



The University of New South Wales

# Architecture

1977  
Faculty Handbook

**Arms of  
The University of  
New South Wales**



Granted by the College of Heralds, London  
3 March 1952

**Heraldic Description of Arms**

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 of New South Wales

# Architecture

1977  
Handbook

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New South Wales is:**

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# 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. The 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 the University and its activities you should consult the University Calendar.

*Now, see the following pages for other general information which may be of value to you.*

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## Some people who can help you

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**Note:** All phone numbers below are University extension numbers. If you are outside the University, dial 663 0351 and ask for the extension or dial 662—and then the extension number.

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 his Administrative Assistant, Mr Stephen Briand, are located on the first floor of the Chancellery. They will see students who need advice and who have problems and are not sure whom they should see about them. Mr Briand looks after financial assistance matters. Enquire at room 148A, phone 2482 or 3164.

**The Assistant Registrar (Examinations and Student Records)**, Mr John Warr, is located on the ground floor of the Chancellery. For particular enquiries regarding *Student Records* (including matters related to *illness affecting study*) contact Mr Jack Morrison (phone 2141), and regarding *Examinations*, Mr John Grigg (phone 2143). This section can also advise on matters relating to *discontinuation of subjects* and *termination of courses*. General enquiries should be directed to 3711.

**The Assistant Registrar (Admissions and Higher Degrees)**, Mr Jack Hill, is located on the ground floor of the Chancellery. For particular enquiries regarding *undergraduate courses* phone Mr John Beauchamp on 3319. General enquiries should be directed to 3711.

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

**The Assistant Registrar (Student Employment and Scholarships)**, Mr Jack Foley, is located on the ground floor of the Chancellery. Enquiries should be directed to 2086 (undergraduate scholarships), 2525 (graduate scholarships), and 3259 (employment).

**The Housing Officer**, Mrs Judy Hay, is located in the Student Amenities and Recreation Unit in Hut B at the foot of Basser Steps. For assistance in obtaining *suitable lodgings* phone 3260.

**The Student Health Unit** is located in Hut E on College Road. The Director is Dr Max Napthali. For *medical aid* phone 2679 or 3275.

**The Student Counselling and Research Unit** is located at the foot of Basser Steps. The Head is Mr George Gray. For assistance with educational or vocational problems ring 3681, 3685 or 2696 for an appointment.

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

**The Chaplaincy Centre** is located in Hut F at the foot of Basser Steps. For spiritual aid consult Rev Phillip Jensen (Anglican)—2684; Rev Father Michael Fallon (Catholic)—2379; Dr Allen Elliott (Church of Christ)—2683; Rev Peter Holden (Methodist)—2683; Mr Glen Weare (Seventh Day Adventist)—2683; Mr Ze'ev Dar (Jewish)—3273; Rev Barry Waters (Baptist)—398 4065.

**The Students' Union** is located on the second floor of Stage III of the University Union where the SU full-time President or Education Vice-President are available to discuss any problems you might have. In addition the SU offers a range of diverse services including legal advice (full-time solicitor available), clubs and societies services, second-hand bookshop (buy or sell), new records/tapes at discount, food shop (The Nuthouse), a professional nursery/kindergarten *House at Pooh Corner*, a typesetting service, electronic calculators (bulk purchasing), health insurance and AUS insurance, an information referral centre (the Infakt Bus), a bail fund and publications such as *Tharunka*, *Orientation Magazine*, *Concessions Book* and counter-course hand-books. For information about these phone 2929.

## Calendar of Dates

1977

**Session 1**  
**(14 weeks)**

7 March to 14 May.

*May Recess:* 16 May to 21 May

23 May to 18 June

*Midyear Recess:* 20 June to 23 July

25 July to 27 August

*August Recess:* 29 August to 3 September

5 September to 5 November

*Study Recess:* 7 November to 12 November

**Monday 14**  
**November**

Annual examinations begin

**Tuesday 6**  
**December**

Annual examinations end

**January**

**Monday 3**  
**Friday 7**

New Year's Day—Public Holiday

Last day for application for review of results of *annual* examinations

Last day for application for permission to re-enrol by students who infringed re-enrolment rules at *annual* examinations

**Monday 10**

Timetables for *deferred* examinations available

**Friday 14**

Last day for acceptance of applications by Admissions Office for transfer to another course within the University

**Monday 24**

*Deferred* examinations begin

**Monday 31**

Australia Day—Public Holiday

**February**

**Saturday 5**

*Deferred* examinations end

**Monday 14**

Enrolment period begins for new students and students repeating first year

**Tuesday 15**

Last day for appeal against exclusion by students who infringed re-enrolment rules at *annual* examinations

**Friday 18**

*Deferred* examination results available

**Monday 21**

Enrolment period begins for second and later year students

**Tuesday 22**

Last day for application for review of *deferred* examination results

<b>Friday 25</b>	Last day for application for permission to re-enrol by students who infringed re-enrolment rules at <i>deferred</i> examinations	<b>July</b>	
<b>March</b>		<b>Tuesday 5</b>	Midyear examinations end
<b>Monday 7</b>	<b>Session 1 commences</b>	<b>Saturday 23</b>	<b>Midyear Recess ends</b>
<b>Friday 11</b>	Last day for acceptance of enrolments by new students (late fee payable)	<b>Monday 25</b>	<b>Session 2 begins</b>
<b>Thursday 17</b>	Last day for appeal against exclusion by students who infringed re-enrolment rules at <i>deferred</i> examinations	<b>Thursday 28</b>	Foundation Day
<b>April</b>		<b>August</b>	
<b>Friday 1</b>	Last day for acceptance of enrolments by students re-enrolling in second and later years (late fee payable)	<b>Friday 5</b>	Last day for students attending the University for the first time to discontinue without failure subjects which extend over the whole academic year
	Last day for students other than those attending the University for the first time to discontinue without failure subjects which extend over Session 1 only	<b>Friday 19</b>	Last day for students other than those attending the University for the first time to discontinue without failure subjects which extend over Session 2 only
	Last day to enrol in additional subjects	<b>Monday 29</b>	<b>August Recess begins</b>
<b>Friday 8 to Monday 11</b>	Easter	<b>Wednesday 31</b>	Last day for acceptance of applications for re-admission in 1978 after exclusion under the re-enrolment rules
<b>Monday 25</b>	Anzac Day—Public Holiday	<b>September</b>	
<b>Friday 29</b>	Last day for students attending the University for the first time to discontinue without failure subjects which extend over Session 1 only	<b>Saturday 3</b>	<b>August Recess ends</b>
<b>May</b>		<b>Monday 12</b>	Last day for applications from students completing requirements at end of Session 2 for admission to University degrees and diplomas
<b>Tuesday 10</b>	Publication of provisional timetable for June/July examinations	<b>Wednesday 14</b>	Last day for return of corrected enrolment details forms
<b>Thursday 12</b>	Last day for acceptance of corrected enrolment details forms	<b>Friday 16</b>	Last day for students attending the University for the first time to discontinue without failure subjects which extend over Session 2 only
	Last day for applications from students completing requirements at end of Session 1 for admission to University degrees and diplomas	<b>Tuesday 27</b>	Publication of provisional timetable for annual examinations
<b>Monday 16</b>	<b>May Recess begins</b>	<b>Friday 30</b>	Last day to apply to MUAC for transfer to another university in Sydney metropolitan area and Wollongong
<b>Friday 20</b>	Last day for students other than those attending the University for the first time to discontinue without failure subjects which extend over the whole academic year	<b>October</b>	
<b>Saturday 21</b>	<b>May Recess ends</b>	<b>Monday 3</b>	Eight Hour Day—Public Holiday
<b>Monday 23</b>	Last day for students to advise of examination timetable clashes	<b>Friday 7</b>	Last day for students to advise of examination timetable clashes
<b>June</b>		<b>Tuesday 25</b>	Publication of timetable for annual examinations
<b>Tuesday 7</b>	Publication of timetable for June/July examinations	<b>November</b>	
<b>Monday 13</b>	Queen's Birthday—Public Holiday	<b>Saturday 5</b>	<b>Session 2 ends</b>
<b>Sunday 19</b>	<b>Session 1 ends</b>	<b>Monday 7</b>	<b>Study Recess begins</b>
<b>Monday 20</b>	<b>Midyear Recess begins</b>	<b>Monday 14</b>	Annual examinations begin
<b>Tuesday 21</b>	Midyear examinations begin	<b>December</b>	
		<b>Tuesday 6</b>	Annual examinations end
		<b>Sunday 25</b>	Christmas Day
		<b>Monday 26</b>	Boxing Day
		<b>Tuesday 27</b>	Public Holiday

## 1978

<b>Session 1</b>	6 March to 14 May <i>May Recess:</i> 15 May to 21 May 22 May to 18 June <i>Midyear Recess:</i> 19 June to 23 July
<b>Session 2</b>	24 July to 27 August <i>August Recess:</i> 28 August to 3 September 4 September to 5 November <i>Study Recess:</i> 6 November to 12 November
Monday 13 November	Annual examinations begin
Tuesday 7 December	Annual examinations end
<b>January</b>	
Monday 2	Public Holiday
Friday 6	Last date for application for review of results of <i>annual</i> examinations
Monday 9	Publication of timetable for <i>deferred</i> examinations
Friday 13	Last day for acceptance of applications by Admissions Office for transfer to another course within the University
Tuesday 24	<i>Deferred</i> examinations begin
Monday 30	Australia Day—Public Holiday
<b>February</b>	
Saturday 4	<i>Deferred</i> examinations end
Monday 13	Enrolment period begins for new students and students repeating first year
Friday 17	Results of <i>deferred</i> examinations available
Monday 20	Enrolment period begins for second and later year students
Tuesday 21	Last day for applications for review of <i>deferred</i> examination results

## 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 as well as short recesses of one week within each of the sessions.

Session 1 commences on the first Monday of March.

## Organization of the University

Rapid development has been characteristic of the University of New South Wales since it was first incorporated by an Act of Parliament in 1949, under the name of the New South Wales University of Technology.

In 1976 the University had 18,378 students and 4000 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.

### 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 42 members representative of the professions, commerce and industry, the legislature, employee organizations, rural, pastoral and agricultural interests, and the academic staff of the University, its graduates and students.

The Council meets six times per year and its members also serve on special committees dealing with such matters as 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, and the Deputy Chancellor is Dr F. M. Mathews.

### The Professorial Board

The Professorial Board is one of the two chief academic units within the University and includes all the professors from the various faculties. 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 these and similar matters are presented to Council for its consideration and adoption.

### The Faculties

The Dean, who is also a professor, is the executive head of the Faculty. Members of each Faculty meet regularly to consider matters pertaining to their own areas of study 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, Science together with the Australian Graduate School of Management. In addition, the Board of Studies in General Education fulfils 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 course.

### **The Schools**

Once courses of study have been approved they come under the control of the individual Schools (eg the School of Chemistry, the School of Mathematics). The professorial 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, Professor Rupert Myers, is charged with managing and supervising the administrative, financial and other activities of the University.

