4103.

Advanced and specialized design-methods. Criteria of various decision theories. Cybernetics. Statistical methods. Linear and cyclic models of the process of synthesis, their evaluation and suitability to specific architectural tasks. Practical application centres on selected case studies.

11.4121 Theory of Form C4

Prerequisite: 11.4103.

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.

11.4122 Theory of Architecture I C4

Prerequisite: 11.4103.

Theory of architectural synthesis: the sources of synthesis; the centre and field, the central 'idea' as the cause of order of priorities and connections between the elements of the synthesis. Discussion on the 'name-form, -idea, -shape' sequence. The concepts of prototypes, synergy, conflict-balance, limitation and economy in architectural synthesis. Introduction to ethics and aesthetics. Practical seminars and projects focus on selected case studies and specific themes.

11.4123 Theory of Architecture II C4

Prerequisite: 11.4122.

The relationship between the cosmic order and architecture. The order of space and time. Introduction to traditional symbolism and sacred architecture. The meaning of numbers, geometry, direction, enclosure, relation and proportion. Sacred architecture examined in detail in the Christian, Hindu, Buddhist and Islamic tradition. Practical seminars and projects focus on case studies and specific themes.

11.4124 Geometry and Design C4

Prerequisite: 11.4103.

Geometrical principles determining spatial order and their application to architecture. Practical study is given to various geometrical systems ranging from simple pragmatic to complex cultural considerations.

11.4125 Interior Design I C4

Prerequisites: nil.

The elements of the built environment in most immediate contact. The components of interiors: light, sound, colour, texture, shape. Perception. Anthropometrics and ergonomics. Tools and machines. Industrial design and manufacture of furniture, fabrics and appliances.

11.4126 Interior Design II C4

Prerequisite: 11.4125.

The nature of the '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.

11.4127 Design for Conservation C4

Prerequisite: 11.4328.

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

11.4128 Computer-Aided Design C6

Prerequisite: 11.4632.

Advanced study of the application of computers to architectural design problems; review and further development of techniques for modelling buildings in computer memory; outline of mathematical optimization techniques and how these may be applied to architectural problem-solving; experience in the development of computer-based architectural design-aid tools.

11.4129 Research and Survey Methods C4

Prerequisite: 11.4103.

Understanding the needs of users of buildings as well as those of the client. Regional and historical perspectives. Prognosis of future 'users'. Survey methods applied to user-research before and after the erection of the building. Practical exercises in user-research and survey.

11.4130 Criticism and Evaluation C4

Prerequisite: 11.4103.

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 in a 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.

11.4131 Principles of Dwellings C3

Prerequisite: 11.4102.

Examination of the different dwelling types and locational characteristics in the context of social, economic, political and legislative issues; the psycho-social aspects of dwelling types with reference to Australian traditions and experience, review of current practice and trends; demographic implications of socio-economic models, theoretical framework for the development of housing concepts, case studies and design exercises.

Architectural Design — Specific

11.4201 Living Unit C4

Prerequisites: nil.

Analysis of the immediate built environment, to develop an awareness of man's need for shelter, and a deeper understanding of his functions, activities and requirements. Development of design skills through a series of studio exercises.

11.4211 Cultural Facilities I C6

Prerequisites: 11.4102, 11.4303, 11.4401, 11.4403.

Cultural attitudes in recent and contemporary Western Society. Cultural experience at participatory level in present-day society, and environmental requirements for small groups; overlaps with education and recreation in broadest sense. Includes design of studios, workshops and craft centres; small libraries; facilities for performance to small audiences; small galleries and exhibition spaces.

11.4212 Commercial Facilities I C6

Prerequisites: 11.4102, 11.4303, 11.4401, 11.4403.

The principles and nature of all aspects of commercial activity. Features common to all commercial buildings, as appropriate to specific commercial buildings. Determining factors, psychological motivations, and market operators. Economic, technological and urban requirements; people, goods and services. The principles and design of small-scale commercial activity in a rural or suburban context.

11.4213 Health and Welfare Facilities I C6

Prerequisites: 11.4102, 11.4303, 11.4401, 11.4403.

Public health and welfare; social theory and practice; function of buildings for health and welfare of infants, children, adults and aged, including the afflicted, sick and handicapped. Social security, funding and legislation. Simple institutions in the suburban context with emphasis on special anthropometrics, site selection and social interaction.

11.4214 Educational Facilities I C6

Prerequisites: 11.4102, 11.4303, 11.4401, 11.4403.

The meaning of education; educational philosophies and their physical and architectural requirements. Child psychology, and psychology of play and learning. Case studies on child-minding centres, preschool kindergartens, infant and primary schools, open and special schools.

11.4221 Detached Houses C6

Prerequisites: One from Group A, 11.4414.

Comprehensive awareness of family housing needs and relation to natural environment, culminating in design of a family house to meet these needs. Historical development. Social, climatic, topographic and technological aspects; local and regional influences and international context. Case studies of significant examples of good design. Site and functional planning requirements; anthropometric, acoustic and visual parameters; community and privacy; development of brief between client/user/designer; growth, change and flexibility, construction, structure and services.

11.4222 Group Dwellings C6

Prerequisites: One from Group A, 11.4414.

Basic concepts of group housing, and analysis of user needs; advantages and disadvantages. Housing associations and community purposes. Case studies of selected examples. Design studies of simple groups in suburban and urban locations.

11.4230 Community Facilities II C12

Prerequisites: One from Group B, 11.4103, 11.4408.

An extension of one, or a combination of two or more, of the subjects 11.4231, 11.4232, 11.4233 and 11.4234. Case studies and two design projects, or one project taken to an advanced stage of development.

11.4231 Commercial Facilities II C6

Prerequisites: One from Group B, 11.4103, 11.4408.

The principles and nature of all aspects of commercial activity. Features common to all commercial buildings, and those appropriate to specific commercial buildings. Determining factors, psychological motivations, and market operations. Economic, technological and urban requirements; people, goods and services. Larger scale commercial activity in the urban context.

11.4232 Industrial Facilities C6

Prerequisites: One from Group B, 11.4103, 11.4408.

The principles and characteristics of industrial building design. History of the development of industrial building, current technology and design, and possible future developments. Planning of industrial estates. Design studies in development of industrial building types, ranging from simple projects to complex plants.

11.4233 Health and Welfare Facilities II C6

Prerequisites: One from Group B, 11.4103, 11.4408.

Public health and welfare; social theory and practice, function of buildings for health and welfare of infants, children, adults and aged, including the afflicted, sick and handicapped. Social security, funding and legislation. More complex institutions in the urban context including housing for the aged, clinics and special facilities for the handicapped.

11.4234 Government Facilities I C6

Prerequisites: One from Group B, 11.4103, 11.4408.

Design of public buildings by or for government agencies. Client/user/architect relationship in development of brief. Public facilities, institutions, government office buildings, public services of quasi-industrial type, etc, for Federal, State and Municipal government, statutory bodies and government undertakings. Case studies and design projects. This series deals with single buildings and groups.

11.4240 Residential Facilities II C12

Prerequisites: One from Group B, 11.4103, 11.4415, 11.4407.

The implications for housing of different densities and purposes; government policies; life styles and traditions; social, technological, physical and cultural environmental requirements; cost analysis. Case studies and two design projects, or one project taken to an advanced stage of development.

11.4241 Urban Housing C6

Prerequisites: One from Group B, 11.4103, 11.4415, 11.4407.

The implications for urban housing of differing densities; advantages and disadvantages; characteristics common to medium- and high-density living. Determining factors: life styles and traditions, psychological motivations, economic, technological and urban requirements. Functional factors: constructional solutions, cost analysis, funding and staging, servicing, alternative housing types, overseas developments and future trends. Practical studies of urban housing design in the context of density, economics, social mix amenity, urban planning, etc.

11.4242 Low-Cost Housing C6

Prerequisites: One from Group B, 11.4103, 11.4415, 11.4407.

History, sociology, economics and government policies for low-cost housing, in Australia and overseas, with special reference to developing countries; physical and cultural environment; local materials, labour, methods, skills, transport, etc.

11.4243 Tourist Facilities C6

Prerequisites: One from Group B, 11.4103, 11.4415, 11.4407.

Development of the tourist industry, and trends in tourism; hotels and motels; recreational centres, and fitness camps; holiday camps and marinas; tourist facilities and accommodation in national parks, etc. Case studies and design projects.

11.4244 Housing for Special Climates

6 credit points. Pre-requisites: One from Group B, 11.4103, 11.4304, 11.4305, 11.4306, 11.4407, 11.4415.

Historical development of housing for special climates; traditional methods, indigenous forms, use of mechanical systems verses special design methods to combat heat, moisture, wind, etc; building materials and construction methods; structural systems and servicing. Case studies and design projects.

11.4250 Community Facilities III C16

Prerequisites: Credit grade or better in both one from Group C and one from Group D.

An extension of one, or a combination of two or more, of the subjects 11.4251, 11.4252, 11.4253 and 11.4255. Case studies and two design projects, or one project taken to full design resolution.

11.4251 Educational Facilities II C8

Prerequisites: One from Group C and one from Group D.

The meaning of education; educational philosophies and their physical and architectural requirements. Child psychology, and psychology of play and learning. Case studies on secondary and tertiary educational institutions, universities, colleges of advanced education, technical, private and specialist colleges, and adult education centres.

11.4252 Government Facilities II C8

Prerequisites: One from Group C and one from Group D.

or 36.411 for 11.4254 and 11.4256 and 11.4123 for 11.4257.
Design of public buildings by or for government agencies. Client/user/architect relationship in development of brief. Public facilities, institutions, government office buildings, public services of quasi-industrial type, etc, for Federal, State and Municipal government, statutory bodies and government undertakings. Case studies and design projects. Highly organized and complex building programs.

11.4253 Cultural Facilities II C8

Prerequisites: One from Group C and one from Group D.

Cultural attitudes in recent and contemporary Western Society. Cultural experience at participatory level in present-day society, and environmental requirements for small groups; overlaps with education and recreation in broadest sense. Includes consideration of cultural activities at the regional, national and international levels. Culture, State and Society. Wider aspects of culture, and concerns for quality, display, conservation and performance. Design studies includes auditoria for the performing arts; libraries and museums; art galleries; integrated educational and recreational facilities; exhibition complexes and conference centres.

11.4254 Urban Development C8

Prerequisites: One from Group C and one from Group D, plus 11.4345 or 36.411.

The development of urban spaces and the resolution, by means of design studies, of diverse building requirements in an urban context, with reference to architectural and civic design, urban planning, transport, infrastructure, staging and implementation.

11.4255 Recreational Facilities C8

Prerequisites: One from Group C and one from Group D.

Range of sporting codes and requirements for building facilities; stadia; swimming pools; athletic tracks; squash courts; golf clubs and other sporting clubs; recreational accommodation; ancillary buildings; landscaping; playing fields and sportsgrounds; structural and constructional systems. Case studies and design projects.

11.4256 Transport Buildings C8

*Prerequisites: **One** from Group C and **one** from Group D, plus 11.4345 or 36.411.*

Characteristics of multi-modal transport systems in urban centres; development of transport technology; design standards; building requirements. Evaluation of transport interchange centres in the context of the total urban transport plan. Detailed planning requirements, vehicle criteria and environment constraints; case studies and projects to develop alternative strategies and design solutions for simple dual mode interchanges (bus/car, car/rail, bus/pedestrian) and for complex multimode interchanges in central urban areas (bus/rail/ferry, air/bus/rail, etc).

11.4257 Ecclesiastical Architecture C8

*Prerequisites: **One** from Group C and **one** from Group D, plus 11.4123.*

The history, meaning and symbolism of Christian architecture as the image of Christian doctrine. The denominational differences in the emphasis of architectural layout. Ritual, functional and social requirements. Religious communities, their ideals, history, variety and pattern of life, with special emphasis on their architectural requirements. Practical application in designing churches, ecclesiastical precincts and buildings for religious communities.

Architectural Environment

11.4301 Contextual Studies C5

Prerequisites: nil.

Introduction to spiritual, mental, physical, social and cultural needs of people. The environment and human influence upon it. Human needs, individually and in groups. Resources of energy and materials and their utilization. The design professions; architecture and building, landscape architecture and town planning, engineering, industrial design, and the arts and crafts. Seminars and projects.

11.4303 Introduction to Architectural Science C4

Prerequisites: nil.

Environmental design methods for total human comfort; climate and its effects in and around buildings; geometry of sunlight, sun control; introduction to thermal, lighting and acoustical design: basic concepts, subjective appraisals and measurement. Laboratory work and projects.

11.4304 Thermal Design of Buildings C3

Prerequisite: 11.4303

Thermal comfort, comfort indices; state heat transfer, solar heat gain; air movements; thermal storage effects; condensation and vapour barriers; heating and cooling of buildings. Laboratory work and projects.

11.4305 Lighting of Buildings C3

Prerequisite: 11.4303.

Daylighting: application to lighting of buildings; design principles; daylight factor and its components; simplified method of calculation; methods of evaluating daylighting. Artificial lighting: light sources and their applications; light control, luminaire design; calculation of illuminance; qualitative lighting design and appraisal; supplementary lighting of interiors. Experimental work and projects.

11.4306 Acoustics of Buildings C3

Prerequisite: 11.4303.

Basic theory of sound propagation in and around buildings; criteria for design; subjective and objective assessment of the aural environment; methods for noise control; introduction to room acoustics. Laboratory work and projects.

11.4307 History of Architecture and Design C3

Prerequisites: nil.

General treatment of the history of architecture and design from early times to the present; the relationships of man and nature; influences of religion, society, culture, climate, materials and technology. Seminars and projects.

11.4308 Western Architecture C3

Prerequisite: 11.4307.

History of western architecture from middle ages to beginning of 20th century, planning and architectural space as a response to human needs; technological influences; the evolution of form, proportion and detail of the architecture. Seminars and projects.

11.4309 Australian Architecture C3

Prerequisite: 11.4308.

History of Australian architecture; historical, human and environmental context of Australian architecture, particularly from the foundations of the colony to World War I, and generally to the present. Seminars, visits and projects.

11.4320 Geometry C3

Prerequisites: nil.

Plane curves, conics and surfaces of revolution; quadric surfaces; ruled and warped surfaces; convex bodies; spherical trigonometry; projective configurations. Tutorials and projects.

11.4321 Physics C4

Prerequisites: nil.

1. Wave motion; simple harmonic motion, wave motion, interference. Doppler effect, energy transfer. **2.** Sound: longitudinal waves, overtones, intensity levels, decibels, quality of sound. **3.** Light: e.m. spectrum, Huyghens' Principle, curved mirrors, lenses, dispersion, interference, polarization, photometry, colorimetry. **4.** Heat: capacity, Joule's equivalent thermometry, connection, conduction, radiation, black body, emittance, absorbtivity. **5.** Laboratory work.

11.4322 Solar Energy C2

Prerequisites: 11.4304, 11.4407.

1. Energy conversion and storage: collection for use in buildings; active and passive systems. **2.** Energy balance: heat loss/gain analysis. **3.** Design for solar energy. **4.** Case studies and projects.

11.4323 Room Acoustics C2

Prerequisite: 11.4306.

1. Subjective and objective criteria for design: speech, music. **2.** Sound reflectors and absorbers. **3.** Sound reinforcement system. **4.** Design methods and reverberation theory: computerized ray tracing; models. **5.** Noise control in auditoria. **6.** Case studies.

11.4324 Lighting Design C2

Prerequisite: 11.4305

1. Major factors influencing design; current research in vision and visual conditions. **2.** Lamps and lighting equipment. **3.** Methodology in interior and exterior lighting design. **4.** Colour and photometry. **5.** Case studies.

11.4325 Tropical Architecture C2

Prerequisite: 11.4303

Outline of factors affecting design in the tropics. **1.** People and their psychological comfort needs. **2.** Materials and construction: climate, sun control, thermal movement, humidity, ventilation; special glasses, roofs, stabilized earth construction. **3.** Architecture in tropical Australian and other tropical climates. **4.** Case studies and projects.

11.4326 Acoustics Studies C4

Prerequisite: 11.4323.

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

11.4327 Lighting Research C4

Prerequisite: 11.4324.

Experimental investigation and research in an elected aspect of lighting design. Seminars: discussions of methodology of results, development of techniques of application. Laboratory work.

11.4330 Modern Architecture C2

Prerequisite: 11.4308.

1. Western 20th century architectural trends, attitudes, dependencies. **2.** Social, economic, technological, ideological, climatic factors. **3.** Functional problems. **4.** Structural developments. 5. Spatial limitations. **6.** Aesthetic attitudes and aims. **7.** Seminars.

11.4331 The Australian House since 1900 C2

Prerequisite: 11.4309.

20th century domestic Australian architecture. **1.** Historical development: at turn of century; emergence of bungalow; climatic, social and stylistic influences. **2.** American influences: California bungalow, Spanish Mission. **3.** Domestic architecture after World War II in Sydney and Melbourne. **4.** Architects and their works; project houses. **5.** Visits, seminars and projects.

11.4332 Historical Research A C3

Prerequisites: 11.4309 and 145 credit points.

11.4333 Historical Research B C3

Prerequisites: 11.4309 and 145 credit points.

11.4334 Historical Research C C3

Prerequistes: 11.4309 and 145 credit points.

Research in the field of Australian architectural history. **1.** Purpose of research: appreciation, sources of materials, use of sources. **2.** Techniques of recording and cataloguing. **3.** Critical assessment, evaluation and integration, interpretation. **4.** Presentation.

All three electives must be taken to gain credit *and desirably* the three electives should be taken concurrently with 11.4707 Research Methods and 11.4708 Dissertation.

11.4335 Eastern Architecture C2

Prerequisite: 11.4307.

Introduction to eastern culture; distinctions between eastern and western mentality reflected in architectural attitudes. An overview of the salient architectural characteristics of the Near-, Middle- and Far-East in an historical context, followed by a deeper study of architecture in any one of the following regions: North Africa, Asia Minor, Persia and Pakistan; India and Nepal; South-East Asia; Indonesia and New Guinea; China and Japan.

11.4336 Measured Studies of Historic Stuctures C3

Prerequisites: 11.4308, 11.4603.

The Australian context of historic buildings. Criteria for selection and evaluation. Techniques for field studies and systems of recording. Field notes. Measured drawings, their context, media and format. Freehand studies. Photography and photogrammetry. Written reports and measured study.

It is particularly appropriate if this elective is taken in conjunction with 11.4309 Australian Architecture, to which it is a natural complement.

11.4339 Introduction to Building Conservation C5

Prerequisites: 11.4309, 11.4414.

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.

11.4340 Cognition and Behaviour A C3

Prerequisite: 11.4301.

Growth and cognitive awareness of man coming to terms with his micro-environment; perception; spatial awareness, privacy, proxemics; case studies.

11.4341 Cognition and Behaviour B C3

Prerequisite: 11.4340.

Man and his relationship to the macro-environment; social behaviour patterns; cognitive mapping; crowding propinquity; the aged; case studies.

11.4342 Transport Systems C4

Prerequisite: 36.411.

1. Transport modes: road, rail, water, air. **2.** Evaluation of past and present transport systems. **3.** Circulation of large groups of people; baggage control. **4.** Case studies.

11.4343 Urban Planning C4

Prerequisite: 36.411.

1. Origins of settlements and development of towns: prehistory, Classical, Medieval, Renaissance and Baroque, Industrial Revolution, present. **2.** Theories of planning: concepts, attitudes, growth and change. **3.** Activity and locational theory: population and employment. **4.** Dynamics of cities: transport. **5.** Metropolis and megalopolis. **6.** Seminars and case studies.

11.4344 Landscape Planning C4

Prerequisite: 11.4303.

1. Analysis and systems developed to use natural science date for landscape planning. **2.** Techniques for land-use planning based upon an analysis of natural phenomena and resources. **3.** Case studies.

11.4345 Urbanism C2

Prerequisite: 11.4309.

The development of urban form and the role of architecture in urban design; civic architecture; growth and change; planning and design methodology. Case studies.

11.4346 Australian House (Measured Drawing) C2

Prerequisite: 11.4331.

The production of a measured drawing of an existing house built during the period covered by 11.4331 The Australian House since 1900. Plans, elevations, section and a selection of details. Format and medium are to comply with established standards.

11.4347 Australian House (Report) C2

Prerequisite: 11.4331.

The production of a report on a house built during the period covered by 11.4331 The Australian House since 1900. History, planning, construction, materials, stylistic characteristics and aesthetic qualities.

Technology

11.4401 Principles of Construction C6

Prerequisites: nil.

Analysis of the principles of construction with particular reference to small-scale building. The site — selection, analysis, measurement. Components and elements of buildings. Materials and construction detailing. Practical construction project.

11.4402 Structures and Materials C4

Prerequisites: nil.

Introduction to structures. History and morphology; loads and structural requirements; structural elements and systems; basic structural form; stress and strain. Introduction to materials science; the relationship between the properties and structure of materials. The properties and use of metals, ceramics, wood and polymers in building and artefact design. Tutorials and laboratory work.

11.4403 Principles of Structures C4

Prerequisites: nil.

Statics: forces in equilibrium; components, resultants, reactions, moments; graphical and analytical methods. Flexure: bending moment and shear force; analysis of beams and simple frames; theory of bending. Stability and rigidity of structures: loading systems; bracing systems; buckling; instability; deflection. Case studies, laboratory work and tutorials.

11.4407 Services A C3

Prerequisites: 11.4303, 11.4414.

Sources and distribution of water, wastes and energy supplies. Application of electric power, hydraulics, vertical transport and fire protection in buildings. Equipment selection and space allocation. Projects and seminars.

11.4408 Services B C3

Prerequisites: 11.4304, 11.4415.

Air conditioning, heating and ventilating of buildings. Design of systems. Selection of equipment and allocation of space. Projects and seminars.

11.4414 Construction A C5

Prerequisites: 11.4401, 11.4402.

Timber and masonry construction for small scale, low-rise buildings. Materials, elements, constructional systems, associated building fabric and detailing. Dimensional co-ordination, constructional drawings and uses of resource materials. Case studies. Tutorial projects.

11.4415 Construction B C5

Prerequisites: 11.4414. 11.4416.

Steel and concrete construction for low and medium rise buildings. Materials, elements, constructional systems, associated building fabric and detailing. Dimensional co-ordination, constructional drawings and uses of resource materials. Case studies. Tutorial projects.

11.4416 Structures C4

Prerequisites: 11.4402, 11.4403.

Structural systems, stability, loadpaths, gravity and wind loads. Behaviour of multi-span continuous structures. Design of beams in timber and steel frames for bending, shear, and deflection, and design of columns. Structural behaviour and design of joints within these frames. Introduction to concrete technology, reinforced concrete, prestressed concrete and structural behaviour of masonry. Design of reinforced concrete beams, columns, frames, and floor systems.

11.4420 Technology for Low-rise Buildings C5

Prerequisite: 11.4414.

Structural, constructional and services systems for low-rise buildings. A detailed study of interrelationships both within and between the various systems, together with an overview of the influence of technologically-based decisions on the other aspects of architectural design. The design of these technological systems for an existing low-rise building. Project.

11.4421 Technology for High-rise Buildings C5

Prerequisite: 11.4415.

Structural, constructional and services systems for high-rise buildings. A detailed study of interrelationships both within and between the various systems, together with an overview of the influence of technologically based decisions on the other aspects of architectural design. The design of these technological systems for an existing high-rise building. Project.

11.4422 Technology for Low-cost Housing C5

Prerequisite: 11.4416.

An analysis of low-cost housing, the market and industry, government policies. Structural, constructional and service systems and review of projection, methods and resource utilization related to non co-ordinated and dimensionally co-ordinated systems. Cost analysis of various systems and building forms. The detailed study of those technological systems as applied to a housing complex. Project.

11.4423 Rationalized Building Systems C5

Prerequisite: 11.4415.

Systems building — philosophy and economics, systems theory craft, prefabrication and industrialization as Methods Dimensional Co-ordination. The interrelationships of structure, services and finishes and the influences of technologically-based decisions on the other aspects of architectural design. A review of existing and developing building systems. Case studies.

11.4424 Construction Planning and Management C3

Prerequisites: 11.4407, 11.4408.

Pre-planning consideration, and building technology design for improved performance and management in the building construction process. Constructional and structional engineering trends, a building's services and equipment, design criteria, methods used in erection of the construction process, influence on design of the building, co-ordination in the building process. Various case studies. Building economics, evaluation and cost planning, construction management. Report on the construction process of a major building.

11.4425 Earth Construction A C3

Prerequisites: 11.4402, 11.4303.

Soil selection, suitability and analysis. Adobe, pise and stabilized earth. Performance, strength, durability, erosion, thermal stabilizers, reinforcement, internal and external finishes. Constructional and structional characteristics and design requirements. Environmental and social implication. Laboratory classes to support the above, including the manufacture and testing of earth blocks, the construction of short walls, the application and evaluation of finishes.

11.4426 Earth Construction B C3

Prerequisite: 11.4425.

The design and construction of a small structure using earth as a major material and the monitoring of environmental conditions in similar structures.

11.4430 Integration of Services C4

Prerequisites: 11.4407, 11.4408.

The incorporation of plant and accessories in the building fabric. Economic routing; noise; identification; incompatability; outlets. Project.

11.4440 Building Materials A C2

Prerequisite: 11.4414.

Structure and classification of materials. Relationship between crystal structure and properties; slip systems. Multiphase materials equilibrium diagrams. Ceramic structure. Organic polymers. Thermal, optical, acoustical properties in relation to structure. Project.

11.4441 Building Materials B C5

Prerequisite: 11.4440.

The properties and application of building materials. An advanced study of detailing and constructional aspects of materials, related to their properties. Project.

11.4450 Advanced Structural Analysis C4

Prerequisites: 11.4416, 11.4602.

Computer-based methods of analysis for linear structures. Tutorials and project.

11.4451 Advanced Structural Design C4

Prerequisite: 11.4415.

Detailed structural design for common engineering materials. Tutorials and project.

11.4452 Models Analysis and Form-finding C3

Prerequisite: 11.4403.

Principles of model analysis: types of models and their application, methods of stress and displacement analysis; model materials, apparatus, planning and the conduct of experiments. Form-finding: experimental methods of form-finding for surface and spatial structures. Laboratory work and project.

11.4453 Surface and Spatial Structures A C5

Prerequisites: 11.4320, 11.4416.

Selected areas of surface and spatial structures: reticulated structures, cable structures, tensegrity structures, folded surface structures, shell structures, stressed skin structures, tent and pneumatic structures. Seminars, laboratory work and project.

11.4454 Surface and Spatial Structures B C5

Prerequisite: 11.4453.

Design application of 11.4453 Surface and Spatial Structures A, individual or group work.

11.4455 Technology Research A C5

Prerequisites: 156 credit points and 11.4416.

Supervised individual or group research at advanced level in a particular field of technology, such as lightweight structures, structural materials and methods, system building, alternative technology.

11.4456 Technology Research B C5

Prerequisite: 11.4455.

Additional supervised individual or group research at advanced level in a particular field of technology, such as lightweight structures, structural material and methods, system building, alternative technology.

11.4457 Workshop Practice C1

Prerequisite: nil.

Safe working practices using selected woodworking and metalworking machines and tools. Conducted during the evenings of the first weeks of certain semesters.

11.4458 Construction Documentation C5

Prerequisites: 11.4407, 11.4415.

The production of graphic documentation for the construction of a selected modern high-rise building; documentation methods; construction details; material specifications. Projects.

Practice

11.4510 Practice and Management C2

Prerequisite: nil.

1. The Architects' Registration Act and registration. **2.** Code of professional conduct. **3.** The other design consultants. **4.** The client, the brief, forms of agreement and fees. **5.** Regulations and codes controlling buildings. **6.** Legal implications of architectural practice.

11.4511 Building Economics and Specifications C3

Prerequisites: 11.4414, 11.4510.

1. Estimating, cost planning, bills of quantities. **2.** Specification writing techniques. **3.** The relationship between the specification, other contract documents and contract administration. **4.** Case studies. **5.** Seminars and assignments.

11.4512 Contract Administration A C2

Prerequisites: 11.4414, 11.4510.

1. The selection of a builder, nominated subcontractor and suppliers. **2.** The administration by an architect of a selected standard form of building contract from the signing of the contract to the issue of the final certificate; responsibilities and liabilities of the architect, consultants, proprietor and the builder. **3.** Post-contract activities. **4.** Case studies. **5.** Seminars and assignments.

11.4513 Contract Administration B C2

Prerequisites: 11.4512 and 130 credit points.

1. Detailed comparison of the various forms of building contract in current use. **2.** Responsibilities and liabilities of architect, consultants, proprietor and builder. **3.** Professional defensive measures. **4.** Case studies. **5.** Assignments.

11.4514 Management for Architects C2

Prerequisites: 11.4513, 11.4703.

1. Introduction to management theory. **2.** The structure and organization of an architectural office, aspects of company and partnership law and insurance. **3.** Business principles and management procedures relevant to an architectural office. **4.** Assignments.

11.4520 Management Systems and Finance C2

Prerequisite: 11.4514.

1. Systems employed in the architect's management functions. **2.** Systems thinking, PERT, C.P.M., multi-activity charting, time/cost relationships, budgeting and other resources allocation systems. **3.** Management of the design and documentation processes; computer applications in architectural management. **4.** Introduction to building finance, feasibility, discounting, acquisition of finance, interest rates, long-term and short-term money, capital cost, operational costs, maintenance costs, the effects of these considerations on 'design' decision-making. **5.** Development applications, procedures and appeals; building applications, procedures and appeals. **6.** Tendering or negotiating for the contract sum. **7.** Seminars and assignments.

11.4521 Documentation

Prerequisite: 11.4511.

1. Communication theory, communication in practice, verbal, written and graphic. **2.** Documentation and Law. Rationalized methods for contract documentation, drawings, specifications, schedules, Bills of Quantities, specified Bills of Quantities. **3.** Standards and codes of practice for Documentation. **4.** Computer applications. **5.** Seminars.

11.4522 Building Economics and Development C3

Prerequisite: 11.4511.

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, market value, unimproved and improved land depreciation and obsolescence, valuation of improvements, valuation law, land laws. **4.** Feasibility: economic models, optimization, feasibility studies on small-, medium-, large-scale development and subdivisions. **5.** Rationalized Building: dimensional control, component technology, building systems, cost planning. **6.** Seminars.

11.4524 The Architect and the Law C2

Prerequisite: 11.4513.

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

11.4525 Project Management C3

Prerequisite: 11.4513.

1. Principles of scientific management and organization, individual group behaviour, management functions, planning, organizing, staffing, directing, co-ordinating, 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.

11.4526 Industrial Relations C2

Prerequisite: 11.4512.

1. An introduction and review of the history, methodology and emphasis of the basic behavioural disciplines; the biological basis of human behaviour; the significance of socio-cultural influences and determinants, need satisfaction; the origins, nature and meanings of motivation and emotional processes. The dynamics of conflict and frustration. **2.** The implications of these issues and theories in the problems of industrial relations on the management of the site, office and work force. **3.** Seminars.

Communication

11.4601 Introduction to Communication C6

Prerequisite: nil.

Introduction to communication theory, its principles and history. Practice in clear, critical thinking; elementary problem-solving; logical development and presentation of arguments orally and in writing. Introduction to techniques and conventions of draughting and the use of instruments. Elementary plane and solid geometry and surface development. Objective depiction in graphic terms. Observation, analysis and graphic statement of aspects of form, indoor and outdoor. Characteristics of illumination systems. Elementary perspective. Emphasis on direct drawing in a variety of media involving methods and techniques employed, from sketches to graphic studies in both traditional and contemporary styles.

11.4602 Introduction to Computing C2

Prerequisite: nil.

Introduction to the computer as a problem-solving tool with emphasis on its application to architecture; description of computing hardware including peripheral devices of interest to the architect; opportunity to gain experience in the use of computing facilities; development of basic programming skills.

11.4603 Graphic Communication C5

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, studio projects.

11.4604 Graphic Communication Theory C4

Prerequisite: 11.4601.

Graphic expression, language and theory of graphic communication applying sense perception to the practice and study of architectural graphics, as a means of enlivening visual awareness in the structural aspects of the arts; colour, unity, space and form.

11.4620 Presentation Graphics C3

Prerequisites: 11.4603, 11.4604.

Perspective and rendering techniques, materials, media. Graphic presentation of the natural landscape, forms and vegetation. Graphic presentation of the urban scene, people, vehicles, buildings, vegetation, street furniture, etc.

11.4621 Oral and Written Communication C2

Prerequisite: 11.4601.

Development of the critical, logical and stylistic skills involved in researching, writing and presenting essays, theses, articles, papers, reports, speeches, talks, etc.

11.4622 Spatial Communication C2

Prerequisite: nil.

Awareness and understanding of space as an important creative aspect of architecture. Historical analysis of spaces, the theoretical exploration of spatial concepts and characteristics, and the practical experience of space.

11.4623 Models and Materials C3

Prerequisite: nil.

The development of awareness and practical skills for three-dimensional project presentation. Materials, colour co-ordination, mechanical aids, assembly techniques, application. Purpose, types of models, visual impact. Analysis and synthesis of design problems. Programming and planning.