He is assisted in this task by three Pro-Vice-Chancellors, Professor John Thornton, Professor Rex Vowels and Professor Albert Willis; 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 Keith Jennings, the Bursar, Mr Tom Daly, and the Business Manager (Property), Mr Bob Fletcher.

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 concerned with the maintenance of buildings and grounds and equipment, and includes the University Architect's office.

### **Student Representation on Council and Faculties**

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 one of their number to a Faculty for each 500 registered students, with a minimum of three students per Faculty. Elections are for a one-year term of office. New provisions for student membership of faculties and boards of studies have been approved by Council, providing for each faculty/board to recommend its own formula for determining the number of students eligible.

### *Open Faculty Meetings*

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

### **Award of the University Medal**

The University may award a bronze medal to the students who have most distinguished themselves in their final year.

### **Identification of Subjects by Numbers**

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

### **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 G54, Morven Brown Building (663 0351 Extn. 3478).

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## Student Services and Activities

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### The University Library

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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 Sciences Building and is closely associated with libraries in the teaching hospitals of the University.

There are also library services at other centres:

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

The library at the Broken Hill Division in the W. S. and L. B. Robinson University College building. Phone 6022/3/4.

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 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. For students, a current union card is acceptable. Staff must apply to the library for a library card.

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### Accommodation

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#### 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 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 students from Australia and up to twenty other countries. Preference is given to more senior undergraduates and graduate students. Apply in writing to the Warden, International House, PO Box 88, Kensington, NSW 2033.

#### New College

This Church of England College is open to all students without regard to race or religion. It has accommodation for approximately 220 students and is co-educational. Enquiries should be addressed to the Master, New College, Anzac Parade, Kensington, NSW 2033.

#### Shalom College

Shalom College 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. 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. A comprehensive tutorial program is offered along with a wide variety of activities and opportunities to meet informally with members of the University staff. Non-resident membership is available to male students who wish to participate in College activities and make use of its facilities. Warrane is directed by the International Catholic lay association Opus Dei. Apply in writing to the Master, Warrane College, PO Box 123, Kensington, NSW 2033. Phone: 663 6199.

#### Creston Residence

Creston, associated with Warrane College, offers residence for 25 full-time undergraduate and graduate women students of all nationalities and denominations. It is directed by the Women's Section of Opus Dei, a Catholic lay association. Further information: The Principal, 36 High Street, Randwick, NSW 2031.

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### Other Accommodation

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#### Off-campus Accommodation

Students requiring other than College accommodation may contact the Housing Officer in the Student Amen-

ities and Recreation Unit for assistance in obtaining suitable lodging in the way of full board, room 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.

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.

**Location:** The Student Accommodation Service is located in Hut B, near the foot of Basser Steps. Phone 663 0351, extension 3260.

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## Student Employment and Scholarships

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The Student Employment and Scholarships Unit offers assistance with career employment for final year students and graduates of the University. This service includes the mailing of regular job vacancy notices to registered students and a campus interview program for final year students.

Careers advice and assistance is also available to undergraduates. Assistance is offered in finding vacation employment which gives either course-related experience or industrial training experience, where this is a course requirement. Information and advice regarding cadetships, undergraduate and graduate scholarships is also available.

The service is located in the Chancellery on the ground floor.

Phone extension 3259 for employment and careers advice, or extension 2086 for cadetships and industrial training information.

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## Student Health

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A student health clinic and first aid centre is situated within the University. It is staffed by three qualified medical practitioners, assisted by two nursing sisters. The medical service, although therapeutic, is not intended to entirely 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 for specialist opinion and/or treatment. 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 E 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 or 3275 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. These clinics are open to staff and students and appointments may be made for the Student Health Unit clinic by telephoning 698 9499, or for The Prince of Wales Hospital clinics by telephoning 399 0111.

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## Student Counselling and Research

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The Student Counselling and Research Unit provides individual and group counselling for all students—prospective, established and graduate. Self-help programs are also available. Opportunities are provided for parents and others concerned with student progress to see members of the counselling staff.

The service which is free, informal and personal is designed to help students with planning and decision making, and a wide variety of concerns and worries which may be affecting personal, educational and vocational aspects of their lives.

The Unit pursues research into factors affecting student performance, and the published results of its research and experience are helpful in improving University and other counselling services, and the quality of student life.

Counselling appointments may be arranged during sessions and recesses between 9 am and 7 pm. Phone 663 0351, extension 3681, 3685 and 2696, or call at the Unit which is located at the foot of Basser Steps. Urgent interviews are possible on a walk-in basis between 9 am and 5 pm. Group counselling programs are offered both day and evening between 9 am and 9 pm by special arrangement. Self-help programs are arranged to suit the student's time and convenience.

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## Student Amenities and Recreation

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In general the Student Amenities and Recreation Unit seeks ways to promote the physical, social and educational development of students through their leisure time activities. The Unit provides, for example, a recreational program for students and staff at the Physical Education and Recreation Centre; negotiates with the Public Transport Commission of NSW on student travel concessions and supplies concession forms for bus, rail, ferries and

planes; assists students with off-campus housing; and, in consultation with the Sports Association, assists various recognized clubs.

The Unit is located in Hut B at the foot of Basser Steps. The various services may be contacted by phone on the following extensions: Recreation Program 3271; Travel 2617; Accommodation 3260; Sports Association 2673.

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### Physical Education and Recreation Centre

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The Student Amenities and Recreation Unit provides a recreational program for students and staff at the Physical Education and Recreation Centre. The Centre consists of eight squash courts and a main building, the latter containing 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, and fitness testing. The Centre is located on the lower campus adjacent to High Street. The Supervisor of PERC may be contacted on extension 3271.

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### The Sports Association

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The Sports Association caters for a variety of competitive sports for both men and women. Membership is compulsory at \$6 per year for all registered students and is open to all members of staff and graduates of the University.

The Sports Association office is situated in Hut G, near the bottom of Basser Steps, and the control of the Sports Association is vested in the General Committee. The Executive Officer of the Sports Association may be contacted on extension 2673.

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### The University Union

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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 compulsory at \$45 per year for all registered students and is open to all members of staff and graduates of the University.

The full range of facilities provided by the Union includes a cafeteria service and other dining facilities, a large shopping centre, cloak room, banking and hair-dressing facilities, showers, a women's lounge, common, games, reading, meeting, music, practice, craft and dark rooms. 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. Exhibitions are held in the John Clark Gallery.

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.

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### The Students' Union

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The Students' Union is run by students and represents them on and off campus. Presidential elections are by popular vote and all students who have completed two years at the University are eligible for election.

A full-time President, elected each year by popular ballot, directs the entire administration of the Students' Union and its activities, through the permanent Administrative Officer.

Other full-time officers include the **Education Vice-President** who works towards the implementation of Student Union education policy and in assisting students with problems they may encounter in the University; **Director of Overseas Students** who deals with specific problems these students may encounter while in Australia.

Both are elected by students with the latter elected by overseas students.

Membership is compulsory at \$10 per annum\*.

The activities of the Students' Union include:

1. Infakt: a student-run information referral service. If you want someone to talk to or need help of any kind see the people at Infakt located in the bus at the foot of Basser Steps.
2. A casual employment service.
3. Organization of Orientation Week.
4. Organization of Foundation Day.
5. A nursery/kindergarten, *The House at Pooh Corner*.
6. Publication of the student paper *Tharunka*.

\* A rise in Students' Union fees may occur in 1977.



7. A free legal service run by a qualified lawyer employed by the Students' Union Council.
8. Students' Union Record Shop which gives an 18% discount.
9. The Nuthouse which deals in bulk and health foods.
10. Secondhand Bookshop for cheap texts.
11. Clubs and societies receive money from the Students' Union through CASOC (Clubs and Societies on Campus).

The Students' Union is affiliated with the Australian Union of Students (AUS) which represents students on the national level.

The Students' Union is located on the second floor, Stage III, the Union.

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## Chaplaincy Centre

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This service is provided for the benefit of students and staff by various religious and spiritual beliefs. Chaplains are in attendance at the University at regular times. A Chapel is also available for use by all denominations. For further details, turn to page 2.

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## Other Services and Activities

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**CASOC** All clubs and societies on campus (except sporting clubs) are loosely organized under the umbrella of CASOC, which is a committee of the Students' Union. Some of these clubs are: the Motor Cycle Club; Chess Club; Dramsoc; Opunka; Kite Club and the Jazz Society.

**School and Faculty Associations** Many schools and faculties have special clubs with interests in particular subject fields. Enquire at your Faculty Office for information.

**University Co-operative Bookshop Limited** Membership is open to all students, on initial payment of a fee of \$10, refundable when membership is terminated. Members receive an annual rebate on purchases of books.

**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 notice boards for details.

**Australian Armed Forces** Enquiries should be directed to:

**Royal Australian Navy:** Royal Australian Naval Liaison Officer, Professor J. S. Ratcliffe, Commander, RANR, at the School of Chemical Engineering. Phone extension 2406.

**University of New South Wales Regiment:** The Adjutant, Regimental Depot, Day Avenue (just west of Anzac Parade). Phone 663 1212.

**Royal Australian Air Force:** Undergraduates interested in the RAAF Undergraduate Scheme should contact The Recruiting Officer, Defence Forces Recruiting Centre, 320 Castlereagh Street, Sydney.

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## Financial Assistance to Students

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### Tertiary Education Assistance Scheme

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Under this scheme, which is financed by the Australian 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.

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

- Undergraduate and graduate degree courses
- Graduate diplomas
- Approved combined Bachelor degree courses
- Master's qualifying courses if the course is the equivalent of an honours year and the student has not attempted an honours year.

### Benefits (as at 30 June 1976)

**Means-tested Living Allowance** The maximum rates of living allowances are \$1,000 per annum for students living at home and \$1,600 per annum for students living away from home. The maximum rates of living allowance will be paid where the adjusted family income is equal to or less than \$7,600 per annum. The adjusted family income is assessed by subtracting from the gross income of both parents their business expenses and an amount of \$450 for each dependent child other than the student.

When the adjusted family income exceeds \$7,600 pa the amount of living allowance will be reduced by \$2 for every \$10 of income until the family income exceeds \$15,200 per annum. After this level, the living allowance will be reduced by \$3 for every \$10 of income.

A concession may be made where there are other children in the family undertaking tertiary education with scholarship assistance from schemes other than the Tertiary Education Assistance Scheme of less than \$600 pa.

## **Students qualifying for living allowance will also receive the following allowances where appropriate:**

**Incidentals Allowance** The Incidentals Allowance of \$100 is designed to help the student meet the cost of those fees which have not been abolished—the Students' Union, University Union and Sports Association fees, and other expenses associated with their studies.

**Travel Allowance** Students whose home is in the country may be reimbursed the cost of three return trips per year, during vacation time.

**Dependents' Allowance** This is made up of allowances of \$15 per week for a dependent spouse and \$7 per week for each child.