11.4624 Architectural Photography C3

Prerequisites: nil.

Development of photographic skills relevant to architectural recording, understanding of design and presentation. Black and white, colour, still and moving photography; video and animation. Developing, enlarging and mounting.

11.4625 Constructional Geometry C3

Prerequisites: 11.4603, **one** *from Design Specific, Group A.*

Graphic study and analysis of the geometry of architectural constructions; the underlying geometric principles from which structural framing, ribbed and shell systems are derived. These include domes, hypars and other warped shapes of planes of double curvature, folded planes, etc, and the resultant effects of intersections and penetrations of multiple units. Study of applications through analysis of constructions in contemporary architecture and historical styles; studio projects.

11.4626 Architectural Ceramics and Sculpture C3

Prerequisite: nil.

Historical development of ceramics and sculpture as art, and their importance as a catalyst in the development of technology and the understanding of materials and spatial concepts. Theory and practice of ceramics manufacture and its application. Ceramics, sculpture, tiles and three-dimensional constructions applied to and integrated with architecture.

11.4627 Computer Graphics C4

Prerequisite: 11.4632.

Use of the computer for design graphics, presentation and production drawings and graphics programming.

11.4628 Contemporary Styles in Art C4

Prerequisite: 11.4629.

Interrelationships of style in the visual arts in their historical perspective. A study of the effect of contemporary art theories and aesthetics. Study of style in modern movements in art derived from stylistic innovation in the plastic arts; projects.

11.4629 Graphic Art C4

Prerequisite: 11.4604.

Graphic expresssion in theory and practice. Vision, perception and illusion. Perspective in the visual field. Analysis and synthesis in systems of descriptive and non-objective graphic presentation. Pictorial structure and content. Basic links with contemporary art styles.

11.4630 Drawing and Painting C4

Prerequisite: 11.4601.

Emphasis on direct drawing from sketches to graphic studies, in traditional and contemporary styles, using a variety of media and visual clues. Light and shade as pattern, positive and neutral space, dynamic relationships; surface, texture, etc. Emphasis on different painting styles and media; space depth; light and shade; colour; brightness gradient; thematic development, etc.

11.4631 Advanced Graphic Concepts C4

Prerequisite: 11.4620 or 11.4629.

Study of the definition and communication of ideas, concepts and objective themes by means of graphic expression — a related study of the history of interaction between the visual and the plastic arts. Use of media and material; development of a professional level of performance in adapting graphic techniques to contemporary needs.

11.4632 Computer Programming and Graphics C6

Prerequisites: 11.4602, 100 credit points. Excluded: 11.4627 (1982 or earlier).

Development of skills in structured computer programming with particular application to architectural problem-solving, introduction to the theory and techniques of computer graphics with particular reference to architectural applications such as draughting; development of three-dimensional computer modelling techniques; experience in computer graphics programming.

11.4633 Architectural Drawing and Rendering C4

Prerequisites: 11.4603, **one** *from Design Specific, Group A.*

Development of skills necessary for the production of formal architectural design drawings and renderings. Advanced perspective construction and shadow projection. Sheet composition assembly and presentation technique. Black-and-white, monochrome and colour rendering. Use of materials and media. Studio projects.

Other Required Studies

11.4701 Graduation Project C8

Prerequisite: 130 credit points.

This project is available to those students intending to obtain the degree of BSc(Arch) or BSc(DesStudies), 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 graduation 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 Graduation Project can be credited only towards the BSc(Arch) or BSc(DesStudies) degrees.

11.4703 Practical Experience C0

Prerequisite: 130 credit points.

Each student is normally required to obtain, **before enrolling in the graduation semester,** 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. Periods of engagement of less than one month are not accepted.

No other subject may be taken concurrently with 11.4703 Practical Experience.

11.4705 Honours Project C26

Prerequisite: 156 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 Professor of Architecture five weeks before the beginning of the session in which the student intends to enrol in the Honours Project.

11.4707 Research Methods C2

Prerequisite: 156 credit points.

The processes and methods of research, writing and referencing for publication, presentation. Preparation of outline and timetable for 11.4708 Dissertation.

11.4708 Dissertation C10

Prerequisite: 11.4707.

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.

General Studies Subjects

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

Other Elective Studies

11.4702 Thesis C12

Prerequisite: 156 credit points.

A specialized individual study taken under staff supervision with the object 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. As such the thesis is essential 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. A student who has the prerequisite of 156 credit points and who wishes to commence work on the thesis shall register his or her name with the Professor of Architecture and submit the proposed thesis topic for approval. The student should subsequently *enrol* in 11.4702 Thesis *only for the semester during which the thesis is to be submitted for assessment.*

11.4704 Architectural Research C4

Prerequisite: 156 credit points.

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 Professor of Architecture at the commencement of the semester preceding that in which it is intended to enrol in this elective.

11.4706 Architecture Graduation Project C20

Prerequisite: 208 credit points. Selection on merit.

This semester unit is available to students who wish to culminate their studies in a project in which a scheme is resolved in depth in selected and approved area(s) 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 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 is an opportunity for students to combine 11.4708 Dissertation with the Architecture Graduation Project by selecting a thesis topic which provides the detailed brief or technological or management aspects applicable to the Architecture Graduation Project.

Appropriate Technology

Emphasis on the socio-economic, environmental and energy parameters of technology design and implementation which, in the past, tend to have been neglected. The relevance of appropriate technology in both developed and developing countries is examined.

The Appropriate Technology subjects are made up of lectures, demonstrations, group discussions and seminars, case studies and design projects.

11.4720 Appropriate Technology I C3

Prerequisites: 40 credit points including 11.4301, 11.4303, 11.4402.

Social, economic and environmental problems associated with technology in both developing countries. Criteria for evaluation of technology — suitability, feasibility and acceptability. The concept of socio-technical systems. Seminars and case studies.

11.4721 Appropriate Technology II C4

Prerequisite: 11.4720.

Case studies of several appropriate technologies; their advantages and disadvantages. The concept of intermediate technology and its relevance in developing and developed countries; the dynamics of technological change; organizations concerned with the dissemination of appropriate technology in Australia and overseas. Field visits and project work.

11.4722 Appropriate Technology III C10

Prerequisites: 100 credit points including 11.4721, 11.4457.

Study in depth of some appropriate technologies; critical evaluation of the state of the art. Major and minor design projects of the student's own choice.

Heritage Studies

Concerned primarily with those places, buildings, artifacts and production techniques that are regarded as being an important and irreplacable part of a culture. Emphasis on the study of traditional tools, materials and techniques used to produce the built environment, the procedures adopted in recording both the items within that environment and the production techniques used.

11.4730 Industrial Archaeology I C4

Prerequisite: 40 credit points.

Introduction to the theory of archaeology. The relationship between anthropology, archaeology, traditional technology and industrial archaeology. Introduction to the scope and methodology of the study of former industrial sites. Field methods, including photography, measuring and surveying of sites and relics, and the interpretation of extant remains. The place of historical research in industrial archaeology. Field work and studio. The investigation and recording of small industrial sites.

11.4731 Industrial Archaeology II C4

Prerequisite: 11.4730.

Archaeological theory and archaeological field methods. The development of industry in nineteenth-century Australia and its extant remains. The characteristics of coal mining, gold mining, tin mining, sawmilling, iron and brewing industries. The places of industrial archaeology in the evaluation of the national heritage. Field work and studio. The investigation, recording and interpretation of selected industrial sites.

11.4732 Traditional Technology I C4

Prerequisite: 40 credit points.

Introduction to the crafts and technologies still being practised in Australia and overseas in the traditional manner. The value and application of traditional technology to developed and developing countries. Methods of recording traditional technologies including still photography, video and tape recordings. Field work and laboratory. The investigation and recording of traditional technologies in NSW, including ferrous foundry, mining, blacksmithing and milling. Manufacture of metallic artifacts, their analysis and recording.

11.4733 Traditional Technology II C5

Prerequisite: 11.4732.

The social and industrial organization of and the impact of mechanization on traditional technologies. The evolution of the artist craftsman from the traditional crafts. Design and production methods and techniques in selected traditional technologies. Field work and laboratory. Lost wax casting, enamelling, wood turning and carving. Industrial and studio visits.

11.4734 Traditional Building Technology C4

Prerequisite: 11.4732.

The nature and place of traditional building technologies in contemporary buildings and in building conservation. Techniques of surveying and recording traditional technologies. An investigation of technologies extant in NSW. Problems of revival of crafts and authenticity. Field work and laboratory. The investigation and recording of traditional building technologies in NSW and laboratory replication.

11.4735 Traditional Technologies of Pakistan C4

Prerequisite: 11.4732.

Work and society in Pakistan. Methods of investigating and recording traditional technologies in foreign countries. A survey of crafts in Pakistan and their relationship to traditional technologies in Australia. Design and production methods used in metal and jewellery crafts. Laboratory and studio. Investigation and replication of a range of traditional Pakistan crafts and technologies.

11.4736 Traditional Technology III C10

Prerequisites: 11.4733, 11.4734 or 11.4735, 4.951 and 4.911 or their equivalents.

Sociological, technological and design aspects of traditional technology. The methodologies of the social and physical sciences and their application to traditional technology. Advance studies of selected traditional technologies. Field work and laboratory. Analysis and recording of traditional technology and the conduct of advanced replication experiments.

Industrial Design

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 I C6

Prerequisite: 40 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 C2

Prerequisites: 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 II **C7**

Prerequisite: 11.4740.

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

11.4745 Industrial Design IIIA **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 IIIB **C10**

Prerequisites: 11.4742, 11.4743, 11.4744.

As for 11.4745.

11.4747 Industrial Design Special Project **C10**

Prerequisites: 156 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.

Ceramic Design

Emphasis on establishing a solid basis of technological studies into which design and management skills are integrated.

11.4750 Pottery and Ceramics **C5**

Prerequisite: 11.4402.

Introduction to the geology of ceramic raw materials and their physical and chemical nature. The characteristics of earthenware, stoneware and porcelain. Glazes, kilns and forming methods. Laboratory and studio: Handbuilding, introductory throwing and design in pottery and ceramics.

11.4751 History of Ceramics **C4**

Prerequisite: 11.4307.

The history of ceramics, focusing on China and its relationship to other countries. The effects of industrialization and the development of studio and craft potteries. Present day industrial practice. Industrial and gallery visits.

11.4752 Pottery and Ceramic Technology **C10**

Prerequisites: 11.4750 or 11.4626, 2.951 or equivalent.

Ceramic body and glaze formation and calculations. The physical and chemical nature of ceramics and the effects of firing. Design and production methods, industrial visits. Laboratory and studio: Handbuilding, throwing and slip casting.

11.4753 Ceramic Kilns **C10**

Prerequisite: 11.4752.

Kiln types, design and construction. Firing techniques. Combustion efficiency and energy saving. Laboratory and studio: Firing, building and maintenance of a variety of kilns.

11.4754 Pottery Management **C10**

Prerequisite: 11.4752.

Design of ceramic production facilities and equipment with emphasis on the needs of small studios/workshops. Practical design and production experience, with emphasis on small business management. Laboratory and studio: Design, making and testing of equipment. Development of product prototypes.

Graduate Study

11.901G Architectural Synthesis I **C9**

11.902G Architectural Synthesis II **C11**

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**

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 and 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 economical effect.

11.933G Cultural Influences in Civic Design C2

An integrated examination of spiritual, mental (psychological, social, political, legislative, administrative) technological, economical, geographical 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 C2

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

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.

Psychology

Undergraduate Study

12.200 Research Methods II F L2T1

Prerequisite: 12.100. (Pass Conceded (PC) awarded prior to Session 2, 1983 is not acceptable). Excluded: 12.152.

General introduction to the design and analysis of experiments; hypothesis testing, estimation, power analysis; general treatment of simple univariate procedures; correlation and regression.

12.201 Basic Psychological Processes II S2 L2T2

Prerequisite: 12.100. (Pass Conceded (PC) awarded prior to Session 2, 1983 is not acceptable.) Excluded: 12.052.

The basic phenomena of behaviour and experience in a biological context.

12.202 Complex Psychological Process II S1 L2T2

Prerequisite: 12.100. (Pass Conceded (PC) awarded prior to Session 2, 1983 is not acceptable.) Excluded: 12.062.

Information processing and cognitive functioning, and social bases of behaviour and personality.

Psychology III

Comprises four Level III units selected in consultation with the School of Psychology. Subject descriptions for Psychology Level III units are in the Combined Sciences Handbook.

Accountancy

Undergraduate Study

14.001 Introduction to Accounting A S1 L2

Architecture: 2 credit points; compulsory for BBuild degree course students.

Prerequisite: Nil.

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 S2 L2

Architecture: 2 credit points; compulsory for BBuild degree course students.

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.

Industrial Arts

Undergraduate Study

Traditional Technology

Traditional technology is the study of the way in which a particular society designs and produces its artefacts. As well as making a study of materials, tools and techniques, the historical, economic and sociological aspects of artefact production are examined.

The theoretical areas of traditional technology include: **1.** the methodology and techniques of ethnographic enquiry; **2.** a systematic examination of the material culture and artefact production in the societies of Asia; **3.** an examination of traditional technology in Eastern Australia, and **4.** an investigation of the industrial archaeology of Eastern Australia.

The laboratory and fieldwork areas include group and individual projects involving: **1.** experimental laboratory work on the examination and production of artefacts using established techniques, and **2.** fieldwork examining a wide range of traditional technologies and industrial archaeological sites using ethnographic and surveying techniques.

21.3121 Traditional Technology I

Prerequisite: 21.3116 or equivalent.

The relationship between traditional technology, ethnography and archaeology. the methodologies of the social and physical sciences and their application to traditional technology. The methods and techniques to be used in measuring and defining buildings and structures and recording small scale traditional technologies. Introduction to traditional design. *Laboratory and fieldwork:* Various techniques used by traditional craftsmen in the production of artefacts. An analysis of selected buildings and sites.

21.3131 Traditional Technology II

Prerequisite: 21.3121 or equivalent.

Social, technological and design aspects of traditional technology. The philosophies encompassing the etic and emic approaches to fieldwork. Methodologies of ethnographic reporting. The development of early Australian crafts and technologies with special reference to traditional building technologies. *Laboratory and fieldwork:* Selected methods of artefact production. The investigation of the Australian traditional technologies of gold-mining and refining, timbermilling, brick-making and building, their background and development.

21.3141 Traditional Technology III

Prerequisite: 21.3131.

The application of theoretical models to ethnotechnology. The study of socio-cultural systems with special reference to their material cultures. An advanced study of traditional Australian technology. *Laboratory:* Materials, techniques, tools and processes used by selected cultures in the production of artefacts. Advanced field research into the traditional Australian technologies with emphasis on traditional building technologies.

Craft

The craft units are intended to develop appreciation of craft activities and integrate aesthetic experience with technological knowledge. While it is intended that students should be able to experience several crafts, such as ceramics, textiles and glassworking, at present only ceramics can be offered.

21.3122 Craft IA (Ceramics)

The characteristics of earthenware, stoneware and porcelain. Glazes, kilns and forming methods. An introduction to the geology of ceramic materials and their properties. Practical experience in hand building methods, introductory throwing and design in pottery.

21.3132 Craft IIA (Ceramics)

Prerequisite: 21.3122.

The history of pottery focusing on China and its relationship to other countries. The emergence of a ceramic industry in Europe. Body formulation, glaze chemistry and calculation. Further practical experience with emphasis on throwing and design skills.

21.3142 Craft IIIA (Ceramics)

Prerequisite: 21.3132.

Present day craft and industrial practice. Kilns and firing techniques. Setting up and running a craft pottery. Further practical experience with emphasis on throwing and design skills.

Industrial Design

The Industrial Design units are made up of lectures, demonstrations, group discussions and criticism, with design projects as the subject core.

The theoretical aspects are concerned with: **1.** the historic, social, psychological and economic aspects of industrial design, and **2.** 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 student's analysis and final solution.

Visits to industrial organizations and design offices are undertaken in conjunction with other units of the Industrial Arts course.

21.3123 Industrial Design I

Prerequisites: 21.3112, 21.3113, 21.3114 or equivalents.

The emergence and development of the industrial design profession from 1850 to the present day. Modelmaking techniques, a series of demonstrations of clay, plaster, timber, polystyrene, polyurethane, glass reinforced plastics and epoxy resin modelmaking. *Studio:* Elementary design project work applying industrial design criteria and method to the solving of design problems. The solutions to be evaluated by means of prototypes, drawings and reports.

21.3133 Industrial Design II

Prerequisites: 21.3123 and 21.3144 or equivalents.