**How to Apply** 1976 Higher School Certificate candidates and tertiary students receiving an allowance were sent forms last October. Other students may obtain forms from the Admissions Section or the Student Employment and Scholarships Unit, or from the Regional Director, Department of Education, 323 Castlereagh Street, Sydney, NSW 2000 (Phone 218 8800). The administrative closing date for 1977 applications was 31 October 1976.

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## **Scholarships, Cadetships, Prizes**

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**1. Undergraduate Scholarships** In addition to finance provided under the Australian Government's Tertiary Education Assistance Scheme there are a number of scholarships, cadetships, prizes and other forms of assistance available to undergraduate students. Details of procedures for application for these awards are contained in the Calendar.

There are also special scholarships not administered by the University, information about which may be obtained from the School office.

Further information and advice regarding scholarships is available from the Student Employment and Scholarships Unit in the Chancellery Building.

**2. Graduate Awards** An honours degree is generally an essential requirement for gaining one of the many graduate scholarships which are available at the University. Therefore gifted students should not neglect the opportunity to qualify for honours and thus become eligible for an award.

Details of graduate awards are contained in the University Calendar.

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## **Other Financial Assistance**

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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 the Students' Union, the University Union and other 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 Australian 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. Repayment usually commences after graduation or upon withdrawal from the course. Students are required to enter into a formal agreement with the University to repay the loan.**

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.

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

Inquiries about all forms of financial assistance should be made at the office of the Deputy Registrar (Student Services), Room 148A, in the Chancellery.

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## **Financial Assistance to Aboriginal Students**

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Financial assistance is available from a number of sources to help Aboriginal students. Apart from the Australian Government's Tertiary Education Assistance Scheme there is a Commonwealth Aboriginal Study Grant Scheme. Furthermore, the University may assist Aboriginal students with some essential living expenses in exceptional circumstances.

All inquiries relating to this scheme should be made at the office of the Deputy Registrar (Student Services), Room 148A, in the Chancellery.

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## **Fund for Physically Handicapped and Disabled Students**

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The University has a small fund (started by a generous gift from a member of staff who wishes to remain anonymous) available for projects of benefit to handicapped and disabled students. Inquiries should be made at the office of the Deputy Registrar (Student Services), Room 148A, in the Chancellery.

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## Rules and Procedures

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The University, in common with other large organizations, has some agreed ways of doing things in order to operate for the benefit of all members. The rules and procedures listed below will affect you at some time or another. In some cases there are penalties (eg fines or exclusion from examinations) for failure to observe these procedures and therefore they should be read with care.

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## Admission

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### Where can I get information about admission?

The Admissions Office, located in the Chancellery on the upper campus, provides information for students on admission requirements, undergraduate and graduate courses and enrolment procedures. The Admissions Office is open from 9 am to 5 pm Monday to Friday (excluding the lunch hour 1 pm to 2 pm). During enrolment the office is also open for some part of the evening.

Applications for special admission, admission with advanced standing and from persons relying for admission on overseas qualifications should be lodged with this office. The Office also receives applications 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 lodgment of applications are adhered to. For further details see the sections below on **Enrolment and Fees**.

Applications for admission to undergraduate courses from students who do not satisfy the requirements for admission (see section on Requirements for Admission), from students seeking admission with advanced standing, and from students who have a record of failure at another university, are referred by the Admissions Office to the Admissions Committee of the Professorial Board.

Students seeking to register as higher degree candidates should first consult the Head of the School in which they wish to register. An application is then lodged on a standard form and the Admissions Office, 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 courses at the University may be obtained from the Admissions Office or the Metropolitan Universities Admissions Centre.

### How do I qualify for admission?

In order to enter an undergraduate course you must qualify for matriculation to the University; satisfy requirements for admission to the course of subjects chosen; and be selected for admission to the faculty or course you wish to enter. Full details of matriculation and admission requirements are contained in a pamphlet obtainable at the Admissions Office and in the Calendar.

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## Enrolment

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### How do I enrol?

All students, except those enrolling in graduate research degrees (see below), must lodge an authorized enrolment form with the Cashier on the day the enrolling officer signs the form or on the day their General Studies electives are approved if their course requires this.

All students, except those enrolling in graduate research degrees and those exempted (see below), should on that day also either pay the required fees or lodge an enrolment voucher or other appropriate authority.

### What happens if I am unable to pay fees at the time of enrolment?

If you are unable to pay fees by the due date you may apply in writing to the Deputy Registrar (Student Services) for an extension of time which may be granted in extenuating circumstances.

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 that time (see "Fees" below). Payment may be made through the mail in which case it is important that the student registration number be given accurately.

### New Undergraduate Enrolments

Persons who are applying for entry in 1977 must lodge an application for selection with the Metropolitan Universities Admissions Centre, PO Box 7049, GPO, Sydney 2001, by 1 October 1976.

Those who are selected will be required to complete enrolment at a specified appointment time before the start of Session 1. Compulsory fees must be paid on the day of the appointment. In special circumstances, however, and provided class places are still available, students may be allowed to complete enrolment after the prescribed week, subject to the payment of a penalty (see below).

Application forms and details of the application procedures may be obtained from the Admissions Office.

## First Year Repeat Students

First year students who failed more than half the program at the 1976 Annual Examinations and who were not granted any deferred examinations should NOT follow the above procedure. They are required to *show cause* why they should be allowed to continue in the course, and should await instructions in writing from the Registrar as to the procedure.

## Later Year Enrolments

Students should enrol through the appropriate School in accordance with the procedures set out in the current year's booklet, *Enrolment Procedures*, available from the Admissions Office and from School offices.

## New Research Students

Students enrolling for the first time in graduate research degrees 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 and pay the appropriate fees. Completion of enrolment after this time will incur a penalty (see below).

## Re-enrolling Research Students

Students re-enrolling in research degrees should lodge the enrolment form with the Cashier as soon as possible but no later than the end of the second week of Session 1. Completion of enrolment after that date will incur a penalty (see below).

## Submission of Graduate Thesis or Project Report at Commencement of Session 1

A candidate who has completed all the work for a graduate degree except for the submission of a thesis or project report is required to re-enrol and pay fees as outlined above *unless* the thesis or project report is submitted by the end of the second week of Session 1 in which case the candidate is not required to re-enrol. Those required to re-enrol may claim a refund of fees if able to withdraw (see below).

## Miscellaneous Subject Enrolments

Students may be permitted to enrol for miscellaneous subjects (ie as students not proceeding to a degree or diploma) provided the Head of the School offering the

subject considers it will be of benefit and there is accommodation available. Only in exceptional cases will subjects taken in this way count towards a degree or diploma. Students who are under exclusion may not be enrolled in miscellaneous subjects which may be counted towards courses from which they have been excluded.

Students seeking to enrol in miscellaneous subjects should obtain a letter of approval from the Head of the appropriate School or his representative permitting them to enrol in the subject concerned. The letter should be given to the enrolling officer at the time of enrolment.

Students who have obtained written permission to enrol may attend the Unisearch House enrolment centre on:

Friday 4 March  
9.30 am to 12.30 pm

or they may attend the Admissions Office, Chancellery, at the times shown below.

Week Commencing	Monday to Friday
7 March	9.30 am to 1.00 pm
	2.00 pm to 4.30 pm
	5.30 pm to 7.00 pm

Week Commencing	Monday to Friday
14 March	9.30 am to 1.00 pm
	2.00 pm to 4.30 pm
	Wednesday and Friday
	5.30 pm to 7.00 pm

## Final Dates for Completion of Enrolments

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 (18 March 1977) 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 (1 April 1977) except with the express approval of the Deputy Registrar (Student Services) and the Heads of Schools concerned. No enrolments for courses in Session 2 only will be accepted after the end of the second week of Session 2 (5 August 1977) except with the express approval of the Deputy Registrar (Student Services) and the Heads of Schools concerned.

## How do assisted students (eg scholarship holders) enrol?

Scholarship holders or sponsored students who have an enrolment voucher or letter of authority from their sponsor should present it at the time of enrolment. 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 must pay the fees (and arrange a refund later). Such vouch-



ers 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.

### **What special rules apply if I wish to be considered for admission with advanced standing?**

If you make application to register as a candidate for any degree or other award granted by the University you may be admitted to the course of study with such standing on the basis of previous attainments as may be determined by the Professorial Board. For complete details regarding "Admission with Advanced Standing" consult the University Calendar.

### **Can I transfer from one course to another?**

To transfer from one course to another you must apply on an application form obtainable from the Admissions Office by 16 January. If your application is successful you are required to comply with the enrolment procedures for the year/stage of the new course and, unless otherwise instructed, you should present the letter granting transfer to the enrolling officer. You should also inform the enrolling officer of the school in which you are enrolled of your intention to transfer.

### **Can I change my course program?**

If you wish to seek approval to substitute one subject for another, add one or more subjects to your program or discontinue part or all of your program, you must make application to the Registrar through the Head of the School responsible for the course on forms available from the School office. The Registrar will inform you of the decision. Application to enrol in additional subjects must be submitted by the end of the fourth week of Session 1.

It is emphasized that failure to sit for examinations in any subject in which you are enrolled will be regarded as failure to satisfy the examiners in that subject unless written approval to withdraw without failure has been obtained from the Registrar.

### **Withdrawal from subjects**

Students are permitted to withdraw from subjects without being regarded as having failed, provided they apply by the dates indicated.

#### **First Year Students**

1. one-session subjects: the end of the eighth week of session;
2. double-session subjects: the end of the second week of Session 2.

*For the purpose of this rule a first-year student is defined as one who is attending the University for the first time either on a full- or part-time basis and is enrolled in the first year or first stage of a course.*

#### **Other Students**

1. one-session subjects: the end of the fourth week of session;
2. double-session subjects: the end of the May Recess.

### **How do I enrol after an absence of twelve months or more?**

If you have had a leave of absence for twelve months and wish to resume your course you should follow the instructions about re-enrolling given in the letter granting your leave of absence. If you do not fully understand or have lost these instructions, then you should contact the Admissions Office *either* in December of the preceding year *or* before October in the year preceding the one in which you wish to resume your course.

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

### **Are there any restrictions upon students 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. A student enrolled for the first time in any undergraduate course in the University shall be required to show cause why he/she should be allowed to continue the course if that student fails more than half the program in which he/she is enrolled. In order that students may calculate half their program, the weighting of subjects in each course is defined in *Schedule A*,\* which may be varied from time to time by the Professorial Board.

#### **Repeated-failure Rule**

2. A student shall be required to show cause why he/she should be allowed to repeat a subject which that student has failed more than once. *Where the subject is prescribed as part of the student's course he/she shall also be required to show cause why he/she should be allowed to continue that course.* Failure in a deferred examination as well as in the initial examination counts for the purposes of this rule as one failure.

\*For details of Schedule A see **Restrictions upon Students Re-enrolling** in the University Calendar.

## General Rule

**3.** The Re-enrolment Committee may, on the recommendation of the relevant faculty or board of studies, review the academic progress of any student. If that student's academic record seems to demonstrate, in the opinion of the Committee, the student's lack of fitness to pursue a subject or subjects and/or a course or courses, the Committee may require that student to show cause why he/she should be allowed to re-enrol in such subject(s) and/or course(s).

## The Session-unit System

**4. A** A student who infringes the provisions of Rules 1 or 2 at the end of Session 1 of any year will not be required to *show cause* at that time but 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 that course.

**B** Such a student will be required to *show cause* at the end of the year, except that a student who has infringed Rule 2 at the end of Session 1, repeats the subject(s) in question in Session 2, and passes it/them, will not be required to *show cause* on account of any such subject.

## Exemption from Rules by Faculties

**5. A** A faculty or board of studies examination committee may, in special circumstances, exempt a student from some or all of the provisions of Rules 1 and 2.

**B** Such a student will not be required to *show cause* under such provisions and will be notified accordingly by the Registrar.

## 'Showing Cause'

**6. A** A student wishing to *show cause* must apply for special permission to re-enrol. Application should be made on the form available from the Examinations and Student Records Section 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.

**B** Each application shall be considered by the Re-enrolment Committee which shall determine whether the cause shown is adequate to justify the granting of permission to re-enrol.

## Appeal

**7. A** Any student who is excluded by the Re-enrolment Committee from a course and/or subject(s) under the provisions of the Rules 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 Professorial Board, or if he 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-Chancellor.

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.

**B** The notification to any student of a decision by the Re-enrolment Committee to exclude him/her from re-enrolling in a course and/or subject(s) shall indicate that the student may appeal against that decision to the Appeal Committee. In lodging such an appeal with the Registrar the student should provide a complete statement of all grounds on which the appeal is based.

**C** The Appeal Committee shall determine the appeal after consideration of the student's academic record, his/her application for special permission to re-enrol, and the stated grounds of appeal. In exceptional circumstances, the Appeal Committee may require the student to appear in person.

## Exclusion

**8. A** A student who is required to *show cause* under the provisions of Rules 1 or 3 and either does not attempt to *show cause* or does not receive special permission to re-enrol from the Re-enrolment Committee (or the Appeal Committee on appeal) shall be excluded from re-enrolling in the subject(s) and course(s) on account of which he was required to *show cause*. Where the subjects failed are prescribed as part of any other course (or courses) he/she shall not be allowed to enrol in any such course.

**B** A student who is required to *show cause* under the provisions of Rule 2 and either does not attempt to *show cause* or does not receive special permission to re-enrol from the Re-enrolment Committee (or the Appeal Committee on appeal) shall be excluded from re-enrolling in any subject he/she has failed twice. *Where the subject failed is prescribed as part of the student's course he/she shall also be excluded from that course.* Where the subject failed is prescribed as part of any other course (or courses) he/she shall not be allowed to enrol in any such course.

**C** A student excluded from a course or courses under the provisions of A or B may not enrol as a miscellaneous student in subjects which may be counted towards any such course.

† It is proposed that under this arrangement, the membership of the Appeal Committee will be Pro-Vice-Chancellor J. B. Thornton (Chairman), Professor D. M. McCallum, Chairman of the Professorial Board, and a member of Council in the category of members elected by the graduates of the University, nominated by the Vice-Chancellor.

## Re-admission after Exclusion

**9. A** An excluded student may apply to the Re-enrolment Committee for re-admission after two academic years.

**B** An application for re-admission after exclusion should be made on the form available from the Examinations and Student Records Section and should be lodged with the Registrar not later than 31 August in the year prior to that for which re-admission is sought. A late application may be accepted at the discretion of the University.

**C** An application 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 appropriate study in the subject(s) (or the equivalent) on account of which the applicant was excluded.

## Restrictions and Definitions

**10. A** These rules do not apply to students enrolled in programs leading to a higher degree or graduate diploma.

**B** A subject is defined as a unit of instruction identified by a distinctive subject number.

## How do I apply for admission to degree or diploma?

Applications for admission to a degree or diploma of the University must be made on the appropriate form by 12 September, in a student's final year. Forms are mailed to all final year students. Don't forget to inform the University if you subsequently change your address so that correspondence related to the ceremony will reach you without delay. Applicants should ensure that they have completed all requirements for the degree or diploma, including industrial training where necessary. Any variation such as cancelling of application in order to proceed to an honours degree or submission of an application following discontinuation of honours program, must be submitted in writing to the Registrar no later than 30 January.

## Fees\*

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

## Do I have to pay fees for tuition?

As a result of a decision by the Commonwealth Government, no tuition fees are charged in 1977.

## What other fees and charges are payable?

Apart from the tuition fees (above) there are other fees and charges which include those charges raised to finance the expenses incurred in operating student activities such as the University Union, the Students' Union, the Sports Association and the Physical Education and Recreation Centre. Penalties 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 which are lent to students for their personal use during attendance in certain subjects. Accommodation charges, costs of subsistence on excursions, field work etc, and for hospital residence (medical students) are payable in appropriate circumstances.

## How much is my contribution to student activities and services on campus?

All students (with the exceptions noted below) will be required to pay the following fees if enrolling for a program involving two sessions. Those enrolling for only one session will pay one-half of the Student Activities Fees, but the full University Union entrance fee, if applicable.

## Student Activities Fees

University Union—\$25 entrance fee, payable on first enrolment

University Union—\$45 annual subscription

Sports Association—\$6 annual subscription

Students' Union:

Students enrolling in full-time courses—\$10 annual subscription

Students enrolling in part-time courses—\$8 annual subscription

Miscellaneous—\$25 annual fee.

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

## Are fees charged for examinations?

Generally there are no charges associated with examinations; however, two special examination fees are applied:

Examinations conducted under special circumstances—for each subject	\$11
Review of examination result—for each subject	\$11

## What penalties exist for late payment of fees?

The following additional charges will be made in 1977 when fees are paid late:

Failure to lodge enrolment form according to enrolment procedure	\$20
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\* Fees quoted are current at the time of publication and may be amended by the Council without notice.

Payment of fees after end of second week of session ..... \$20  
 Payment of fees after end of fourth week of session ..... \$40

## Locations and Hours of Cashier

Cashier's Offices are open during the enrolment periods referred to in this booklet. The locations and hours are shown below:

### Unisearch House

221 Anzac Parade

#### Week Commencing 21 February

Monday and Thursday  
 10.00 am to 1.00 pm  
 2.00 pm to 5.00 pm  
 6.00 pm to 9.00 pm

#### Wednesday

10.00 am to 1.00 pm  
 2.00 pm to 5.00 pm

#### Friday

9.30 am to 1.00 pm

#### Week Commencing 28 February

Monday to Thursday  
 9.30 am to 1.00 pm  
 2.00 pm to 5.00 pm  
 6.00 pm to 9.00 pm

#### Friday

9.30 am to 5.00 pm

## Chancellery

#### Week Commencing 21 February

Monday to Friday  
 9.30 am to 1.00 pm  
 2.00 pm to 4.30 pm  
 Friday  
 6.00 pm to 8.30 pm

#### First Week of Session 1 Commencing 7 March

Monday to Friday  
 9.30 am to 1.00 pm  
 2.00 pm to 4.30 pm  
 5.30 pm to 8.00 pm

#### Second Week of Session 1 Commencing 28 March

Monday to Friday  
 9.30 am to 1.00 pm  
 2.00 pm to 4.30 pm

Wednesday and Friday  
 5.30 pm to 8.00 pm

#### Week Commencing 28 February

Monday to Friday  
 9.30 am to 1.00 pm  
 2.00 pm to 4.30 pm  
 6.00 pm to 9.00 pm

#### Third Week of Session 1 Commencing 21 March

Monday to Friday  
 9.30 am to 1.00 pm  
 2.00 pm to 4.30 pm

#### Fourth Week of Session 1 Commencing 14 March

Monday to Friday  
 9.30 am to 1.00 pm  
 2.00 pm to 4.30 pm

Friday 26  
 5.30 pm to 8.00 pm

## Who is exempt from payment of fees?

1. Life members of University Union, Sports Association, and Students' Union are exempt from the relevant fee or fees.
2. Students enrolled in courses classified as *External* are exempt from all Students Activities Fees and the University Union entrance fee.
3. University Union fees and subscriptions may be waived by the Deputy Registrar (Student Services) for

students enrolled in graduate courses in which the academic requirements require no attendance on the Kensington campus.

4. 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 in a miscellaneous subject or 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.

5. 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.

6. 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.

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

8. All Student Activities Fees, for one or more sessions may be waived by the Deputy Registrar (Student Services) for graduate students who are given permission to pursue their studies away from the Kensington campus for one or more sessions.

## How much will textbooks and special equipment (if any) cost?

You must allow quite a substantial sum for textbooks. This can vary from \$200 to \$600 depending on the course taken. These figures are based on the cost of new books. The Students' Union operates a second-hand 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.

## Will I receive any refund if I withdraw from a course?

Yes. The following rules apply:

1. If you withdraw from courses you are required to notify the Registrar in writing.
2. Where notice of withdrawal from a course is received by the Registrar before the first day of Session 1 a refund of all fees paid will be made. After that time only a partial refund will be made. See the Calendar for details.

## What happens if I fail to pay the prescribed fees or charges?

If you fail to pay prescribed fees or charges or become otherwise indebted to the University and you fail to make a satisfactory settlement of your indebtedness upon receipt of due notice then you cease to be entitled to the use of University facilities. You will not be permitted to register for a further session, to attend classes or examinations, or be granted any official credentials. In the case of a student enrolled for Session 1 only or for Sessions 1 and 2 this disbarment applies if any portion of fees is outstanding after the end of the eighth week of Session 1 (29 April 1977). In the case of a student 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 (2 September 1977).

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

## Can I get an extension of time to pay?

If you apply before the due date and extenuating circumstances exist, an extension of time may be granted. Apply to the Deputy Registrar (Student Services).

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## Examinations

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### When are examinations held?

Examinations for Session 2 and for Full Year subjects are held in November/December. Examinations for Session 1 subjects are held during the Midyear Recess. Provisional timetables indicating the dates and times of examinations and notices of the location of examinations are posted on the central notice boards in the Biological Sciences Building, the Chancellery, Central Lecture Block, Dalton Building (Chemistry), Main Building (Mining and Physics), and in the Western Grounds Area on 10 May and 27 September. You must advise the Examinations Unit (Chancellery) of a clash in examinations by 23 May and 7 October. Final timetables are displayed and individual copies are available for students on 7 June and 25 October.

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

In the assessment of your progress in University courses, consideration is 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.

## How are examination passes graded?

Passes are graded: High Distinction, Distinction, Credit and Pass. A Pass Conceded may be granted to a student whose mark in a subject is slightly below the standard required for a pass but whose overall satisfactory performance warrants this concession.

A Terminating Pass may be granted where the mark for the subject is below the required standard. A terminating pass will not permit a student to progress further in the subject or to enrol in any other subject for which a pass in the subject is a co-requisite or pre-requisite. A student given a terminating pass may attempt a deferred examination, if available, to improve his performance but should he fail in such attempt, the terminating pass shall stand.