A study of industrial design case histories in Australia, Europe and USA. Local cases are examined in conjunction with the Industrial Design Council of Australia. Design and materials. An examination of the design potential of selected materials from an industrial design viewpoint. *Studio:* Advanced design project work involving the reconciliation of multi-faceted industrial design problems, in a variety of materials. The solution to be evaluated by means of models, prototypes, graphics and reports.

21.3143 Industrial Design III

Prerequisite: 21.3133.

An international survey of design education from 1850 with particular reference to the contemporary situation. Theories of Industrial Design with emphasis on the contemporary situation. The nature of 'good' design, the ethics of design, styling and design, design and the multinationals, design and the developing countries. *Studio:* A major and minor design project to the student's own choice. The major project to be undertaken in conjunction with an external industrial organization or design office.

Graphics

The graphics units are concerned with two-dimensional means of analysis, abstraction, synthesis and communication, of two and three dimensional design problems and concepts. Initially the units are concerned with the application of graphic method to the industrial design, traditional technology and craft units, as well as to the solution of two-dimensional design problems. The course develops into the study and practice of graphic design. The units are made up of lectures, demonstrations, group discussions and criticism, with design projects as the subject core.

The theoretical aspects are concerned with: **1.** the historic, social , economic, and psychological aspects of two-dimensional communication and graphic design. **2.** the methodology and techniques of graphic design.

The design projects are set in many different media, and give the student an opportunity to solve problems over the whole spectrum of graphic design. Visits to the office of a consultant designer and a company design team are undertaken in conjunction with other units of the Industrial Arts course.

21.3124 Graphics I

Prerequisites: 21.3112, 21.3113, 21.3114 or equivalents.

The history and background of contemporary graphic design. Detailed study of graphic method and techniques — perspective, geometric projections, typography, photography, descriptive geometry, graphic design and layout, printing and photomechanical reproduction. *Studio:* Project work using the above techniques to solve two-dimensional design problems, and to externalize, abstract, synthesize and communicate three-dimensional design problems and concepts.

21.3134 Graphics II

Prerequisite: 21.3124.

Advanced studies of dynamic symmetry, analysis of geometric solids, analysis of two-dimensional pattern in nature and man made objects, symbols and symbolism, visual illusion in art and nature, graphic techniques applied to industrial design. A study of graphic design case histories. *Studio:* Analytical work in the subjects covered by the lectures and design project work applying graphic design criteria and methods to the solving of design problems.

21.3144 Graphics III

Prerequisite: 21.3134.

Social and psychological aspects and effects of graphic design, with particular reference to advertising and the ethics of graphic design. Investigations of the effectiveness of visual communications in films, television, posters, books, computer systems. Legibility of print, computer graphics, graphic visualization and representation of abstract data and ideas. Advanced photography, typography, techniques of printing and photomechanical reproduction and graphic communication. *Studio:* Project work based upon lecture course and a major project to be undertaken in association with an external organization of a design office.

Industrial and Social Organization

The units in industrial and social organization are concerned with the theory and practice of human organization in industry and society. The interrelationship between people and technology and the associated problems and their solutions provide the general framework. Teaching in these units is by way of lectures, case studies, various experimental exercises and visits to industrial organizations.

21.3125 Industrial and Social Organization I

Prerequisite: 21.3115.

The general development of 20th century industrial organization and society. The nature of work and some important psychological, sociological and economic factors in industrial dynamics.

21.3126 Project

The project provides the opportunity for practice in research methods, teamwork, and planning, organizing and conducting study in the field of industrial arts.

21.3127 History of Art and Design

A brief chronological survey of the major art and design movements from the earliest times to the present day.

21.3135 Industrial and Social Organization II

Prerequisite: 21.3125

The nature of management and the development of management and organization theory. The role of trade unions in social and technological change. The environment of industry.

21.3145 Industrial and Social Organization III

Prerequisite: 21.3135.

The nature of organization behaviour; decision making, problem solving and adaptability. Organizational change. Social responsibility of industry. Present and future trends in organization and management.

21.3146 Advanced Project

The advanced project provides the opportunity to conduct in-depth study in the field of industrial arts.

21.3147 Appropriate Technology

Examination of problems in the relationship between people and technology in developed and in developing countries and at various levels of analysis. The concept of appropriate technology as a solution to such problems and the development of solutions which are evaluated on criteria of suitability, feasibility and acceptability.

Geography

Undergraduate Study

27.801 Introduction to Physical Geography S1 L2T1½

Prerequisite: Nil. Excluded: 27.111.

Themes selected from the mechanisms of the physical environment, with particular reference to Australia and to the Sydney Region; landscape as an expression of dynamic response. *Energy and Atmospheric Circulation over Australia:* local climate and weather patterns. *Climate-related Problems:* the hazards of fire and flood. *Geological Control of Landform Character:* the development and stability of hillslopes. *Soil, Vegetation and Drainage Relationships:* soil erosion. *The Coastal Ecosystem:* problems of risk and management in the coastal zone. *Lectures* are supplemented with tutorials, laboratories and a field tutorial. Students are required to provide some materials for practical work and to contribute towards the cost of the field tutorial.

Surveying

Undergraduate Study

29.411 Surveying for Architects and Builders S1 L1T1½ C2

A compulsory subject. Prerequisites: 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.

29.901 Introduction to Mapping S1 L1T½

Mapping: map tyres, map reading, scale, relief, depiction of features, cartography and photogrammetry. *Remote Sensing:* cameras and other sensors. Landsat images and applications. *Cadastral surveying:* land titles, surveys, easements and covenants.

Building

Undergraduate Study

Construction Studies Stream

The construction studies stream embraces both the functional requirements and methods of constructing buildings. An understanding of structural elements and materials is fundamental. The ability to compare design alternatives and to see buildings as part of an overall environment is developed as the student progresses.

35.202 Soil Mechanics for Building — S1 L1T1

2 credit points; compulsory. Prerequisite: nil.

The origins and formation of soils; clay mineralogy; classification of soils; soil as an engineering material; site investigation; boring, sampling and in-situ 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.

35.500 Building Graphics — S1 L2T2

6 credit points; compulsory. Prerequisite: nil.

The development of visual awareness and the practical skills basic to the observation, analysis and recording of appearance. An introductory survey of the visual environment of man; buildings, precincts, squares, architectural and construction aspects. Descriptive geometry. *Practical exercises* in two and three dimensional composition in various media.

35.501 Construction I (Domestic Buildings) — S1 L2T1

5 credit points; compulsory. Prerequisite: nil.

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

35.502 Construction II (Building Practice) — S2 L2T2

5 credit points; compulsory. Prerequisite: 35.501.

The major building trades and crafts including the use of tools and materials, and the on-site observation of trade practices: materials, techniques, tools, terminology, problem areas, quality control and supervision. The construction of a dwelling through its various stages including elementary time and motion studies. Construction draughting and measured survey.

35.503 Construction III (Low-rise Buildings) — S1 L2T2

5 credit points; compulsory. Prerequisite: 35.502.

Small multi-storey buildings from the functional and construction operation viewpoints. Concepts from Construction I are further developed and new concepts are introduced: site work procedures; concrete as a building material; foundations and footings; types of wall construction; basement, ground floor and upper floor construction; methods of roofing, waterproofing; construction of staircases; joinery; steel as a building material; internal finishes; minor construction plant, formwork.

35.504 Construction IV (Factory Buildings) — S2 L2T2

5 credit points; compulsory. Prerequisite: 35.503.

Functional requirements and methods of constructing light industrial buildings: further development of structural steel, large span factory roofing, welding techniques, fire requirements, cladding methods, installation of cranes and machine footings, scaffolding, relevant builder's plant and equipment.

35.505 Construction V (High-rise Buildings) — S1 L2T2

5 credit points; compulsory. Prerequisite: 35.504.

Functional requirements 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; 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 co-ordination of services.

35.506 Construction VI (Techniques) — S2 L2T4

4 credit ponts. Prerequisites: 35.505, 35.703.

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. Integrated construction systems. Students undertake on-site studies. Emphasis on method of construction rather than the attributes of the finished product.

35.517 Construction VII (Industrialization and Technological Change) — S2 L2T2

4 credit points. Prerequisites: 35.505, 35.703.

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 co-ordinating 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.

35.518 Construction VIII (Special Project)

4 credit points. Prerequisites: 35.505, 35.704.

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

35.551 Structures I — S2 L2T2

5 credit points; 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.

35.552 Structures II — S1 L2T2

5 credit points; compulsory. Prerequisite: 35.551.

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: glueing, bolting, nailing, riveting, welding.

35.553 Structures III — S1 L2T2

5 credit points; compulsory. Prerequisite: 35.552.

Load-paths in structures from external loads to supports. Principles of ultimate strength design in reinforced concrete; design of reinforced concrete beams, slabs, columns, and footings for strength and serviceability criteria; detailing of reinforcement. Introduction to prestressed concrete. Strength and stability of temporary structures; principles of formwork and falsework design.

35.580 Building Design Analysis — S1 L2T1

3 credit points. Prerequisites: 35.505, 35.704.

A critical analysis and evaluation of current building designs within the study areas of communication and documentation, information flow, appropriate construction methods, constructibility and work flow, construction economics and cost-value analysis.

35.591 Built Environment I — S1 L2

2 credit points; compulsory. Prerequisite: nil.

Background to building; the ancient world, recent history: Europe, Asia, the Americas, Australia. Development of structures, construction, building science and building economics. Rationalization and industrialization. Innovations, building research. Development of the structure of the industry and professions; laws and regulations, industrial relations, the contract document.

35.592 Built Environment II — S2 L2

2 credit points. Prerequisites: nil.

The distribution of urban and regional centres in Australia. Factors which have shaped and will continue to shape the growth and quality of the built environment. Elements forming the urban environment viewed as the components of a complex system. Patterns of land-use formed by the physical structures in which people live, work and play. The interaction between land-use and transport and the effect of energy costs on land-use patterns. Population growth and structure in an urban and regional context. The effect of population change, household formation rates and other factors on the demand for housing in urban and regional areas. Possible futures for the built environment and the demand for commercial and industrial building. The Australian building stock. Quantitative methods used in evaluating and planning the built environment. The quality of an urban environment. Socio-economic and other indicators of amenity. Possible conflicts between the man-made and natural environments. Environmental impact statements. Efficient utilization of resources in the building process. Characteristics of the built environment in the Sydney region and its development over the last 50 years.

Building Science Stream

The underlying purpose of the building science stream is to impart to students an understanding of: the physical principles governing the behaviour of matter and the performance of building materials; the nature of the macro-environment and the parameters that control it and the principles involved in creating a suitable human environment; the mathematical tools and computer techniques necessary for the efficient design, construction, and operation of modern buildings.

35.601 Building Science I (Materials) — S1 L2T1

4 credit points; 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, ceramics, plastics, sealants and mastics, stones.

35.602 Building Science II (Energy) — S2 L3T2

5 credit points; compulsory. Prerequisite: 1.931.

The thermal environment: heat and comfort, heat transfer, thermal storage, thermal resistance, insulation, water vapour, condensation, vapour barriers, ventilation, environmental parameters, comfort indices, heat flow through glass, solar radiation, shading coefficient. Acoustics: the nature of sound: velocity, wavelength, frequency, intensity, sound pressure, sound power; sound analysis and subjective loudness; dBA level; assessment of noise annoyance: airborne sound transmission; sound attenuation, transmission loss, absorption coefficients, transmission class, composite partitions; recommended acoustic criteria, introduction to auditorium acoustics. Solar control: solar position diagrams, spherical projection, shadow angles, effect of latitude, longitude, magnetic north and equation of time, shading devices, sky factor, sunlight in streets, shading by tall buildings. Daylighting: daylight factors, reflected daylight, availability of daylight, design. Artificial light: light sources, colour, luminaires, luminance design, glare, lighting quality, spatial illumination, maintenance. Fire: fire behaviour of building materials, fire behaviour of structures, systems for fire safety.

35.604 Building Science IV (Plastics) — S2 L2T1

3 credit points. Prerequisite: nil.

Polymers in building: history and development of polymers, chemical structure, properties and applications of thermoplastics and thermosets, forming and design, reinforced plastics, fabrication techniques, building adhesives, elastomers, modified concrete.

35.605 Building Science V (Concrete) — S1 L2T1

3 credit points; compulsory. Prerequisite: nil.

Concrete technology: cement aggregates, water and admixtures, properties of fresh concrete, strength considerations, duability, shrinkage and creep, special concretes, non-destructive testing, mix design.

35.606 Building Science VI (Metals) — S1 L1T2

3 credit points; compulsory. Prerequisite: nil.

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, stain hardening.

35.607 Building Science VII (Thermal)

3 credit points. Prerequisite: 35.602.

Not offered in 1984.

Building with climate: climate (global and local), thermal comfort factors and indices, effective temperature, principles of thermal design, thermal control, ventilation and air movement, light, daylighting, sound, noise control, shelter for various climate types, design aids.

35.609 Building Science IX (Timber) S2 L1½T1½

3 credit points. 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, plywood, particle board, hardboard, softboard, prefabricated building components, laminated beams.

35.651 Services I (Hydraulics) S1 L2T1

3 credit points; 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.

35.652 Services II (Mechanical) S2 L2T1

3 credit points; compulsory. Prerequisite: 35.602.

Air conditioning, heating and ventilating of buildings. Design of systems. Selection of equipment and allocation of space. Projects and seminars.

35.653 Services III (Integration) S2 L1T3

4 credit points. Prerequisites: 35.651, 35.652.

The incorporation of plant and accessories in the building fabric. Economic routing; noise, identification; incompatibility; outlets. Project.

35.670 Mathematics for Builders S1 L4T2

4 credit points compulsory. Prerequisite: nil.

Calculus: elementary functions, and their inverses; limits and continuity; differentation and integration; practical applications. *Statistics and probablity:* descriptions of sample data; probability and sets; probability distributions; use of probability in decision analysis; introduction to Monte Carlo simulation. *Algebra:* systems of linear equations and inequalities; introduction to linear programming; introduction to the mathematics of finance. Application of mathematics to building industry problems.

Management Studies Stream

Building management includes management in theory and management in practice. It equips the student with well founded principles which he can apply to operational situations in the building process.

35.701 Management I (Management Principles) S1 L2

4 credit points; compulsory. Prerequisite: nil.

Scientific management principles, administration and supervision; principles of organization, individual and group behaviour; technical report writing; introduction to scientific methods of construction planning and control; the building and development industry, building Acts and Regulations, codes, local government authority powers, fees and approvals.

35.702 Management II (Professional Practice) S2 L2

4 credit points; compulsory. Prerequisite: 35.701.

Business practice procedures in relation to: statutory requirements, employment, purchasing, safety and accident prevention, risks and insurance and the conduct of meetings and formal company procedures.

35.703 Management III (Planning) S1 L2T1

4 credit points; compulsory. Prerequisites: 35.502, 35.603 or 35.751, 35.702.

Systems concepts and their relevance to building, planning and construction problems; construction planning techniques and site applications. Operational research techniques with particular reference to the use of networks for planning and scheduling. Selected aspects of work study appropriate to the building industry. Planning and control techniques and their application. Computer applications of CPM.

35.704 Management IV (Contracts, Site Administration) S2 L2

4 credit points; compulsory. Prerequisite: 35.703.

Contract law. Local aspects of site management. Building contracts and contract administration. Site organisation, plant and equipment. Building methods and materials handling.

35.705 Management V (Project Management) S1 L2

4 credit points; compulsory. Prerequisite: 35.704.

Project management and site organization. Theory and concept of project management. The systems approach to construction planning. Alternative organization of the building process. Application of project management in building. Management of pre-design, design and construction activities. Strategic planning, construction strategy. Planning of materials handling, repetitive work and services. Project management control. Management games.

35.706 Management VI (Personnel Management) S1 L1T2

4 credit points. Prerequisite: 35.704.

People management. Human motivation, personnel management. Occupational health and safety in building. Industrial relations. Employers and employees; employers and employer groups. Unions and unionism. Industrial law, conciliation and arbitration. Industrial disputes.

35.707 Management VII (Corporate Strategy) S2 L2T1

4 credit points; compulsory. Prerequisites: 35.704, 35.832 or 35.842.

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 knowledge 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.

35.708 Management VIII (Marketing) S2 L2T1

4 credit points. Prerequisites: 35.704, 35.832 or 35.842.

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.

35.720 Commercial Arbitration S2 L2T1

4 credit points. Prerequisite: 35.704.

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

35.721 Law for Builders I

2 credit points; compulsory. Prerequisites: 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 and a general introduction to the law of bankruptcy. General principles of law of agency. Law of partnership.

35.722 Law for Builders II

2 credit points; compulsory. Prerequisite: 35.721.

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

35.751 Introduction to Computing S2 L1T2

2 credit points; 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.

35.752 Computer Applications in Building S2 L1T2

3 credit points; compulsory. Prerequisite: 35.751.

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. Applications in quantity surveying, estimating and construction management.

35.753 Systems Analysis and Modelling S1 L2T2

4 credit points. Prerequisite: 35.703.

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.

35.754 Building Information Systems S2 L2T2

4 credit points. Prerequisites: 14.001, 35.603 or 35.752.

The specification, development and use of computer based information systems in the management of building companies.

Building Economics Stream

The subjects contained in the Building Economics Stream aim to provide a study of the economic aspects of building and real estate. This study is intended to develop an awareness of cost structure and characteristics from concept to demolition and necessarily embraces a variety of operations and professions. Particular attention is given to the acquisition of skills in the various techniques used to control cost in a building program.

35.801 Quantity Surveying I (Measurement) S2 L3T1

4 credit points; compulsory. Prerequisite: 35.503.

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 store construction; billing fundamentals of item descriptions; taking off quantities from plans and specifications.

35.802 Quantity Surveying II (Billing) S1 L3T1

4 credit points; compulsory. Prerequisites: 35.504, 35.870 or 35.871.

Advanced quantity surveying for the trades 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.

35.813 Quantity Surveying III (Cost Planning) S2 L2

4 credit points. Prerequisite: 35.802.

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

35.831 Building Economics I S1 or S2 L2T1

4 credit points; 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.

35.832 Building Economics II — S1 L1T1

4 credit points; compulsory. Prerequisites: 35.831 or 35.840, 14.002.

Entrepreneurship in the construction industry; depreciation; taxation; operating costs; economics of building plant; materials handling and ergonomics; capital investment appraisals; case studies and field research.

35.833 Building Economics III — S1 L3T1

5 credit points. Prerequisites: 35.832 or 35.842, 35.866 or 35.868.

Economic advantages and disadvantages of conventional onsite construction and industrialized building components and system building. Financial controls used in the erection, management, maintenance and demolition of buildings. Case studies; advanced investment analysis; together with the nature of financial management; the business environment: financial analysis; planning and control; capital investment decisions; organization of the financial structure; operating and working capital management; growth and development; and the causes and prevention of financial stability and failure.

35.867 Estimating I — S2 L2T1

4 credit points; compulsory. Prerequisite: 35.503.

Introduction to techniques used by building estimators. Topics include the analsis 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.

35.868 Estimating II — S1 L1T1

3 credit points. Prerequisites: 35.603 or 35.752, 35.865 or 35.867.

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

35.871 Building Specifications — S2 L2

3 credit points; compulsory. Prerequisite: 35.503.

Principles and methods involved in the compilation of a specification for building works; objectives and purposes of a specification; the specification as a contract document; legal, tender and working aspects; relationship to bill of quantities and drawings; schedules, sources of information, references, outright and performance specifications, prime cost and provisional sums; specification sections, clauses and language, 'master' specifications; preparation, format, binding and printing; explanation of documents and general conditions.

35.880 Development Project — S2 L1T2

4 credit points; compulsory. Prerequisites: 35.504, 35.832 or 35.842.

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. 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.

35.890 Property Valuation — S1 L2

2 credit points. Prerequisites: 35.503, 35.831 or 35.840.

Legal background to valuation of land and property inspection. Depreciation assessment. Building maintenance cycles. Time value of money and equivalence. Market value, comparable sales analysis. Statutory values and applications. Building investment feasibility assessment. Case studies of property valuations.

Special Requirements

35.900 Thesis (Building) — S1 and/or S2

10 credit points; compulsory. Prerequisite: a total of 100 credit points.

A specialized individual study taken under staff supervision with the object of allowing the student either to gain knowledge in some aspect of building which is not covered in the course or to increase his 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 it is an essay permitting the student's unsupported opinion. The topic of the thesis is to be supplied by the student for the approval of the Head of School. A student may not commence the thesis until 100 credit points have been accrued and it must be submitted for examination before the close of the last semester attended by the student. Students are permitted to extend this subject over two consecutive sessions (if desired) and may commence in Session 1 or Session 2. **Note:** thesis performance affects the award of the degree at Honours level. See **Award of Honours** under the School entry earlier in this Handbook.

35.910 Industry Semester — S1 or S2

3 credit points: compulsory. Prerequisites: 35.503, 35.702.

It is desirable for students to be exposed, at the appropriate time during their course, to industrial conditions and experiences and this can best be achieved by continuous experience on a building site (or other approved situation). Students will be required to arrange approved continuous employment for a period of six months (one semester plus vacation periods). The industry semester is most beneficial if taken at about midway through the course, and must be taken at a stage which will enable students to subsequently complete a minimum of 12 credit points, apart from credit points obtained for 35.900 Thesis. During the industry semester, students are under the supervision of a staff member and are required to submit a report on an approved topic.

Subject Offered to Other Schools

35.242 Building Techniques

Building types and characteristics, planning, design and construction process. Costs of building and site works. Building and environmental relationships: access, sun, light, wind, foundations.

Graduate Study

35.212G Pre-Construction Management L2

2 credit points. Prerequisite: nil.

Changing roles and responsibilities; the integration of construction skills with design as a pre-contract input; the costs and benefits of such an approach; user-owner brief; total project planning, administration of contracts, progressive design input and as executed drawings.

35.213G Building Contract Management L2

2 credit points. Prerequisite: nil.

Contract administration, sub-contractors, relationship and communications during construction and commissioning, case studies, analysis of areas of dispute between parties.

35.231G Operations Planning L4

4 credit points. Prerequisite: nil.

Advanced planning and control systems, computer application to planning and control. Time, cost and quality trade-offs, management models, decision theory and risk analysis, construction strategy, resource scheduling.

35.232G Systems Modelling L2

2 credit points. Prerequisite: nil.

Systems concepts and modelling. Applications, including the location, planning and design of buildings, and the relevance of urban energy usage to the siting of buildings. Analytical tools used in systems analysis and their application to building decision problems. Systems design allowing for non-quantifiable factors and multiple objectives. Decision theory and risk analysis.

35.242G Project Report (Compulsory) S1 and S2 L1

10 credit points. Prerequisite: nil.

Each student is registered for the Project Report throughout his or her course. *Semesters 1 & 2:* Survey of the project area, preliminary submission containing an outline of the project. *Semesters 3 & 4:* consultations, group discussions and seminars on the project topics; preparation of a project report.

35.254G Personnel Management L3

3 credit points. Prerequisite: nil.

Management of design and construction of personnel, motivation and personnel theory, selection and development, industrial psychology, industrial relations.

35.275G Property Management L2

2 credit points. Prerequisite: nil.

Designing for better property management, maintenance, plant and equipment selection, economic, technical and tax trade-offs, obsolescence, material selection, development proposals.

35.296G Construction Techniques L3

3 credit points. Prerequisite: 35.505 or equivalent.

Techniques for the demolition of existing buildings and the excavation for and construction of new buildings. Determinants such as new techniques, industry cost structure, materials handling equipment and transportation costs and their effect on construction techniques. A study of recent methods through case studies undertaken. Rehabilitation of existing buildings.

35.297G Developments in Building Materials L2

2 credit points. Prerequisite: nil.

Current developments in the application of building materials. Technical developments and innovations affecting the utilization of building materials, case studies of recent design and applications.

35.330G Cost Planning and Analysis L2

2 credit points. Prerequisite: nil.

Cost planning history, definitions, processes and applications: survey of world usage; the viewpoints of the Architect, the Manager, the Cost Planner and the Services Engineer; case studies; seminars.

35.355G Computer Graphics L2

2 credit points. Prerequisite: 35.360G.

Introduction to computer graphics and graphics devices: drum and flatbed plotters; electrostatic printer/plotters; storage tube and refresh tube graphic displays; digitizers. Use of software and application packages in the following areas: building plans, perspectives, shadows, land form, quantity surveying, networks, etc.

35.360 Computer Techniques and Applications I L3

3 credit points. Prerequisite: nil.

Nature and use of digital computers. Components of a system. Introduction to interactive computing and terminals, elements of the Fortran language. Application of computers in various areas: scheduling; structural design; services; statistics; data reduction; information systems.

35.361G Computer Techniques and Applications II L2

2 credit points. Prerequisite: 35.360G.

Further development of computing concepts. Completion of the Fortran language. Assignments in some of the following areas: scheduling; operations planning; structures; statistics; simulation; linear programming.

35.370G Experimental Techniques L2

2 credit points. Prerequisite: nil.

Purposes of and methods used in building research, experimentation and testing. Design of experiments, method of dimensions and principles of similarity. Analysis of experimental results; regression techniques. Experimental techniques used in building science, and in assessing building materials and mechanical equipment. Methods used in socio-economic analysis; factor and component analysis. Design of subjective experiments and questionnaires.

35.381G Building Physics L2

2 credit points. Prerequisite: nil.

Thermal balance and energy conservation in buildings. Utilization of solar energy for heating and cooling. Effect of building components, materials and services on the internal environment; effect of walls, floors and fenestration.

35.382G Building Psychophysics L2

2 credit points. Prerequisite: nil.

Psychophysical analysis of parameters affecting comfort; the visual acoustical and thermal environment; human engineering.

35.390G Co-ordination of Structures and Services L2

2 credit points. Prerequisite: 35.426G.

A qualitative study of structural systems and their interaction with services. Integration of services and structure. Case studies of special integrated solutions, with particular reference to prefabrication and industrialized solutions, with particular reference to prefabrication and industrialized building. Co-ordination of services.

35.400G Economics of Services L2

2 credit points. Prerequisite: nil.

Costs in use: initial costs; running and maintenance costs; effect of interest rates and inflation; statistics. Maintenance methods and costs; methods of approach and analysis; planned maintenance; repair and renewal. Evaluation methods for building cost appraisal. Cost benefit analyses.

35.426G Building Services L3

3 credit points. Prerequisite: nil.

A study of thermal, electrical, hydraulic and mechanical services in buildings with regard to flexibility, space usage, long-term efficiency, design life and economy.

35.460G Applied Building Economics L2

2 credit points. Prerequisite: nil.

The interrelationship between the national economy and the building industry; entrepreneurship in the building industry; small-business economics in the building industry; the economics of conventional and industrialized buildings; financial management of building contracts; economics of property development. Life cycle costs of buildings.

35.470G Analysis and Valuation of Property L2

2 credit points. Prerequisite: nil.

Buildings as an investment: Site value and selection; optimum site development; assessment of depreciation. Feasibility assessment, including renovation or demolition decision. Amortization of depreciating assets. Economic analysis of hypothetical development of sites. Valuation reports including case studies of building investment projects.

35.480G Managerial Economics in Building L2

2 credit points. Prerequisite: 35.460G.

Advanced techniques of pragmatic concern to the building economist; techniques, problems and model derivation; decision theory; planning of production, labour and inventories; design of decision systems; dynamic programming; sensitivity analysis; integrated models of the firm, econometric models of the economy. Marketing.

Town Planning

Undergraduate Study

Core Subjects

36.211 Introduction to Planning S1 L4T6

The structure of towns and cities. The needs and activities of people. The various land use components related to these needs: housing, schools, shops, workplaces, open spaces, recreational and cultural areas and movement systems. The need for proper interrelationships and integration. Planning theories, aims and practices. The development of the planning profession. Constraints on the profession. Plans of various types and at various levels. Planning as a process, from the formulation of objectives to implementation and monitoring. Planning law and administration; statutory planning. Design and information gathering exercises.

36.212 Planning Studies S2 L5T5

Lectures, seminars and projects aimed at teaching the principles of investigation and research related to the planning of the urban environment, and their application in different situations. **1.** *Role of Planning Studies:* type, purpose and scope of planning studies. Planning studies in the planning process; relationships to various contexts, objectives, decision-making situations and forms of implementation. Study design and presentation. **2.** *Research Methodology:* social science research methods. Sampling techniques, questionnaire design, data processing, use of packaged computer programs. Introducing statistical methods; application to data. Demographic methods, growth rates, population composition.

36.213 Local Planning — S1 L3T7

Prerequisites: 36.211 and 36.212.

A studio, practical exercise and lecture program focusing on the principles and practice of planning new and exciting neighbourhoods and stressing the integrated nature of the skills and theory used in town planning for these activities. At the scale being studied, the subject includes civic and land surveys and their analysis; urban and natural environment conservation; social and political issues; energy considerations. It also encompasses planning for redevelopment and renewal; housing layout; basic traffic management and street design; subdivision and service layouts. *Case studies of existing and new areas:* Students carry out the planning activities required to understand and practice the planning of such areas, including the preparation of environmental planning studies.

36.214 Development Planning — S2 L3T7

Prerequisites: 36.211 and 36.212.

A studio and lecture program focusing on growth, decay and change in existing urban areas, and aimed at an understanding of growth and development patterns, particularly considered as a consequence of accessibility; structure planning of new urban settlements; new towns in Australia and overseas; studies in retail trading, the location and design of shopping centres and industrial areas.

36.215 Statutory Planning — S1 L5T5

Prerequisites: 36.213 and 36.214.

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 Commmonwealth 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 Metropolitan Planning — S2 L6T6

Prerequisite: 36.215.

Definitions of a metropolis in terms of demography, accessibility, economics and politics. Metropolitan structure and organization: social and land use distribution; comunications and access; power relationships between decision makers; gains and losses. Planning methodology: problems of expansion, decay, deprivation; planning for growth, change, improvements at metropolitan scale; critical evaluation of planning policies and processes. Australian and overseas metropolitan centres; plans and organization, metropolitan planning in Third World countries.

36.219 Regional Planning — S1 L6T6

Prerequisite: 36.218.

1. *Intraregional Planning.* Types of intraregional planning. General methodologies for regional planning: environmental; systems and policy approaches. Analysis of Australian and overseas examples of regional plans. Conceptual issues, including: justifications for overriding local government authority; the limited functions of traditional land-use planning in dealing with regional issues; limitations of comprehensive rational plans. Special topics, including: rural and coastal planning issues. **2.** *Interregional Planning.* Regional concept and regionalisation. Indicators of regional imbalance and their significance. Dynamics and theory of regional imbalance. Role of cities in spatial economic development. Location of economic activity. Regional policy in Australia and overseas. Current issues, including: community-based economic development; structural change in the economy; 'decentralization' or 'regional development'. **3.** *Techniques.* Projections and futures analysis, risk analysis; economic impact analysis; structure and functions in the planning process, of selected mathematical models of spatial organization.

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 Professor 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.

Related Subjects

36.452 History of Town Planning — S2 L2

Brief review of planning theories and practices in past ages before the Industrial Revolutions. Planning theories and practices in the late 19th and early 20th century. The birth and development of the town planning profession in Britain and Australia. Planning theories and practices since World War II.

36.453 History of Cities **S1 L2**

Brief survey of urban development chiefly related to Western Civilization, from earliest known cities to the present day, noting how geographical, social, political economic and technological factors help determine the form of cities, making them distinctive for each different period. Origins and purposes of cities. The civilizations of Mesopotamia, Egypt, Crete, Greece and Rome. Medieval Europe. The Renaissance and the Baroque. The French and English landscape garden movements. The 18th century in England. The Agrarian and Industrial Revolutions. Company towns, garden cities and new towns. The 20th century. Futuristic ideas.

36.134 Graphic Communication **S1 L1T3**

Graphics as a communication technique. Media and techniques for different purposes. The planner's need to communicate graphically. Exercises in drawing.

36.222 Computers and Information Systems **S2 L1T1**

The use and potential use of computers by planners. Basic knowledge to make use of opportunities 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. Planning information system types, application; establishment; maintenance.

36.131 Communication Techniques **S2 L1T2**

Presentation and layout of information; reproduction of drawings, maps and reports, photographic processes; model making; audio-visual techniques; report and letter-writing; public speading and oral communication.

35.243 Building and Land Development **S1 L1T1**

Materials, construction techniques, sites, earthwork and the planning and building process. Building and land development costs. Economic and social life of buildings, change, depreciation. Exercise in the evaluation of the continuing usefulness of buildings — redevelopment and conservation.

36.242 Land Economy **S2 L1T1**

The use, management and development of land as a national resource; the economic, legal sociological and technological factors which affect the individual ownership of proprietary interests in land. Aspects of 'land' concerned with the control of land use, land management, land reforms, land development, land transaction and land valuation.

36.323 Environmental Science I **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 II **S1 L1T1**

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

36.253 Environmental Science III **S2 L1T1**

Climates and climatic elements. Design for climate. Man-environment studies. Sun control including shading devices. Shadows and shading. Daylight as planning control. Wind effects. Aspect. Sound waves and decibels, the ear hearing, measurement and analysis of sound sources, acceptable sound levels inside and outside buildings, environmental noise sources and their control.