## When are examination results available?

Final examination results will be posted to your term address (which can be altered up to 30 November) or to your vacation address (fill in a form obtainable at the Information Desk, Chancellery, also by 30 November). Results are also posted on School notice boards and in the foyer of the Sir John Clancy Auditorium. No examination results are given by telephone.

## Can examination results be reviewed?

Examination results may be reviewed for a fee of \$11 a subject, which is refundable in the event of an error being discovered. This review consists mainly of ensuring that all questions attempted have been marked and checking the total of the marks awarded. Applications for review must be submitted on the appropriate form to the Examinations and Student Records Section together with the necessary fee by the dates printed on the reverse side of *Notification of Results*.

## Are allowances made if students are sick before or during an examination?

A student who through serious illness or other cause outside his control *is unable to attend an examination* is required to bring the circumstances (supported by a medical certificate or other evidence) to the notice of the Registrar *not later than seven days after the date of the examination*, and may be required to submit to medical examination.

A student who believes that his performance in a subject has been affected by serious illness *during the year* or by other cause outside his control, and who desires these circumstances to be taken into consideration in determining his standing, is required to bring the circumstances (supported by a medical certificate or other evidence) to the notice of the Registrar as soon as the circumstances are known but not later than seven days after the date of the examination.

All medical certificates should be as specific as possible concerning the severity and duration of the complaint and its effect on the student's ability to take the examinations.

A student who attempts an examination, yet claims that his performance is prejudiced by sickness *on the day of the examination* must notify the Registrar or Examination Supervisor *before, during, or immediately after the examination*, and may be required to submit to medical examination.

A student suffering from a physical disability which puts him at a disadvantage in written examinations should apply to the Registrar in writing for special provision when examinations are taken. The student should support his request with medical evidence.

### 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.

### How are examinations conducted?

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 ten 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. No candidate shall be admitted to an examination after thirty minutes from the time of commencement of the examination.
5. No candidate shall be permitted to leave the examination room before the expiry of thirty minutes from the time the examination commences.
6. No candidate shall be re-admitted to the examination room after he has left it unless during the full period of his absence he has been under approved supervision.
7. A candidate shall not by any improper means obtain, or endeavour to obtain, assistance in his work, give, or endeavour to give, assistance to any other candidate, or commit any breach of good order.

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

9. All answers must be in English unless otherwise directed. Foreign students who have the written approval of the Officer-in-Charge of Examinations may use standard translation dictionaries.

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.

### Under what circumstances are deferred examinations granted?

Deferred examinations may be granted in the following cases:

1. When a student through illness or some other acceptable circumstance has been prevented from taking the annual examination or has been placed at a serious disadvantage during the annual examinations.
2. To help resolve a doubt as to whether a student has reached the required standard in a subject.
3. To allow a student by further study to reach the required standard in a subject.
4. Where a student's progression or graduation is inhibited by his failure in one subject only, a deferred examination may be granted notwithstanding his failure otherwise to qualify for this concession.

In the Faculties of Arts, Commerce and Law special circumstances apply in the granting of deferred examinations. Details in each circumstance are given in the section *Faculty Information* in the respective handbooks for these faculties, or in the Calendar.

Deferred examinations must be taken at the centre at which the student is enrolled, unless he has been sent on compulsory industrial training to a remote country centre or interstate. In this case the student must advise the Registrar, on a form available from his school or the Information Desk, the Chancellery, of relevant particulars, before leaving for his destination, in anticipation that deferred examination papers may have to be forwarded to him. Normally, the student will be directed to the nearest university for the conduct of the deferred examination.

### Can I buy copies of previous examination papers?

Yes—for 5c each from the Union Shop in the University Union.

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## Essays

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### Should I list my sources?

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

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## Student Conduct on Campus

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### Is there a detailed code of rules related to the general conduct of students?

No. The University has not considered it necessary to formulate a detailed code of rules relating to the general conduct of students.

However, now that you have become a member of the University you should understand that this involves an undertaking on your part to observe its rules, by-laws and other requirements, and to pay due regard to any instructions conveyed by any officer of the University.

### What are the rules related to attendance at classes?

You are expected to be regular and punctual in attendance at all classes in the course or subject in which you are enrolled. All applications for exemption from attendance at lectures or practical classes must be made in writing to the Registrar.

In the case of illness or of absence for some other unavoidable cause you 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.

Applications for exemption from lectures (leave of absence) should be addressed to the Registrar and, where applicable, should be accompanied by a medical certificate. If examinations have been missed, state this in your application.

If you fail a subject at the annual examinations in any year and re-enrol in the same course in the following year, you must include in your program of studies for that year the subject in which you failed. This requirement will not be applicable if the subject is not offered the following year; 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.

If you attend less than eighty per cent of your possible classes, you may be refused permission to sit for the examination in that subject.

### Why is my University Union card important?

All students enrolled for courses leading to degrees and/or diplomas, except those exempt from fees, are issued with a University Union membership card. Your card must be carried during attendance at the University and shown on request.

The number appearing on the front of the card above your name is your 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 some inconvenience in completing re-enrolment.

If you lose your Union card it is important to notify the University Union as soon as possible.

New students will be issued with University Union cards on enrolment.

### Why should I inform the University if I change my address?

If you change your address you should notify the Student Records Section of the Registrar's Division as soon as possible. Failure to do this could lead to important correspondence (including examination results) not reaching you. The University cannot accept responsibility if official communications fail to reach students who have not notified their change of address. Change of Address Advice Forms are available at Faculty and School offices and at the Information Counters on the Ground Floor of the Chancellery Building.

These will be accepted up to 30 November, except for final year students who may advise changes up to four weeks before their graduation ceremony.

### Will the University release information to third parties without my permission?

In general, no. The University treats examination results 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, there are sometimes accusations made that the University has revealed information, including addresses (especially to insurance companies).

All students should be aware that students' addresses are eagerly sought by various commercial agents and that sometimes tricks are used to obtain them. For example, from time to time 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 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.

### How are student records kept up to date?

Enrolment details forms will be sent to all students on 30 April and 30 August. It is not necessary to return these forms unless any information recorded thereon is incorrect. Amended forms must be returned to the Examinations and Student Records Section within fourteen days. Amendments notified after the closing date will not be accepted unless exceptional circumstances exist and approval is obtained from the Registrar. Amended forms returned to the Registrar will be acknowledged in writing within fourteen days.

### Is there any rule related to the ownership of students' work?

Yes. 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 you as part of your courses, or submitted for any award or competition conducted by the University.

### Can I get a permit to park on campus?

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

### Lost Property?

All enquiries concerning lost property should be made to the Superintendent on extension 3580 or to the Lost Property Office at the Union.

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## Further Information

Where can I get further information concerning courses, admission requirements, scholarships and enrolment procedure?

## General

Any student who requires information on the application of these rules or any service which the University offers, may make enquiries from the Admissions Office, the Student Counselling Unit or the Registrar.

## Notices

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

## Appeals

Section 5 (c) of Chapter III of the By-laws provides: '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'.

## The Calendar

Please consult the Calendar if you want a more detailed account of the information contained in this section.

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## Vice-Chancellor's Official Welcome to New Students

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

### Full-time Students

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

Monday 28 February 1977  
11 am in the Clancy Auditorium

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

Tuesday 1 March 1977  
11 am in the Clancy Auditorium

### Part-time Students

Tuesday 1 March 1977  
6.30 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.

To-day architects, landscape architects, builders and town planners 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.

Students seeking advice should contact the representative of the relevant School. A list appears below:

School of Architecture	....	....	....	....	....	Richard Apperly
Department of Landscape Architecture	....	....	....	....	....	Finn Thorvaldson
School of Building	....	....	....	....	....	Charles Anderson
School of Town Planning	....	....	....	....	....	Professor John Shaw

**Faculty of  
Architecture**

## Staff

*Comprises Schools of Architecture, Building, and Town Planning.*

**Dean**  
Professor G. E. Roberts

**Chairman**  
Professor J. M. Freeland

**Executive Assistant**  
R. E. Apperly

**Senior Administrative Officer**  
Brian John Newell, BCom *N.S.W.*

**Professor of Architecture and Head of Department of Undergraduate Studies**  
Eric Charles Daniels, MArch *N.S.W.*, ASTC, FRAIA, Hon.MIES

**Professor of Landscape Architecture and Head of Department**  
Peter Spooner, DipLD *Durh.*, ASTC, FRAIA, FILA, FAILA, ARIBA

**Associate Professors**  
Neville Joseph Anderson, BArch *Syd.*, MArch *Liv.*, DipTP *Lond.*, FRAIA, MRTPI  
Laszia Peter Kollar, MArch *N.S.W.*, ASTC, FRAIA  
Anita Barbara Lawrence, MArch *N.S.W.*, FRAIA, MAAS

**Administrative Officer**  
Randall Watkins, DipTech *N.S.W./I.T.*, MRIPA

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## School of Architecture

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**Professor of Architecture and Head of School**  
Gareth Edward Roberts, BArch MCD *Liv.*, FRAIA, FRAP, MRTPI, ARIBA

**Professor of Architecture**  
John Maxwell Freeland, DFC, MArch DTRP *Melb.*, MArch DLitt *N.S.W.*, LFRAIA, FRSA

**Professor of Architecture and Head of Department of Graduate Studies**  
John Christopher Haskell, DipTP *Lond.*, MArch *Natal*, Rome Scholar, RIBA, FRTPI, ARAIA

**Senior Lecturers**  
Richard Eric Apperly, BArch *Syd.*, MArch *N.S.W.*, ARAIA  
Ronald Douglas Chalmers, BSc(Eng) *Lond.*, MIEAust, AAIB  
James Conner, DipArch(Aberd.), MArch *N.S.W.*, FRAIA, ARIBA, ARIAS  
Robert G. Head, MSc(Building) *N.S.W.*, ASTC, FRAIA  
Peter Thomas Oppenheim, BArch *Cape T.*, MArch PhD *N.S.W.*, ARIBA, ARAIA  
Sidney Charles Palmer, BArch *Syd.*, MArch *N.S.W.*, FRAIA  
Arthur Edgcombe Rupert Purkis, MArch *N.S.W.*, FRAIA, ARIBA  
Nancy Claire Rodgers, BArch *N.Z.*, MBdgSc *Syd.*, FIEC, ANZIA, ARAIA  
Clive William Stevens, MArch *N.S.W.*, DipTCP *Syd.*, ASTC  
Barry Vivian Wollaston, BArch *Syd.*, FRAIA  
Kenneth James Wyatt, BE *Qld.*, MBdgSc *Syd.*, MIEAust