36.225 Public Policy and Urban Government **S1 L1T1**

Public policy and bureaucracy, including decision making processes in general; Australian government policy making, particularly in relation to cities; freedom of information. Executive government at the state level; regional government and administration; local government structure, functions, politics; co-ordination and citizen participation; theories of urban politics.

36.235 Urban Sociology **S1 L1T1**

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. People and their relationship to the urban environment. Relationships between groups within the context of the urban environment. The evaluation of planning objectives and outcomes.

36.299 Introduction to Social Planning **S1 L1**

Focus on the social component of the planning process, including participatory techniques of public interaction, the availability of resources for implementing community improvement measures, and equalising and anti-discriminatory measures for disadvantages and minority groups. Students study and make use of games that are aimed at increasing awareness of conflicts of interest inherent in city organization, and the ways to resolve them.

36.244 Economic Issues in Planning **S2 L1T1**

The market mechanism and market failure. Urban policy and the distribution of welfare. Macroeconomic policies and corporate strategies vis-a-vis urban and regional issues. Structural economic change. Manufacturing and office location. Urban growth theory. Economics of urban size. Land stock and service provision in the city. Plan evaluation techniques.

36.461 Engineering **S1 L3T1**

The provision of public utility services: town water supplies, sewerage, drainage, flood management, electricity and gas supply, telecommunication. Transportation planning and design: road hierarchy, road geometry, arterial roads, residential streets, intersections, cross sections, road layouts in residential areas, public transport. Transport and environment: accidents and safety, noise, air pollution. Traffic engineering; characteristics of road vehicle, driver, road system.

36.228 Transportation Planning **S2 L1T1**

The relationship between urban planning and transportation planning with particular reference to transport needs, objectives, systems, forecasting, planning and management within an urban planning

framework. *Needs:* personal travel, goods and services. *Objectives:* accessibility, efficiency, economy, equity. Systems: roads, public transport, para transit, slow way; modal and intermodal transfer, transport technology. *Forecasting:* trip generation and land use, trip distribution, modal choice, trip assignment, evaluation. *Planning:* dynamic processes and their relationship to land use/transport decision-making. Management: traffic flow, capacity, traffic area management, parking standards and control, operational requirements of public transport.

36.234 Urban Design **S1 L2T1**

Aims to increase visual awareness and sensitivity; to learn about design components; and to develop some understanding of the effects of planning controls on the appearance of cities. Topics include the character and identity of areas as influenced by natural and man-made features; townscape elements (skyline, floorscape, wallscape, street furniture, vegetation, water and the synthesis of these); townscape in movement; the effects of light and shade and night time lighting and of wind and other climatic factors: pedestrianized urban spaces — their creation, function and appearance; the impact of new buildings, rehabilitation and reconstruction; the effects of the car and other forms of transport; varying perceptions of people; performance standards and other controls affecting appearance. Lectures, seminars, visual analysis exercises and urban design case studies and projects.

36.439 Regional Survey Camp

Year 5 students are required to attend a Regional Survey Camp of up to two weeks' duration. The camp is held in or near an appropriate country centre. Students, under staff supervision, study the character and function of a regional centre, patterns of rural settlement, and rural land use classifications.

36.210 Professional Practice **S2 L1**

Functions and organizational structures. Corporate planning. Office management. Elemental costing, cost planning. Client relationships, consulting, sub-consulting, briefs, responsibilities, liabilities. Formal evidence. Professional ethics.

36.503 Practical Experience

For the purpose 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 Professor of Town Planning for approval.

Planning Electives

36.300 Planning Elective **S1 or S2**

For initial enrolment only.

36.3012 Third World Planning **2CCH**
36.3014 Third World Planning **4CCH**

Studies of planning problems in Third World Countries by way of lectures, research and seminars related to population, society, labour and incomes, rural-urban migration, infrastructure and housing.

36.3022 Urban Conservation **2CCH**
36.3024 Urban Conservation **4CCH**

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.

36.3032 Subdivision Design **2CCH**
36.3034 Subdivision Design **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.

36.3042 Development Planning II **2CCH**
36.3044 Development Planning II **4CCH**

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

36.3052 Urban Studies **2CCH**
36.3054 Urban Studies **4CCH**

Exploration in depth of an aspect of environmental planning of particular interest to the student. An individual research study to expand the student's experience in methodological and substantive areas beyond what is encountered elsewhere in the course.

36.3062 Statutory Planning II **2CCH**
36.3064 Statutory Planning II **4CCH**

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

36.3072 Metropolitan Planning II **2CCH**
36.3074 Metropolitan Planning II **4CCH**

The concept of the metropolis: historical development of metropolitan areas; political and social forces; metropolitan values and lifestyles; future possibilities — growth, decline, change.

36.3082 Metropolitan Planning III **2CCH**
36.3084 Metropolitan Planning III **4CCH**

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

36.3092 Regional Planning II **2CCH**
36.3094 Regional Planning II **4CCH**

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

36.3102 Social Planning **2CCH**
36.3104 Social Planning **4CCH**

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.

36.3112 Environmental Psychology **2CCH**
36.3114 Environmental Psychology **4CCH**

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 values held and actual behaviour. The emergence of different viewpoints and resultant conflicts. The role of planning in understanding, anticipating and reconciling such conflicts.

36.3122 Impact Assessment and Evaluation **2CCH**
36.3124 Impact Assessment and Evaluation **4CCH**

Impact of planning and development proposals. Environmental planning legislation. Environmental, social, economics, institutional and political impact. Evaluation of impact assessments.

36.4402 Planning (Special Subject) **2CCH**
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 **S1 L2T1**

Architecture prerequisite: 11.4309.

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 written paper for tutorial discussion.

Graduate Study

36.934G Theory and Practice of Planning A **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 Theory and Practice of Planning B **SS 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 Theory and Practice of Planning C **SS L3**

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 Theory and Practice of Planning D **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 Theory and Practice of Planning E **SS L3**

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 Theory and Practice of Planning F **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.

36.922G 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

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 and ordinances. Commonwealth-State Housing Agreements. The organization and administration of public housing authorities. Significant overseas housing policies.

36.930G Theory of Neighbourhood Planning I

36.931G Theory of Neighbourhood Planning II

The neighbourhood concept: its historical evolution and development. The contributions of Ebenezer Howard, Unwin and Parker, Clarence Perry, Stein and Wright and others. Neighbourhood structure, elements and form. Relationship to town and metropolitan planning.

36.940G Practice of Neighbourhood Planning I

36.941G Practice of Neighbourhood Planning II

36.942G Practice of Neighbourhood Planning III

36.943G Practice of Neighbourhood Planning IV

Dwelling types. Residential densities. The design and layout of groups of dwelling, open spaces, streets and pathways in high, medium and low density housing estates. Mixed development. Subdivision patterns and standards. Community facilities including shopping and civic centres. Urban renewal in living areas. Organization of neighbourhood development.

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-making 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

Undergraduate Study

37.0014 Introduction to Computer Applications — S2 L1T1

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.

37.3013 Man in His Environment — S1 L2T1

An appreciation of man through behavioural studies, including territoriality and personal space identity. The understanding of the effect of environmental changes on man. Sociological techniques for understanding user requirements.

37.5816 Land Systems — S2 L2T1

Ecological approach to land management. Marine, coastal, estuarine and terrestrial ecology. Conflicts with development. Statistical evaluation of human impact on undisturbed vegetation, through field work. Study of methods of management of land systems. Includes field excursions.

37.5817 Land Management — S1 L1T1

An investigation of resources and their management, with reference to managed landscapes, both cultural and natural. Conservation and rehabilitation methods are studied in relation to rural and urban landscapes, including coastal processes. Rehabilitation methods are related to land use types with studies of specific examples, following investigations of human impacts and their assessment.

37.6041 Landscape Graphics I **S1 L2T3**

37.6042 Landscape Graphics II **S2 L2T3**

Basic landscape drawing with emphasis on pencil techniques, drafting conventions, layouts, lettering, instruments, drawing types, use of scales. The principles and application of orthographic, axonometric and isometric drawing, plane geometry and solid geometry. Basic use of symbols to graphically depict environmental factors. *Advanced drawing techniques* including the use of media other than pencil. An investigation of perspective theory. Application of the principles of perspective to the drawing of landforms and elements in the landscape.

37.6043 Landscape Graphics III **S1 L1T2**

37.6044 Landscape Graphics IV **S2 L1T2**

Advanced perspective including multiple vanishing points. Isometric drawings of complex landforms. Shadow projection. Techniques for use in presentation drawings. *Advanced graphic presentation techniques* of survey, analysis, synthesis and final design documentation. A major graphic project is integrated with Landscape Design.

37.6203 Landscape Technology I **S1 L2T1**

An introduction to the nature of materials commonly utilized in landscape construction. The properties and applications of common building and construction materials, including testing procedures.

37.6204 Landscape Technology II **S2 L2T2**

Structural elements and the basic principles of structure. Analysis of the principles of construction, as applied to landscape construction applications and techniques.

37.6235 Landscape Engineering I **S1 L2T2**

Study of the design and construction techniques related to basic civil works, including earth works, route alignment, services, urban and rural drainage. Interpretation of engineering design and development documents. Projects incorporating detail resolution of civil works.

37.6246 Landscape Engineering II **S2 L1T1**

Study of the design and construction techniques related to water control and treatment, waste disposal and sewage treatment. Overview of the principles of transportation systems including roads, railway permanent ways, airports, ports and harbours.

37.6352 Plants and Planting Methods I **S2 L2T1**

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

37.6353 Plants and Planting Methods II **S1 L2T1**

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

37.6585 Professional Practice I **S1 L1½**

The landscape architect's responsibilities in law; a study of the development of law in Australia, including torts, contracts, equity and environmental legislation. Project procedure, the stages of a capital development project. Construction contracts, including tender documentation, subcontract conditions and subconsultative responsibilities.

37.6586 Professional Practice II **S2 L1½**

The specification, its function and forms. A comparative analysis of various standard contract forms including SAA documents and other performance codes. Preparation of contract documentation, including elemental and trade technical sections. Cost planning and feasibility studies.

37.6587 Professional Practice III **S1 L1½**

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, rectification and final certification. The rights and duties of the proprietor and contractor, including the relationship with the consultants. Post-contract activities, maintenance manuals, appraisal of design and construction and retention of records. The Statute of Limitations.

37.6588 Professional Practice IV **S2 L1½**

Prerequisite: Four months approved experience.

Landscape architecture as a profession; obligations, liabilities and responsibilities. Professional association and registration, including a study of the Australian Institute of Landscape Architects. Office management and practice; record keeping, correspondence, insurances and taxation. Copyright and document control. Preparation of reports on practical experience gained during enrolment in the course. A minimum requirement of four months approved experience is prerequisite to enrolment in this subject.

37.7011 Landscape Graphics (Art) I **S1 L1T2**

37.7012 Landscape Graphics (Art) II **S2 L1T2**

Practical exercises in the basic grammar of form as an element of composition. Projects planned to develop: **1.** Appreciation of the principles of composition in relation to a total graphic structure. **2.** Effective graphic communication of ideas and concepts in terms of a variety of media. **3.** The use of methods and techniques to effect clear graphic statements with an economy of means.

37.7013 Landscape Graphics (Art) III **S1 L1T2**

37.7014 Landscape Graphics (Art) IV **S2 L1T2**

Projects planned to develop: **1.** a more complex and able employment of the graphic language; **2.** an increasing ability to balance and judge the demands of pictorial content and formal structure in the graphic presentation of pictorial material or plans; **3.** the potential of the individual student towards a personal expression based on increasing technical command of materials in a lucid, graphic style.

37.7101 Theory of Landscape Architecture **F L2**

An introduction to the discipline of Landscape Architecture. The design process. Landscape design, construction, maintenance and policies in both urban and rural environments. Design philosophies with recognition of ecological, social, functional and aesthetic consideration. The relationships between the various subjects offered in the landscape program and current research interests within the School. Basic techniques used in the landscape discipline which includes land management, elementary surveying, map reading, understanding of contours, grading, earthwork manipulation and general site appraisal.

37.7133 Landscape Design I **S1 L1T3**

The development of a logical design process. The understanding of aesthetic appreciation of knowledge of materials and construction applied through a range of simple landscape design exercises.

37.7134 Landscape Design II **S2 L2T6**

Practical landscape design ability is developed through more complex medium scale projects. Particular emphasis benefits arising from designed development, and the practical relationship to the cost of landscape work and its maintenance. The direction of study is towards urban needs and the effective provision of environments of real benefit in medium and high density living, working and playing areas.

37.7135 Landscape Design III **S1 L2T6**

37.7136 Landscape Design IV **S2 L2T6**

More advanced exercises wherein students find it necessary to undertake considerable research and make value judgments based upon an extensive range of factors. Projects may include the design of regional parks, and open-space systems, nature reserves, camping and caravan parks, golf courses and sports fields, highways, housing estates, shopping malls and civic squares. A number of the exercises call for group work. (Several are directed towards the solution of real design briefs.)

37.7137 Landscape Design V **S1 L2T6**

37.7138 Landscape Design VI **S2 L2T10**

Students are called upon to employ all the knowledge, skill and understanding they have gained in previous years. Projects are few in number, but call for solutions of professional standard, supported by thorough documentation. Group work predominates. Projects are representative of our major environmental problems, ranging from expressways to mineral extraction and from National Parks to solid and liquid waste disposal.

37.7145 Landscape Planning I **S1 L2T2**

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.

37.7146 Landscape Planning II **S2 L2T2**

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, industrial, commercial, grazing, agriculture, forestry and conservation. Projects include the use of remote sensing techniques and advanced computer programs.

37.7147 Landscape Planning III **S1 L2T2**

Visual analysis, assessment and evaluation techniques detailed in order to incorporate this important aspect into planning models. Visual resource management. Recent Australian and overseas case studies. Projects incorporate relevant visual analysis computer programs.

37.7148 Landscape Planning IV **S2 L2T2**

Major planning project in conjunction with final landscape design project. Discussions on contemporary environmental planning issues. Australian case studies.

37.8086 Research Methods **S2 L1**

Investigation of various research methods with application to study in landscape architecture. Development of the critical, logical and stylistic skills involved in researching, writing and presenting essays, theses, articles, papers and reports. Selection of topic for study in the subject *37.8087 Landscape Thesis.*

37.8087 Landscape Thesis **F**

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.

37.9013 History of Landscape Architecture S2 L1½

Changing patterns of land-use throughout history as a reflection of their times and an expression of man's attitude toward nature and his basic individual and social needs. Ancient Egypt, Assyria and Babylonia, Greece, Imperial Rome, the Middle Ages, Persia and Moorish Spain. The Renaissance in Europe, the English Landscape School and the Picturesque Movement. Effects of the Industrial Revolution and scientific plant exploration. The emergence of public parks.

37.9112 Prehistory of Landscape and Man S2 L1

Formation of the Australian landscape in prehistory. An overview of continental drift, orogenesis, paleoclimates and glacial cycles, plate tectonics and geomorphology. Paleo environments and the advent of *homo sapiens*. Critical interfaces within the biosphere and the impact of prehistoric man with reference to extant 'primitive' societies.

37.9192 Environment and the Landscape S2 L2T4

Observation and interpretation of both the physical and biological environments and their interrelationships. Perception and appreciation of landscape character through sensory inputs of sight, sound, smell and touch. Recording and presentation techniques associated with landscape surveys. Fundamental characteristics of biological systems, with emphasis on relationships with the physical environment. Survey of Australian plant communities and associated fauna with particular emphasis on the Sydney region.

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 3270, 3280, 3290 or 3295.

37.100 Site Planning Elective S2 L2

2 credit points. Prerequisite: 52 credit points.

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 S1 L2

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.

37.3015 Environment Impact Assessment I S1 L1T1

2 credit points. Prerequisite: 156 credit points, or as otherwise approved by Subject Authority.

Not offered in 1984.

37.3016 Environmental Impact Assessment II S2 L1T1

2 credit points. Prerequisite: 37.3015.

Not offered in 1984.

The environment defined in terms of bio-physical and socio-economic factors. Introduction to the general principles of environmental survey and analysis and the assessment of impact. Specific methodologies are reviewed on a comparative basis. The importance of communication between the environmental sciences and professions and the problems of objectivity. Emphasis upon the role that environmental impact assessment should play as part of the planning process; landscape assessment methodologies reviewed with specific reference to their adaptability for use as a 'before and after' technique for comparatively assessing impact in relation to visual/aesthetic factors.

The student undertakes a specific study of current social significance on a group basis in two phases over two consecutive sessions, in the same year. Each phase is used as a partial assessment of progress.

37.400 Urban Landscape Elective S1 L2

2 credit points. Prerequisite: 104 credit points.

Not offered in 1984.

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 1984.

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

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.

Graduate Study

37.910G History of Landscape Design

Not offered in 1984.

Primitive cultures and their impact upon the landscape through farming, transport and settlement patterns. Social influences, aesthetic beliefs and their expression through the ages in the design of parks and gardens. The industrial revolution and resultant changes in the humanized landscape. Landscape development in America and Australia.

37.912G Landscape Engineering

Not offered in 1984.

1. Classification of soils, shear, compaction, consolidation and permeability. Stability of walls, embankments, cuttings and earth dams. Common causes of failure and remedial measures. **2.** Elementary hydrostatics and hydraulics. **3.** Bernoulli's Theorem, flow through orifices, over notches, in channels and pipes. Pumps and reticulating equipment.

37.913G Theory and Practice of Landscape

Not offered in 1984.

Aesthetic philosophies of landscape design—scale—texture and colour. Design, construction and maintenance in urban and rural environments, including highways, residential areas, parks and gardens. Erosion control and shore protection. Landscape surveys and analyses. Specifications, contracts, and office procedure.

37.914G Forestry and Horticulture

Not offered in 1984.

Principal commercial trees—identification—planting techniques, care and maintenance, including fire and insect pests, and felling techniques. Forest nursery practice and forest economics. Characteristics, identification and specific requirements of selected plants and shrubs. Soil requirements and cultivation. Grasses, lawn and playing field construction. Use of herbicides and selective weed killers — control of insect pests.

37.915G Landscape Design

Not offered in 1984.

A series of design assignments to be executed in the studio. It is anticipated that some work will be required to be done at home.

Graduate School of the Built Environment

Graduate Study

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

39.101G Contextual Studies 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 town scape consideration. The current legal framework. Government, semi-government and community conservation organizations and their roles.

39.102G Architectural History S1

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 S2

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 analyses, 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 S1

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 S1

Prerequisite: 39.107G.

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

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 — F

An appropriate conservation topic from any apposite area, including such fields and 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

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 — S1 T2

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 — F

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 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) — F

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 and Communication — S1

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 — S2

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 — F

Prerequisite: 39.501G.

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 — S1

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 — S1

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 — S1

Co-requisite: 39.501G.

Industrial design project work intended to integrate the students' 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: 39.501G.

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 S2

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)) F

Co-requisite: 39.533G.

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.

39.651G Mechanical Shock and Vibration S1 L1T1

2 credit points. 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

4 credit points. 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

2 credit points. 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

4 credit points. 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.

39.993G The Ear, Hearing and Hearing Conservation S1 L1T1

2 credit points. 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.

39.994G Graduate Project A S1

5 credit points. Prerequisite: 10 credit points.

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

39.995G Community Noise S2 L2T2

4 credit points. 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

10 credit points. Prerequisite: 39.994G.

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

39.997G Auditorium Acoustics S2 L2T1

3 credit points. 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 graphical and model analysis; sound reflectors; sound absorbents.

39.998G Noise Control in Buildings **S2 L2T2**

4 credit points. 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.

Servicing Subject

Servicing subjects are those taught within courses offered by other schools or departments in a different faculty.

For further information regarding the following subject see the Applied Science Handbook.

39.908G Community Noise Control **S1 L1T1C2**

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 exercises in sound recording, analysis and assessment; noise control — source noise reduction, use of barriers, enclosures, distance, sound absorbing materials; sound transmisson through building elements; noise components of environmental impact statements.

Botany

Undergraduate Study

43.202 Plant Structure and Function **S1 L2T3**

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 structure and function.

Graduate Study

43.211G Botany and Ecology

Plant anatomy and cytology — growth and reproduction — photosynthesis, transpiration and water relations. Principles of plant classification and the use of a flora. Principal soil types, chemical and physical properties, soil profiles. Composition of selected plant communities in relation to their environment. Plant succession and climax communities with special reference to Australian conditions.

Education

Undergraduate Study

58.793 Advanced Education I **F 1CCH**

Students study *one* of the following segments: *Philosophy of Education segment:* some connected issues in social and political philosohpy, and their implications for educational theory and practice. Includes: freedom, compulsion and the aims of education; neutrality of education systems, schools, teachers and courses; and justice and equality. *Educational Psychology segment:* introduction to selected aspects of on-going research activities in educational psychology. The area is selected following discussions with staff members. *Sociology of Education segment:* more detailed and extensive examination of central topics studied in the pass strand. Consideration of selected issues to do with social theory, the nature of the sociological enterprise and sociological methods.

58.794 Advanced Education II **F 1CCH**

Each student engages in twenty-eight hours of supervised study appropriate to his or her proposed research, as approved by the Head of School.

58.795 Advanced Education III **F 4CCH**

Enrolment is subject to approval by the Head of School.

In their full-time Honours year, all students enrol in four twenty-eight-hour units of study appropriate to their research, as approved by the Head of School.

58.799 Thesis **F**

58.703 Theory of Education II **F L2½**

Prerequisite: 58.702.

Educational Psychology: extension of the introductory studies of learning, cognition, individual differences and cognitive development with concentration upon child development; classroom applications emphasized and phenomena experimentally demonstrated where

possible. *Philosophy of Education:* exploration of philosophical questions concerning teaching and learning with particular reference to the various subjects taught in schools; issues concerning the relationships between school subjects, a connection between knowledge and the development of mind, the value of school subjects in relation to other activites which could compose education and the social and ethical context of education. Focus on logical and epistemological questions which are internal to the various teaching subjects. Students are assigned to one of the following Philosophy of Education groups: Philosophical Issues in: Mathematics and Education; Literary Appreciation and Education; History and Education; Science and Education; Curriculum and Education; Language and Education; Social Sciences and Education; Industrial Arts Education. *Sociology of Education:* includes socialization, the family, the role of education in society, inequality of educational opportunity, multi-cultural education.

58.704 Theory of Education III — F L3

Prerequisite: 58.703.

Sociology of Education: Includes sociology of the school and classroom, deviance, knowledge and the curriculum, sexism, in schools, social trends and problems and their implications for education, technology work and lifelong learning. *Selected Studies in Education:* two education theory options to be selected from among a number available; some deal with the separate disciplines of philosophy, psychology, sociology, others may draw from more than one. In any given year the options offered depend on the staff available and on student demand. *Topics may include the following:* Computer assisted instruction, the talented child, learning disabilities, social trends and problems, sociology of the school and classroom, methodology for criticism, ethical theory and moral education, science and religion in education.

58.713 Teaching Practice II — F 15 days

Prerequisites: 58.712, 58.722 or 58.732 or 58.742 or 58.752 or 58.762. Co-requisites: 58.723 or 58.733 or 58.743 or 58.753 or 58.763.

Extensive opportunities for students to develop teaching competence; each student is placed in a high school for 10 days and works in close association with a teacher.

58.714 Teaching Practice III — F 15 days

Prerequisites: 58.713, 58.723 or 58.733 or 58.743 or 58.753. Co-requisites: 58.724 or 58.734 or 58.744 or 58.754 or 58.764.

Provision for further opportunities for students to develop teaching competence; each student is placed in a high school for 20 days and works in close association with a teacher.

58.723 Industrial Arts Curriculum and Instruction II — F L1T2

Prerequisites: 21.312, 58.702, 58.722. Co-requisite: 58.703.

School structure and organization, the roles of teachers and administrators and the rights, responsibilities and legal obligations of teachers, methods of instruction applicable to the various aspects of secondary school Industrial Arts, with use being made of microteaching techniques to allow students the opportunity for personal development in the general area of class control and management, safety in school workshops and laboratories, particularly in relation to teacher responsibility for adequate safety instruction and supervision. The requirements of the NSW Department of Education and the Department of Labour and Industry are examined, the aim being to develop in the students desirable attitudes and practices relating to the provision of a safe working environment in the secondary school.

The laboratory component of the course is primarily directed towards workshop/laboratory methodology applicable to the wood, metal, plastic and leatherwork strands of technics. The application of design and planning is emphasized and is shown to be especially applicable to Industrial Arts years 9 and 10. Aspects of the Industrial Arts-Engineering Science Syllabus are also explored. In essense the students are involved in a problem-solving situation where both practical and intellectual skills are experienced in the context of applying these skills to programming and teaching through the junior school syllabi. *Classroom Issues and Strategies:* aspects relating to classroom and community including the primary school, the teacher in the school community, teachers and parents, legal responsibilities and rights, transition, unemployment, leisure, support facilities.

58.724 Industrial Arts Curriculum and Instruction III — F L2T2

Prerequisites: 58.703, 58.713, 58.723.

Detailed examination of planning and management of curriculum from a variety of points of view. Consideration of current views in a number of specialist areas, eg slow learners, the role of syllabus committees, equipment and materials committees, regional consultants (advisers), engineering science, current innovations in Industrial Arts. The aim of this experience is to assist students to formulate their own philosophy of education and develop an understanding of the implications of Industrial Arts in secondary schools in some depth. Detailed examination of aims and objectives of specific syllabuses in made in order that appropriate programs and teaching methods may be developed. The laboratory program consists of a small number of major projects which add to and synthesize the students' previous experiences in the course. Both student self-evaluation and reporting techniques are constantly assessed. *Classroom Issues and Strategies:* aspects relating to assessment and measurement including test planning, standardized tests, marking and reporting, essay-type tests, scaling of test scores, uses and effects of assessment.

Financial Assistance to Students

The scholarships and prizes listed below are available to students whose courses are listed in this handbook. Each faculty handbook contains in its **Financial Assistance to Students** section the scholarships and prizes available within that faculty. The **General Information** section of the Calendar contains a comprehensive list of scholarships and prizes offered throughout the University.

Scholarships

Undergraduate Scholarships

As well as the assistance mentioned, there are a number of scholarships available to students. What follows is an outline only. 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 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*	$180 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
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 enrolling in any year of a full-time undergraduate course on the basis of academic merit and financial need

*Apply to The Secretary, Bursary Endowment Board, PO Box 460, North Sydney 2060 immediately after sitting for HSC.

Undergraduate Scholarships (continued)

Donor	Value	Year/s of Tenure	Conditions
General (continued)			
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 Credit Union Ltd or members of the family of such members.

Graduate Scholarships

Application forms and further information are available from the Student Enquiry Counter, located on the Ground Floor of the Chancellery. 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*.

Where possible, the scholarships are listed in order of faculty.

Donor	Value	Year/s of Tenure	Conditions
General			
University of New South Wales Postgraduate Scholarships	Living allowance of $5750 pa. Other allowances may also be paid	1-2 years for a Masters and 3-4 years for a PhD degree	Applicants must be honours graduates (or equivalent). Applications to Dean of relevant Faculty.
Commonwealth Postgraduate Research Awards	Living allowance of $6850 pa. Other allowances may also be paid.	1-2 years; minimum duration of course	Applicants must be honours graduates (or equivalent) or scholars who will graduate with honours in current academic year, and who are domiciled in Australia. Applications to Registrar by 31 October.
Commonwealth Postgraduate Course Awards			Preference is given to applicants with employment experience. Applicants must be graduates or scholars who will graduate in current academic year, and who have not previously held a Commonwealth Postgraduate Award. Applications to Registrar by 30 September.
Australian American Educational Foundation Travel Grant (Fulbright)**			Applicants must be graduates, senior scholars or post-doctoral Fellows. Applications close 30 September.
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

*Available for reference in the University Library.

**Application forms are available from The Secretary, Department of Education, AAEF Travel Grants, PO Box 826, Woden, ACT 2606.

Graduate Scholarships (continued)

Donor	Value	Year/s of Tenure	Conditions
General (continued)			
The Caltex Woman Graduate of the Year	$16000 over 2 years for further studies in USA, UK, Northern Europe or in special cases Australia. There are no special allowances for travel or accommodation for married graduates.	2 years	Applicants must be female graduates who will have completed a University degree or diploma this year and who are Australian citizens or have resided in Australia for at least seven years. Selection is based on scholastic and literary achievements, demonstrable qualities of character and accomplishments in cultural and/or sporting/recreational activities. Applications close 30 September.
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 Commonwealth citizens or British Protected Persons, and who are not older than 35 years of age. Applications close with Registrar by 15 September.
Sam Cracknell Memorial	Up to $3000 pa		See above under **Undergraduate Scholarships, *General***
The English-Speaking Union (NSW Branch)	$5000		Applicants must be residents of NSW or ACT. Awarded to young graduates to further their studies outside Australia.
Gowrie Scholarship Trust Fund	$3500 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 Registrar by 15 November.
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: **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 early August.
Frank Knox Memorial Fellowships at Harvard University	Stipend of $5600 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

**Application forms must be obtained from the Australian representative of the Fund, Mr L. T. Hinde, Reserve Bank of Australia, GPO Box 3947, Sydney, NSW 2001. These must be submitted to the Registrar by early August.

Graduate Scholarships (continued)

Donor	Value	Year/s of Tenure	Conditions
General (continued)			
The Rhodes Scholarship*	Approximately £3000 stg pa	2 years, may be extended for a third year	Unmarried male and female Australian citizens aged between 19 and 25 who have been domiciled in Australia at least 5 years and have completed at least 2 years of an approved university course. Applications close in early September each year.
Rothmans Fellowships Award**	$16500 pa	1 year, renewable up to 3 years	The field of study is unrestricted. Applicants must have at least 3 years graduate experience in research. Applications close in July.
Architecture			
The Associated Hardware Manufacturers Scholarship	$1500 pa 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 funds.	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. Applications to Registrar by 31 October.
Byera Hadley Travelling Scholarship§	Varies year to year	Not more than 3 years	Awarded to outstanding graduate 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. Graduate must be an Australian citizen and award is eligible up to 3 years from graduation.
The Lindsay Robertson Memorial Travel Award	A maximum of $1000	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 overseas university or other approved overseas institution. Applications close 30 May.
The Master Builders' Association of NSW	$500	2 years	Applicants must be graduates who have enrolled in the Master of Science (Building) degree course
Wightman/University Scholarship	$2000 pa	1 year	Best final year student in BArch degree course proceeding to graduate study

*Applications to Mr H. McCredie, Secretary of the NSW Committee, University of Sydney, NSW 2006.
**Applications to the Secretary, Rothmans University Endowment Fund, University of Sydney, NSW 2006.
§Applications to the Registrar, Board of Architects of New South Wales, 196 Miller 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 Examinations 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 Association	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
Byrne & Davidson Roll-A-Door	100.00	11.4307 World Architecture
Frank Fox Memorial	150.00	11.4334 Historical Research C
James Hardie & Co Pty Ltd	150.00	General proficiency throughout the Bachelor of Architecture degree course
Frank W. Peplow	100.00	Church Architecture or Design
Royal Australian Institute of Architects	250.00	Architectural Design and allied subjects in last two years of Bachelor of Architecture degree course
School of Building		
Byrne & Davidson Roll-A-Door	200.00	Bachelor of Building degree course, Year 3
James Hardie & Co Pty Ltd	100.00	Bachelor of Building degree course, Year 1
Institute of Wood Science (Australian Branch) — Timber in Building	50.00	35.609 Building Science IX (Timber)
Master Builders' Association of New South Wales	300.00	Merit performance in the Bachelor of Building degree course
O'Brien Glass Industries Ltd	300.00	Best undergraduate thesis in the Bachelor of Building degree course
School of Landscape Architecture		
Lindsay Robertson Memorial	100.00	37.7134 Landscape Design

Undergraduate University Prizes (continued)

Donor/Name of Prize	Value $	Awarded for
School of Town Planning		
The NSW Department of Environment and Planning	150.00	Bachelor of Town Planning degree course, Year 5
Royal Aust Planning Institute, NSW Division	150.00	Bachelor of Town Planning degree course, Year 3
John Shaw Memorial	200.00	Best result in Thesis in the Bachelor of Town Planning degree course

Graduate University Prizes

The following table summarizes the graduate prizes awarded by the University.