**Lecturers**

John Albyn Ballinger, BArch *Adel.*, ARAIA  
 Chris LeRoy Bell, BA(Arch) *Calif.*  
 Robert John Bryant, BArch *N.S.W.*, MTCP *Syd.*, ASTC, MRAPI, ARAIA  
 Geoffrey Lindsay Dwyer, ARAIA  
 Richard Grantley Fitzhardinge, DipArch (Kingston on Thames Poly.), MArch *Calif.*, ARIBA, ARAIA  
 John Barrie Fraser, DipArt(Ed)  
 Peter Hale, BArch *N.S.W.*, ARAIA  
 Graeme Ross Hewett, ASTC, ARAIA  
 Richard Hough, BSc BE *N'cle.(N.S.W.)*, MEng *Tor.*, MIEAust  
 Robert Charles Lewis Irving, ARMTIC, FRAIA  
 Paul Alan Johnson, BArch *Syd.*, DipCD *N.S.W.*, ARAIA  
 Nicholas Marinov, DipArch *Prague*  
 Lorna Muir Nimmo, ASTC, FRSA  
 Ian Roy Patrick, ASTC, ARIBA, ARAIA  
 Peter Reginald Proudfoot, BArch *Syd.*, MArch *Penn.*, PhD *N.S.W.*, Rome Scholar  
 Peter Leggett Reynolds, BArch PhD *N.S.W.*  
 Vinzenz Franz-Josef Sedlak, DiplIngArch. *T.U. Graz*, MPhil *Sur.*  
 Warren Albert Selle, BArch *Syd.*, FRAIA  
 Harry Anthony Stephens, BArch DipLD *N.S.W.*, ARAIA  
 Kwong Hon Tang, BArch *H.K.*, MArch *Melb.*, ARIBA, ARAIA  
 Brian Woodward, DipLArch *Oxon.*, RIBA

**Senior Tutors**

Victor Martin Berk, BArch, DipAdmin *N.S.W.*  
 Marion Anne Burgess, BSc *Syd.*, MSc(Acoustics) *N.S.W.*, MAAS  
 Elizabeth Ann Howard, BArch *Syd.*, BA *Macq.*  
 Geoffrey Kenneth Le Sueur, BArch *N.S.W.*  
 Paul Edward Walsh, BArch *N.S.W.*

**Tutors**

John Robert Kinstler, BArch *Syd.*  
 George Michael Rich, BArch *N.S.W.*  
 Richard Ralph Winterton, BA DipArch *Camb.*, RIBA

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**Department of Landscape Architecture****Senior Lecturer**

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

**Lecturers**

Sydney Allison Baggs, MArch DipLD *N.S.W.*, ASTC, FRAIA, AAILA, RIBA  
 Truda Mary Howard, BSc PhD *Melb.*  
 Russell Colin Smith, DipLD *N.S.W.*, ASTC, FRAIA, AAILA

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**School of Building**

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**Professor of Building and Head of School**

\*Emery Balint, MCE *Melb.*, FIEAust, FICE, FAIB, HonFAICS

**Associate Professor**

Roger Mark Anthony Miller, BBuild *N.S.W.*, SM CE *M.I.T.*, AAIB

**Senior Lecturers**

Charles Walter Anderson, MBuild *N.S.W.*, ASTC, FAIB  
 John Malcolm Hutcheson, MC, BE *Syd.*, BCom *Qld.*, MBA *N.S.W.*, FIEAust, FID, FAIA, AAUQ, LGE, AASA(Snr), AFAIM, AAIB  
 Allan Alexander Jack, MBuild *N.S.W.*, ASTC, FAIB  
 Graham Edward Levido, BBuild MSc(Building) *N.S.W.*, AAIB

**Lecturers**

Ojars Indulis Greste, ME *N.S.W.*, DEng *Calif.*  
 David Nevil Hume Hassall, BE MBdgSc *Syd.*, MIEAust  
 Bruce Hadford Hawkins, BE *W.Aust.*  
 Martin Marosszeki, BE *N'cle.(N.S.W.)*, MEngSc *N.S.W.*, MIEAust  
 James Francis Mooney, ASTC, FIQSA  
 Clyde Donald Smythe, MBuild *N.S.W.*, ASTC, AAIB

**Tutor**

Carol Rose Edds, BBuild *N.S.W.*

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**School of Town Planning**

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**Professor of Town Planning and Head of School**

John Henry Shaw, BE DipTCP *Syd.*, MCD *Liv.*, PhD *N.S.W.*, FRAPI, MRTPI, MIEAust

**Associate Professor**

Elias David Duek-Cohen, MA *Oxon.*, BArch *Liv.*, DipTP *Lond.*, FRAPI, MRTPI, ARIBA, ARAIA

**Senior Lecturers**

James Leslie King, BArch MTCP *Syd.*, FRAPI  
 Zula Nittim, BArch *Melb.*, DipCD PhD *N.S.W.*, FRAIA

**Lecturers**

Douglas Robert Daines, DipTCP *Syd.*, MRAPI, ACIV  
 Stephen Harris, BTP *N.S.W.*  
 Neville Thomas Schaefer, BA *N.E.*, PhD *N.S.W.*  
 Robert Bolles Zehner, BA *Amh.*, MA PhD *Mich.*

\*Retired from the University 29 December 1976.

## Faculty Information

### Faculty of Architecture Enrolment Procedures\*

#### Town Planning

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 Third and Fourth year students.

#### Bachelor of Architecture Course

Students entering the first year of the BArch course are required to enrol, and will be sent enrolment instructions by mail, notwithstanding the fact that the year is devoted to practical experience.

#### Bachelor of Building

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 below.

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.

\*As a result of a decision by the Commonwealth Government, no tuition fees are charged in 1977.

### Enrolment Timetable

Students should attend the appropriate enrolment centre according to the timetable below to pick up their Enrolment Form and enrol in the approved program.

#### 1. Architecture

Enrolment forms to be returned	BArch Year 1	in person or by mail by Monday 28 February
BArch Years 2 and 3	Monday 28 February	2.00 pm to 5.00 pm
BSc(Arch) Year 3	Tuesday 1 March	2.00 pm to 5.00 pm
BSc(Arch) Year 2	Wednesday 2 March	2.00 pm to 5.00 pm
BSc(Arch) Part-time	Thursday 3 March	6.00 pm to 8.00 pm

#### 2. Town Planning

All years except Year 4	Tuesday 1 March	9.00 am to 12.30 pm
Year 4	Enrolment forms to be returned in person or by mail by Tuesday 1 March	

#### 3. Building

All students other than new students	Monday 28 February	10.00 am to 4.00 pm
All new students	Tuesday 1 March	10.00 am to 1.00 pm

#### 4. Landscape Architecture

BLArch Year 2 and  
Year 3                      Wednesday 2 March  
2.00 pm to 5.00 pm

#### 5. New Students with Advanced Standing

Wednesday 2 March  
2.00 pm to 6.00 pm

#### General Studies

Students enrolling in general studies electives after completing enrolment in their own Faculty and BEFORE GOING TO THE CASHIER, should proceed to the General Studies enrolment centre in Unisearch House where they will obtain places in electives, complete class admission cards and finalize enrolment forms.

#### Enrolment Centres

##### School of Architecture (Including Landscape Architecture)

Ground Floor Foyer  
Faculty of Architecture

##### School of Building

4th Floor Foyer  
Faculty of Architecture

##### School of Town Planning

Studio 222  
Old Main Building

#### Late Enrolments

Students are strongly advised to attend for enrolment *during Enrolment Week* as those who fail to do so not only miss initial classes but disrupt lecture, tutorial and practical work programs and cause considerable inconvenience to lectures and the punctual students. There are two late enrolment sessions:

##### First Late Enrolment Period

Wednesday 9 March

##### Second Late Enrolment Period

Wednesday 16 March

##### The times and locations for late enrolment are:

Faculty Office, Ground Floor,  
Architecture Building  
2.00 pm to 7.00 pm

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### General Rules for Progression where Progression is by the Year

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1. A student is required to pass all subjects of any year (or its two corresponding part-time stages) before being permitted to proceed to the next year or its corresponding stages except that, subject to the specific course rules set out below, one subject only may be carried with the subjects of the next higher year or its corresponding stages.

2. A student who fails in two or more subjects of a year may be required at the discretion of the Head of School to repeat any or all the subjects of that year.

3. A student can 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.

4. In exceptional cases the general and specific rules may be varied by the Head of the School.

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### Specific Course Rules for Progression

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1. **Architecture:** A student enrolled in the Bachelor of Science (Architecture) course shall not progress to any subject in second year or its part-time equivalent until he has passed Graphic Communication I and Construction I or their part-time equivalents. A student of the Bachelor of Science (Architecture) course may not progress to any subject of a higher year or its part-time equivalent until he has passed Design and Construction in the immediately preceding year or its part-time equivalent except that this rule shall not apply to the subject of Design I

A student enrolled in the Bachelor of Architecture course may not enrol in Architecture B until he has passed Architecture A.

2. **Town Planning:** A student enrolled in the Town Planning course shall not progress to any subject in second year until he has passed Graphic Communication I nor shall he progress to any subject of a higher year until he has passed Town Planning Theory and Practice in the immediately preceding year.

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### Building Research Laboratory

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The Faculty controls a Building Research Laboratory situated in the University of New South Wales Research Station, King Street, Randwick. The laboratory which concentrates on graduate research and research for industry has sections equipped for work on Environment and Climate, Materials, Model Testing, Services, Lighting and Acoustics. The Laboratory has extensive testing and research equipment and workshop facilities including a wind-rain machine, a weatherometer, an artificial sky, a structural testing bay and a controlled atmosphere chamber. The equipment and facilities of the Laboratory are continually being expanded. Research work and testing programs carried out in the Laboratory 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 pre-stressed concrete structures.*

*Applications of mortar-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*

journals and guides to the use of the literature in the forms of abstracting and indexing journals in the subject areas of pure science, technology and architecture. The library also houses a growing map collection and some microfilm material. All material in the library bears the prefix 'P' and is indexed in the library's catalogue on Level 2. There is also a catalogue in the Physical Sciences Library. Seating is for approximately 300 people. A number of room carrels and seminar rooms are available for use. Photocopying facilities are provided but journals may not be borrowed from the collection. Library staff on Level 7 are happy to assist readers with enquiries. Further details are contained in the Physical Sciences Library guide.

The Studio Collection contains a small amount of material which duplicates that contained in the Physical Sciences Library. The Studio Collection is open 9.30 am to 4.30 pm Monday to Friday, and material cannot be borrowed from the library.

Students will also wish to use the Undergraduate Library for associated reading.

Physical Sciences Librarian      Janine Schmidt

Undergraduate Librarian      Pat Howard

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### Faculty of Architecture Library Facilities

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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 serves the information needs of undergraduate students, graduate students and members of the academic staff. It contains books, a large collection of

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## Financial Assistance to Students

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The scholarships and prizes listed below are available to students whose courses are listed in this handbook. A similarly oriented list appears in the **Faculty Information** section of each of the faculty handbooks. The complete list of University scholarships and prizes appears in the **General Information** section of the Calendar.

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## Scholarships

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### Undergraduate Scholarships

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As well as the assistance mentioned earlier in this Handbook (see **General Information: Financial Assistance to Students**) there are a number of scholarships available to students. What follows is an outline only. Full information may be obtained from the Student Employment and Scholarships Unit, 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.