Donor/Name of Prize	Value $	Awarded for
School of Building		
Alex Rigby	105.00	Master of Science (Building) — distinguished graduate

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 G. E. Roberts

Chairman

Professor E. C. Daniels

Executive Assistant

P. A. Johnson

Senior Administrative Officer

Brian John Newell, BCom *N.S.W.*

Professional Officers

Terrence Edward Gill, BE *N.S.W.*
Roderick Craig McGregor, BSc *N.S.W.*
Richard Rosenberger, BE *Timisoara*

School of Architecture

Professor of Architecture and Head of School

Eric Charles Daniels, MArch *N.S.W.*, ASTC, LFRAIA, Hon.MIES

Professor of Architecture

Vacant

Professor of Architecture

Gareth Edward Roberts, BArch MCD *Liv.*, LFRAIA, FRAPI, MRTPI, ARIBA

Associate Professors

Richard Eric Apperly, BArch *Syd.*, MArch *N.S.W.*
Russell Callam Jack, MArch *N.S.W.*, ASTC, FRAIA
Laszlo Peter Kollar, MArch PhD *N.S.W.*, ASTC, FRAIA
Peter Thomas Oppenheim, BArch *Cape T.*, MArch PhD *N.S.W.*, ARIBA
Kenneth James Wyatt, BE *Qld.*, MBdgSc *Syd.*, MIEAust

Senior Administrative Officer

Randall Watkins, DipTech *N.S.W.I.T.*

Senior Lecturers

John Albyn Ballinger, BArch *Adel.*, FRAIA
Paul Alan Johnson, BArch *Syd.*, DipCD *N.S.W.*, FRAIA
Nicholas Marinov, DipArch *Prague*, MArch *N.S.W.*, ARAIA
Peter Leggett Reynolds, BArch PhD *N.S.W.*

Nancy Claire Ruck, BArch *N.Z.*, MBdgSc *Syd.*, PhD *N.S.W.*, FIES, FRAIA, ANZIA
Vinzenz Franz-Josef Sedlak, DiplIngArch *T.U.Graz*, MPhil *Sur.*
Clive William Stevens, MArch *N.S.W.*, MSc *Sur.*, DipTCP *Syd.*, ASTC
Barry Vivian Wollaston, BArch *Syd.*, MArch *N.S.W.*, FRAIA

Lecturers

Chris LeRoy Bell, BA(Arch) *Calif.*
Victor Martin Berk, BArch DipAdmin *N.S.W.*
Robert John Bryant, BArch *N.S.W.*, MTCP *Syd.*, ASTC, DipEnvStud *Macq.*, MRAPI, ARAIA
John Richard Cooke, BArch *Syd.*, MSc(Building) *N.S.W.*, ARAIA
Geoffrey Lindsay Dwyer, FRAIA
Richard Grantley Fitzhardinge, DipArch *Kingston on Thames Poly.*, MArch *Calif.*, ARIBA, ARAIA
John Barrie Fraser, DipArt(Ed)
Bruce Herbert Judd, BArch PhD *Syd.*, ARAIA
Geoffrey Kenneth Le Sueur, BArch GradDip *N.S.W.*, ARAIA
Alan Ogg, BE *N.S.W.*, MArch *Penn.*
Richard Patrick Parlour, BSc *Lond.*, PhD *N.S.W.*, DipEng *Lough.*
James David Plume, MArch *Syd.*
Peter Reginald Proudfoot, BArch *Syd.*, MArch *Penn.*, PhD *N.S.W.*, Rome Scholar, ARAIA
Harry Anthony Stephens, BArch DipLD *N.S.W.*, FRAIA
Kwong Hon Tang, BArch *H.K.*, MArch *Melb.*

Senior Tutors

Marion Anne Burgess, BSc *Syd.*, MSc(Acoustics) *N.S.W.*, MAAS
Elizabeth Ann Howard, BArch *Syd.*, BA *Macq.*
Paul Edward Walsh, BArch *N.S.W.*

Tutors

Desley Olwyn Luscombe, BSc(Arch) BArch *N.S.W.*
Michael Charles Tawa, BArch *N.S.W.*

Department of Industrial Arts

Senior Lecturer and Acting Head of Department

William Richard Lawson, BSc PhD *N.S.W.*, MAPsS, MAIHR

Senior Lecturer

Donald McArthur Godden, MSc *N.S.W.*

School of Building

Professor of Building and Head of School

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

Associate Professor

Roger Mark Anthony Miller, BBuild *N.S.W.*, SM CE *M.I.T.*, MAIB

Senior Lecturers

David Nevil Hume Hassall, BE MBdgSc *Syd.*, MIEAust
John Malcolm Hutcheson, MC, BE *Syd.*, BCom *Qld.*, MBA PhD *N.S.W.*, FIEAust, FID, FIArbA, AAUQ, LGE, AASA(Snr), FAIB, AFAIM, ACIS
Graham Edward Levido, BBuild MSc(Building) *N.S.W.*, MAIB
Martin Marosszeky, BE *N'cle.(N.S.W.)*, MEngSc *N.S.W.*, MIEAust
James Francis Mooney, MBuild *N.S.W.*, ASTC, FAIQS, FIArbA

Lecturers

Ojars Indulis Greste, ME *N.S.W.*, DEng *Calif.*
Bruce Hedford Hawkins, BE *W.Aust.*
Karl Goran Runeson, BA *N.S.W.*
Clyde Donald Smythe, MBuild *N.S.W.*, ASTC, MAIB
Thomas Edward Uher, BBuild MSc(Building) *N.S.W.*, MAIB

Administrative Assistant

Diana Kazemi

School of Landscape Architecture

Professor of Landscape Architecture and Head of School

Richard Clough, BArch *Syd.*, FLI, FAILA, FRAIPR

Associate Professor

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

Senior Lecturer

Sydney Allison Baggs, MArch DipLD PhD *N.S.W.*, ASTC, FRAIA, AAILA, ARIBA

Lecturers

Helen Beatrice Armstrong, BSc *Syd.*, GradDip *N.S.W.*
Craig Anthony Burton, BArch GradDip *N.S.W.*, MA *Syd.*, ARAIA
Douglas Crawford, BArch *Melb.*, GradDip *N.S.W.*, MRAIPR
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, MA *Oxf.*, BArch *Liv.*, DipTP *Lond.*, FRAPI, MRTPI, ARIBA

Senior Lecturers

Stephen Harris, BTP *N.S.W.*, MRAPI
James Leslie King, BArch MTCP *Syd.*, FRAPI
Zula Nittim, BArch *Melb.*, DipCD PhD *N.S.W.*, FRAIA MRAPI
Robert Bolles Zehner, BA *Amh.*, MA PhD *Mich.*

Lecturers

Peter Ashton Murphy, BA *Syd.*, PhD *Macq.*
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

Robert Charles Lewis Irving, MArch *N.S.W.*, ARMTC, FRAIA
John Kyle Redmond, MA *R.C.A.*, BA *C.S.A.D.*, FRSA, AIDIA

Student's Timetable

Time	Monday		Tuesday		Wednesday		Thursday		Friday	
	Session 1	Session 2	Session 1	Session 2	Session 1	Session 2	Session 1	Session 2	Session 1	Session 2
9-10										
10-11										
11-12										
12-1										
1-2										
2-3										
3-4										
4-5										
5-6										
6-7										
7-8										
8-9										

The University of New South Wales Kensington Campus 1984

Theatres

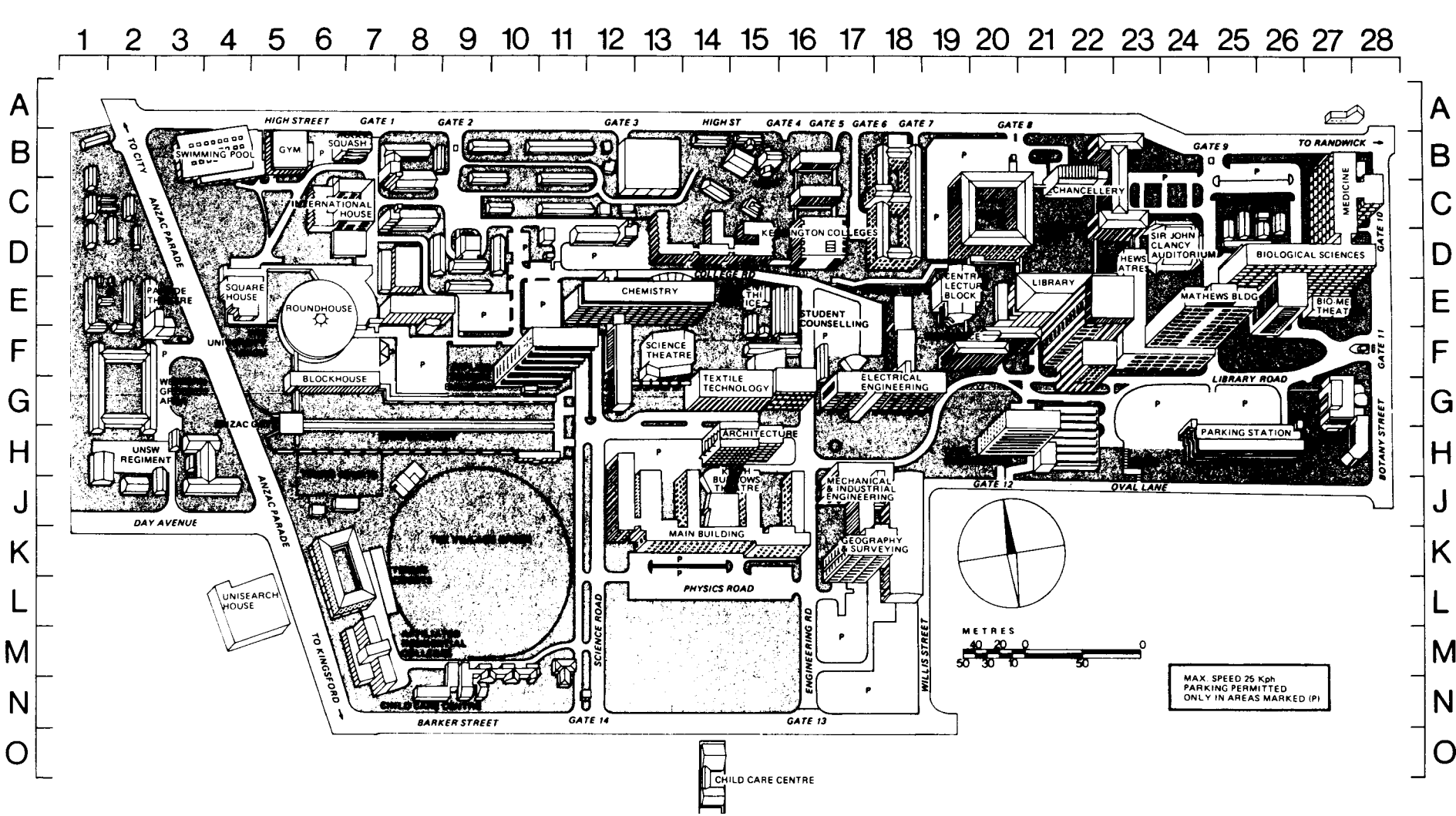
Biomedical Theatres E27
Central Lecture Block E19
Classroom Block (Western Grounds) H3
Rex Vowels Theatre F17
Keith Burrows Theatre J14
Main Building Theatrette K14
Mathews Theatres D23
Parade Theatre E3
Science Theatre F13
Sir John Clancy Auditorium C24

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 (John Goodsell) F20
Dalton (Chemistry) F12
Electrical Engineering G17
Geography and Surveying K17
Goldstein College D16
Golf House A27
Gymnasium B5
House at Pooh Corner N8
International House C6
Io Myers Studio D9
John Goodsell (Commerce) F20
Kanga's House O14
Kensington Colleges C17
Basser C18
Goldstein D16
Philip Baxter D14
Main Building K15
Maintenance Workshop B13
Mathews F23
Mechanical and Industrial Engineering J17
Medicine (Administration) B27
Menzies Library E21
Metallurgy E8
Morven Brown (Arts) C20
New College (Anglican) L6
Newton J12
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 B4
Unisearch House L5
University Regiment J2
University Union (Roundhouse) — Stage I E6
University Union (Blockhouse) — Stage II G6
University Union (Squarehouse) — Stage III E4
Wallace Wurth School of Medicine C27
Warrane College M7
Wool and Pastoral Sciences B8

General

Academic Staff Office C22
Accountancy F20
Admissions C22
Adviser for Prospective Students C22
Alumni and Ceremonials C22
Anatomy C27
Applied Geology F10
Applied Science (Faculty Office) F10
Architecture (including Faculty Office) H14
Arts (Faculty Office) C20
Australian Graduate School of Management G27
Biochemistry D26
Biological Sciences (Faculty Office) D26
Biomedical Library F23
Biotechnology D26
Bookshop G17
Botany D26
Building H14
Careers and Employment C22
Cashier's Office C22
Centre for Biomedical Engineering A28
Centre for Medical Education Research and Development C27
Centre for Remote Sensing K17
Chaplains E15a
Chemical Engineering and Industrial Chemistry F10
Chemistry E12
Child Care Centres N8, O14
Civil Engineering H20
Closed Circuit Television Centre F20
Commerce (Faculty Office) F20
Committee in Postgraduate Medical Education B27
Community Medicine D26
Computing Services Unit E21
Drama B10
Economics F20
Education G2
Electrical Engineering and Computer Science G17
Energy Research, Development and Information Centre B8b
Engineering (Faculty Office) K17
English C20
Examinations C22
Fees Office C22
Food Technology F10
French C20
General Staff Office C22
General Studies C20
Geography K17
German Studies C20
Graduate School of the Built Environment H14
Health Administration C22
History C20
History and Philosophy of Science C20
Industrial Arts C1
Industrial Engineering J17
Institute of Rural Technology B8b
Japanese Economic and Management Studies Centre F20
Kanga's House O14
Kindergarten (House at Pooh Corner) N8
Landscape Architecture K15
Law (Faculty Office) E21
Law Library E21
Librarianship F23
Library E21
Lost Property F20
Marketing F20
Mathematics F23
Mechanical Engineering J17
Medicine (Faculty Office) B27
Metallurgy E8
Microbiology D26
Mining Engineering K15
Music B11b
National Institute of Dramatic Art C15
Nuclear Engineering J17
Off-campus Housing C22
Optometry J12
Organizational Behaviour F20
Pathololgy C27
Patrol and Cleaning Services F20
Philosophy C20
Physics K15
Physical Education and Recreation Centre (PERC) B5
Physiology and Pharmacology C27
Political Science C20
Postgraduate Extension Studies (Closed Circuit Television) F20
Postgraduate Extension Studies (Radio Station and Administration) F23
Psychology F23
Public Affairs Unit C22
Regional Teacher Training Centre C27
Russian C20
Science and Mathematics Course Office F23
Social Work G2
Sociology C20
Spanish and Latin American Studies C20
Sport and Recreation E4
Student Counselling and Research E15c
Student Health E15b
Student Records C22
Students' Union E4
Surveying K17
Teachers' College Liaison Office F15b
Tertiary Education Research Centre E15d
Textile Technology G14
Town Planning K15
University Archives C22
University Press A28
University Union (Blockhouse) G6
Wool and Pastoral Sciences B8a
Zoology D26


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
A B C D E F G H J K L M N O
HIGH STREET
GATE 1
GATE 2
GATE 3
HIGH ST
GATE 4
GATE 5
GATE 6
GATE 7
GATE 8
GATE 9
TO RANDWICK
TO CITY
ANZAC PARADE
SWIMMING POOL
GYM
SQUASH
INTERNATIONAL HOUSE
SQUARE HOUSE
ROUNDHOUSE
BLOCKHOUSE
UNSW REGIMENT
DAY AVENUE
UNISEARCH HOUSE
TO KINGSFORD
BARKER STREET
GATE 14
GATE 13
SCIENCE ROAD
ENGINEERING RD
WILLIS STREET
PHYSICS ROAD
MAIN BUILDING
CHEMISTRY
SCIENCE THEATRE
TEXTILE TECHNOLOGY
ARCHITECTURE
STUDENT COUNSELLING
ELECTRICAL ENGINEERING
MECHANICAL & INDUSTRIAL ENGINEERING
GEOGRAPHY & SURVEYING
KENSINGTON COLLEGES
COLLEGE RD
CHANCELLERY
SIR JOHN CLANCY AUDITORIUM
CENTRAL LECTURE BLOCK
LIBRARY
MATHEWS BLDG
BIOLOGICAL SCIENCES
MEDICINE
GATE 10
GATE 11
GATE 12
LIBRARY ROAD
OVAL LANE
BOTANY STREET
PARKING STATION
METRES
40 20 0 0
50 30 10 50
MAX. SPEED 25 Kph
PARKING PERMITTED
ONLY IN AREAS MARKED (P)
CHILD CARE CENTRE

This Handbook has been specially 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, Engineering, Law, Medicine, Professional Studies, Science (including Biological Sciences and the Board of Studies in Science and Mathematics), the Australian Graduate School of Management (AGSM) and the Board of Studies in General Education.

The Calendar and Handbooks are available from the Cashier's Office.

The Calendar costs $5.00 (plus postage $1.00, interstate $1.20).

The Handbooks vary in cost: Applied Science, Architecture, Arts, Commerce, Engineering, Professional Studies, and Sciences are $3.00. Postage is $1.00 in each case ($1.20 interstate). Law, Medicine and AGSM are $2.00. Postage is 60 cents in each case (70 cents interstate).

A set of books is $32.00. Postage is $2.00 ($4.50 interstate).

The General Studies Handbook is free. Postage is 60 cents (70 cents interstate).