Donor	Value	Year/s of Tenure	Conditions
<b>General</b>			
Bursary Endowment Board*	\$300 pa if living at home; \$400 pa if living away from home	7 years	Merit in HSC and total family income not exceeding \$4000.
Sam Cracknell Memorial	\$1000 to \$1500 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 either directly or administratively; and financial need.
Air Force Association Memorial Scholarship	\$250 pa	1 year renewable for the duration of the course subject to satisfactory progress	Child of member or former member of Royal Australian Air Force undertaking a full-time degree course.

\*Apply to The Secretary, Bursary Endowment Board, Box 7077, GPO, Sydney 2001 immediately after sitting for HSC.

## Graduate Scholarships

Applications for scholarships should be made in triplicate on the required form, and sent to the Registrar by 31 October. Eligibility depends on such factors as the applicant holding an honours degree or equivalent qualification, or having relevant experience. Students completing the final year of a course may apply. Those under bond should disclose this fact. Awards are tenable for one year, and may be renewed for a maximum of two years for a Masters and 3 to 4 years for a PhD degree. Renewal each year is subject to satisfactory progress. Any exceptions from these requirements are indicated.

Application forms and further information are available from the Student Employment and Scholarships Unit, which is located on the ground floor of the Chancellery. This Unit produces the booklet *Graduate Awards*, and also provides information on additional scholarships which may become available from time to time, mainly from funds provided by organizations sponsoring research projects.

Where possible, the scholarships are listed in order of the schools within the faculty.

Donor	Value	Year/s of Tenure	Conditions
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### General

University of New South Wales Research Awards	<div> <div></div> <div>Living allowance of \$4000 pa. Other allowances may also be paid.</div> </div>	1-2 years for a Masters and 3-4 years for a PhD degree	Applicants must be honours graduates (or equivalent).
Australian Government (Research Awards)		As above	Applicants must be honours graduates (or equivalent) who will graduate with honours in current academic year, and who are permanent residents of Australia.
Australian Government (Course Awards)		1-2 years; minimum duration of course	Applicants must be graduates or scholars who will graduate in current academic year and who are permanent residents of Australia, and who have not previously held a Commonwealth Postgraduate Award. Applications to Registrar by 30 September.
Australian American Educational Foundation Travel Grant*			Applicants must be graduates, senior scholars or post-doctoral Fellows. Graduate applications close 31 December. Other applications by mid-November.
Australian Federation of University Women	A total of \$500/\$3200	Up to 1 year	Applicants must be female graduates from any accredited Australian or overseas university.
The British Council Commonwealth University Interchange Scheme	Cost of travel to UK or other Commonwealth country university		Applicants must be: <b>1.</b> University staff on study leave. Applications close with Registrar by 30 November. For visits to commence during ensuing financial year 1 April to 31 March. <b>2.</b> Graduate research workers holding research grants. Applications close with Registrar by 28 February for visits to commence during ensuing 1 April to 31 March.

\*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
<b>General (continued)</b>			
Canadian Pacific Airlines Award for Travel to Canada for University Graduates	One free economy class return flight a year to Canada		Graduates of an Australian University who are Australian citizens or permanent residents. Candidates must have been accepted by a Canadian University, be able to support themselves on a full-time basis, and intend to return to Australia. Applications close with Registrar by 31 May.
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	Graduates who are Commonwealth citizens or British Protected Persons, and who are not older than 35 years of age. Applications close with Registrar by 1 October.
General Motors Holden's Research Fellowship	Living allowance and other allowances	Maximum of 3 years	Graduates qualified to undertake research program for Masters or PhD degree.
Gowrie Graduate Research Travelling Scholarship	Maximum \$2000 pa	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.
Harkness Fellowships of the Commonwealth Fund of New York*	Living and travel allowances, tuition and research expenses, book and equipment and other allowances	Between 12 to 21 months	Candidates must be either: <b>1.</b> Members of the Commonwealth or a State Public Service or semi-government Authority. <b>2.</b> Staff or graduate students at an Australian university. <b>3.</b> Individuals recommended for nomination by the Local Correspondents. The candidate will usually have an honours degree and be between 21-30 years of age. Applications close 23 July.
IBM Graduate Scholarship Plan	A maximum of \$1200 pa	A maximum of 2 years for a degree of Master and 4 years for a PhD	Graduates must already hold a scholarship, such as an Australian Government Post-graduate Research Award and be studying computer science or its applications. Applications close with Registrar by 30 November.

\*Application forms must be obtained from the Australian representative of the Fund, Mr L. T. Hinde, Reserve Bank of Australia, Box 3947, GPO, Sydney, NSW 2001. These must be submitted to the Registrar by 24 July.

## Graduate Scholarships (continued)

Donor	Value	Year/s of Tenure	Conditions
<b>General (continued)</b>			
Frank Knox Memorial Fellowships at Harvard University	Stipend of \$3400 plus tuition fees pa	2 years	Applicants must be British subjects and Australian citizens, who are graduates or near graduates of an Australian University.
Nuffield Foundation Commonwealth Travelling Fellowships†	Approximately £2240 stg pa for married fellow and wife. Approximately £1760 stg pa in other cases plus travelling costs.	1 year	Australian citizens usually between 25 and 35 who are graduates preferably with higher degrees and who have at least a year's teaching or research experience at a university. Applications close by February.
The Rhodes Scholarship**	£1650 stg pa	2 years, may be extended for a third year	Unmarried male and female British subjects, between the ages 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 July each year.
Rothmans Fellowships Award‡	\$12000 pa	Up to 3 years	The field of study is unrestricted. Applications close early September each year.

†Applications to the Secretary, The Nuffield Foundation Australian Advisory Committee, Chemistry Laboratory, Barry Building, University of Melbourne, Parkville, Victoria 3052.

\*\*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.

## Architecture

The Master Builders' Association of NSW	\$500 (\$250 at commencement of each year)	2 years	Applicants must be graduates who have enrolled in the Master of Science (Building) Course.
Building Research Fellowship	\$4000 pa	3 years	Awarded for research in building science, construction, economics or related fields.
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.

## 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.

Donor/Name of Prize	Value \$	Awarded for
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#### General

Sydney Technical College Union Award	50.00	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	100.00	An outstanding graduand in the School of Architecture.
Byrne & Davidson (Mfg) Pty Ltd	100.00	11.121 History of Architecture I.
Chamber of Manufactures of New South Wales	15.00	Subject selected by Head of School.
Frank Fox	100.00	11.8511 or 11.8521 Historical Research.
James Hardie & Co Pty Ltd	100.00	General proficiency throughout the BArch degree course.
Frank W. Peplow	24.00	Church Architecture.
Lindsay Robertson Memorial	100.00	11.512 Landscape Design II.
Royal Australian Institute of Architects	50.00	Architectural Design and allied subjects in last two years of BArch degree course.

#### School of Botany

E. O. Tout Memorial	40.00	Best aggregate any five subjects offered by School of Botany.
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#### School of Building

Byrne & Davidson Roll-a-door	100.00	Bachelor of Building, Year III.
James Hardie & Co Pty Ltd	50.00	Bachelor of Building, Year I.
Master Builders' Association of New South Wales	200.00	Subjects selected by Head of School.

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**Undergraduate University Prizes (continued)**


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Donor/Name of Prize	Value \$	Awarded for
<b>School of Town Planning</b>		
The NSW Planning and Environment Commission	150.00	Bachelor of Town Planning, Year V.
Royal Aust Planning Institute, NSW Division	100.00	Bachelor of Town Planning, Year III.

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**Graduate University Prizes**


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**General**

The Thistlethwayte Memorial Prize	100.00	Best essay in the field of water — waste water treatment or water quality management, by MEngSc, MAppSc, ME, MSc student.
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**School of Building**

Alex Rigby	105.00	Master of Science (Building) — Distinguished graduate.
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**School of Transportation and Traffic**

School of Transportation and Traffic Veteran Motorists of Australia	20.00	Traffic Planning and Control.
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# Undergraduate Study

The Faculty of Architecture conducts undergraduate courses in the fields of Architecture, Landscape Architecture, Building, and Town Planning. These courses provide thorough training in the arts and sciences which today govern the design and construction of buildings and the balanced growth of cities. In addition to professional and vocational training, the courses include general studies in order to provide graduates with a broad understanding of the humanities and social sciences. The Faculty comprises the School of Architecture, School of Building and School of Town Planning. The School of Architecture comprises the Department of Graduate Studies (controlling the Bachelor of Architecture course), the Department of Undergraduate Studies (controlling the Bachelor of Science (Architecture) course), and the Department of Landscape Architecture (controlling the Bachelor of Landscape Architecture course).

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## School of Architecture

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### The Degree Courses in Architecture—BSc(Arch) and BArch

Architects play a vital part in the nation's physical and cultural growth. Their contribution to society is primarily one of design, but includes a consideration of such practical factors as economy, efficiency and durability. Indeed architecture may be defined as a complete synthesis of art and science, and the syllabus of study has been arranged to achieve this end.

Training in architecture consists of two courses:

The course leading to the Bachelor of Science (Architec-

ture) degree provides a fundamental training in the sciences underlying building technology. It is designed to impart the basic knowledge and information, to develop skills, techniques and working methods, and to encourage the intellectual attitudes that are necessary for the practice of architecture. It contains a balance of science and mathematics, building technology, graphics, history, humanities and creative design in projects that progress from the simple to the more complex.

The course leading to the Bachelor of Architecture degree builds upon the knowledge and experience gained in the BSc(Arch) course. Architectural design assumes major importance, for it is through this subject that students learn to integrate all the contributory training they have received. However, the common core subjects taken by all students are handled in such a manner as to allow a student to concentrate on those aspects which most interest him. In addition, a wide variety of elective subjects allows the student to choose so that he may extend his study either in breadth or depth.

### The Bachelor of Science (Architecture) Course

The course leading to the Bachelor of Science (Architecture) degree normally requires three years' full-time attendance at the University. The course may be taken by part-time study; each full-time year is equivalent to two part-time stages. Students may transfer to full-time study from the second part-time year (1B) or the fourth part-time year (2B) at their successful completion of Stages 1B or 2B.

Students must apply to the Registrar to transfer from the part-time to full-time courses, or vice versa.

Students in the part-time course must be concurrently

engaged in approved practical experience (see 'Practical Experience' below) for the whole of their part-time attendance.

On satisfactory completion of the course, a student is awarded the degree of Bachelor of Science (Architecture).

The holding of the degree of Bachelor of Science (Architecture), or its equivalent, is a requirement for selection into the Bachelor of Architecture course. It is also an eligible first degree for a number of other graduate courses offered by the University. (For summary see the Calendar, and for details see the appropriate Faculty Handbook.)

## The Bachelor of Architecture Course

Students wishing to apply for admission to the Bachelor of Architecture course must hold the degree of Bachelor of Science (Architecture) or approved equivalent qualification. Admission to the Bachelor of Architecture course is selective and is based on the ability revealed and the performance achieved up to the awarding of the Bachelor of Science (Architecture) degree. Selection is made according to a points score determined by a formula approved by the University Council and administered by the Bachelor of Architecture Admissions Committee of the Faculty of Architecture. It should be noted that possession of a BSc(Arch) degree does not automatically ensure admission to the BArch course.

While the first year of the course requires no formal attendance at the University, students are required to enrol in the normal manner. In this period the student is required to obtain practical experience (see 'Practical Experience' below). Students who whilst in the Bachelor of Science (Architecture) course have satisfactorily completed three years of part-time study and have obtained approved practical experience during the whole of the period of part-time attendance shall not be required to complete the first year of the Bachelor of Architecture degree course. On satisfactory completion of the course the student is awarded the degree of Bachelor of Architecture.

The second and third years of the course are available by full-time attendance only.

## Practical Experience

Students who have obtained approved practical experience for the full duration of at least three years of part-time study may, subject to the approval of the Bachelor of Architecture Admissions Committee, be exempted from the first year of the Bachelor of Architecture degree course.

## Honours

The Bachelor of Architecture degree may be conferred with Honours based upon the quality of performance and in accordance with the current Faculty regulations. Honours will be Class I or Class II Division 1 or Class II Division 2.

## Registration and Professional Recognition

Students enrolled in the Bachelor of Science (Architecture) and Bachelor of Architecture degree courses are eligible to become Student Members of the Royal Australian Institute of Architects.

The degree of Bachelor of Science (Architecture) is not recognized by the Board of Architects of NSW for registration for practice as an architect but is recognized by the Royal Australian Institute of Architects as an eligible qualification for an Affiliate membership provided the candidate produces evidence of two years' approved practical experience, at least one of which has been subsequent to successful completion of the course.

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 provided the candidate can 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 Institutes and the Board of Architects of New South Wales.

## Department of Undergraduate Studies

### 337

## Bachelor of Science (Architecture) Course

### Bachelor of Science (Architecture) BSc(Arch)

		Hours per week		
		Full-Time Prog.	Part-Time Prog.	
Year 1				
			Stage 1A	Stage 1B
11.111	Design I	1	1	0
11.121	History of Arch. I	1	1	0
11.131	Graphic Comm. I	9	0	0
11.1311	Graphic Comm. 1A	0	5	0
11.1312	Graphic Comm. 1B	0	0	3
11.211	Construction I	5	0	4
11.221	Structures I	3	3	0
11.271	Arch. Science I	9	0	0
11.2711	Arch. Science 1A	0	3	0
11.2712	Arch. Science 1B	0	0	6
		28	13	13

First year students may be required to participate in a practical construction program outside the metropolitan area, involving a field exercise of approximately two weeks' duration.

## Year 2

	Full-time Prog.	Hpw	
		Part-time Prog.	
		Stage 2A	Stage 2B
11.112 Design II	7	0	7
11.122 History of Arch. II	1	0	1
11.132 Graphic Comm. II	6	6	0
11.212 Construction II	6	0	6
11.222 Structures II	3½	3½	0
11.272 Arch. Science II	2	2	0
Gen. Studies Elec.	1½	1½	0
	27	13	14

In Session 2 the subject Construction II includes 29.411, Surveying for Architects and Builders consisting of a weekly lecture of one hour and seven practical lessons of three hours.

## Year 3

		Hpw	
		Stage 3A	Stage 3B
11.113 Design III	7	0	7
11.123 Hist. of Arch. III	1	0	1
11.133 Graphic Comm. III	3	3	0
11.213 Construction III	8	0	0
11.2131 Construction IIIA	0	5	0
11.2132 Construction IIIB	0	0	3
11.223 Structures III	3	3	0
11.273 Arch. Science III	2½	2½	0
11.331 Estimating and Specifications	1	0	1
Gen. Studies Elec.	1½	0	1½
	27	13½	13½

## Department of Graduate Studies

## 330

## Bachelor of Architecture Course

Bachelor of Architecture  
BArch

## Year 1

	Hours per week
11.500 Practical Experience*	

\* Students who have obtained approved practical experience for the full duration of at least three years of part-time study shall not be required to complete the first year of the Bachelor of Architecture course.

## Year 2

		Hpw	
		S1	S2
11.151 Architecture A Electives†		15	15
11.171A Thesis‡		5½	5½
36.411 Town Planning		1	1
		2	0
		23½	21½

† The subject of the thesis will be submitted by the student for the approval of the Head of the School at the beginning of second year and submitted for examination towards the end of the third year. Staff supervision will be available for one hour per week.

## Year 3

11.152 Architecture B	15
11.321 Professional Practice Electives†	2
11.171B Thesis‡	5½
	1
	23½

† **Second year electives** to a total minimum weekly time of five and a half hours to be freely selected from the following, at least one hour being taken from either sub-section B or C.

A		Hours per week	
		S1	S2
11.2241	Structures A1	2	0
11.2242	Structures A2	0	2
11.226	Properties of Materials	2	0
11.227	Behaviour of Materials	0	2
11.8111	Theory of Architecture A1	2	0
11.8112	Theory of Architecture A2	0	2
11.8211	Construction A1	2	0
11.8212	Construction A2	0	2
11.8411	Acoustics A1	2	0
11.8412	Computer-aided Design A2	0	2
11.8431	Lighting Design A1	2	0
11.8432	Lighting Design A2	0	2
11.8511	Hist. Research A1 } Both must	2	0
11.8512	Hist. Research A2 } be taken	0	2
11.8711	Landscape Design A1	2	0
11.8712	Landscape Design A2	0	2
11.8811	The Evolution of Modern Architecture A1	2	0
11.8812	The Evolution of Modern Architecture A2	0	2
36.412	Town Planning A	0	2

Any other undergraduate or Master of Science preparatory year subject offered within the Faculty of Architecture, subject to the approval of the Head of the School of Architecture and the agreement of the professor responsible for the subject.

B Any Arts or Commerce subjects consistent with the rules for enrolment of the Faculty concerned.

C Any Humanities subjects consistent with the rules for enrolment of the Department of General Studies.

Third year electives to a total minimum weekly time of five and a half hours to be freely selected from the following:

**Third year electives** to a total minimum weekly time of five and a half hours to be freely selected from sub-sections A, B and C above and from sub-section D below.

D		Hpw	
		S1	S2
11.2251	Structures B1 } Both must	2	0
11.2252	Structures B2 } be taken	0	2

		Hpw	
		S1	S2
11.8121	Theory of Architecture B1	2	0
11.8122	Theory of Architecture B2	0	2
11.8221	Construction B1	2	0
11.8222	Construction B2	0	2
11.8421	Acoustics B1	2	0
11.8422	Computer-aided Design B2	0	2
11.8441	Lighting Design B1	2	0
11.8442	Lighting Design B2	0	2
11.8521	Hist. Research B1 } Both must	2	0
11.8522	Hist. Research B2 } be taken	0	2
11.8721	Landscape Elective B1— Urban Landscaping	2	0
11.8722	Landscape Elective B2— Landscape Planning	0	2

## Degree Course in Landscape Architecture—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 varies in scale through the design of domestic gardens, urban plazas and thoroughfares, regional parks, 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 humans with 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 is of four years' duration and requires full-time attendance of approximately 24 hours per week in each year.

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 Architecture, Botany, Geography and Town Planning, and the Department of General Studies.

## Practical Experience

Students of the undergraduate course must obtain a total of six 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, and must obtain from the employer a statement of experience gained.

## Professional Recognition

It is anticipated that graduates holding the BLArch degree will qualify for corporate membership of the Australian Institute of Landscape Architects after a specified period of graduate experience.

## Department of Landscape Architecture

### 338

### Bachelor of Landscape Architecture Course

#### Bachelor of Landscape Architecture BLArch

Year 1†		Hours per week	
		S1	S2
11.111	Design I	1	1
11.121	History of Architecture I	1	1
11.601	Landscape Struct. and Materials	2	2
11.501	Introduction to Landscape Architecture	1	0
11.541	Physical Environment**	3	0
11.551	National Communities**	0	3
11.561	Fundamental Landscape Techniques	3	0
11.571	Landscape Appreciation**	0	3
11.581	Landscape Graphics I	6	6
11.591	Landscape Graphics Art I	3	3
11.531	Landscape Prehistory	0	2
17.011	Biology of Mankind	6	0
43.212	Landscape Botany*	0	4
		26	26

† First year students may be required to participate in a practical construction program outside the metropolitan area, involving a field exercise of approximately two weeks' duration.

\* Includes some field work.

\*\* The courses in Landscape Design and Construction comprise 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**

		S1	Hpw	S2
11.552	Introduction to Computer Application	2		0
11.562	Landscape Design and Construction A	10		10
11.572	Man in His Environment	2		2
11.582	Landscape Graphics II	3		3
11.592	Landscape Graphics Art II	3		3
11.502	Plants and Environment	3		0
27.296	Physical Geography for Landscape Architects	0		5
	General Studies Elective	1½		1½
		<hr/> 23½		<hr/> 25½

**Year 3**

11.513	Landscape Design III	10		10
11.523	Landscape Construction III	3		3
11.553	Plants and Planting Methods	3		3
11.563	Landscape Specs. and Estimates	2		2
11.573	Public Recreation Planning	2		2
11.583	Environmental Impact Studies	2		2
	Two General Studies Electives	3		3
		<hr/> 25		<hr/> 25

**Year 4**

11.514	Landscape Design IV	15		15
11.564	Landscape Professional Practice	2		2
11.574	Landscape Conserv. and Rehab.	2		2
11.594	Landscape Thesis	1		1
36.411	Town Planning	2		0
	Adv. General Studies Elective	1½		1½
		<hr/> 23½		<hr/> 21½

**Credit Points**

To qualify for a Bachelor of Building Degree a student must have obtained a minimum of 192 credit points (including 139 credit points from compulsory subjects). Credit points are allocated to all compulsory and elective subjects. Students, provided that they can satisfy the prerequisite and co-requisite requirements for subjects to be attempted, may choose that pattern and order of subjects which best suit individual requirements. Credit points generally correspond to class hours per week per semester.

**Practical Experience**

Students are required to be in employment related to their course during at least six months of their program. 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 accordance with current Faculty regulations.

**Professional Recognition**

The award of the degree, Bachelor of Building, is recognized for admission to membership by the Australian Institute of Building and the Australian Institute of Quantity Surveyors.

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**School of Building**

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**Degree Course in Building—BBuild****General Description of the Course**

The course has been offered on a semester basis since 1976. Students are required to complete a minimum of eight semesters (sessions) including one semester of appropriate industry experience. A maximum of seventeen semesters may be taken to complete the course.

The course leads to the degree of Bachelor of Building (BBuild).

**333****Building Degree 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.

## Building Degree Course (continued)

No.	Subject Name	Credit Points	Prerequisites	Co-requisites
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### Construction Studies Stream

#### Compulsory Subjects

35.500	Building Graphics	6	nil	nil
35.501	Building Construction I	6	nil	nil
35.502	Building Construction II	6	nil	35.501
35.503	Building Construction III	6	35.501, 35.551, 35.701	35.502
35.504	Building Construction IV	6	35.501, 35.552, 35.701	35.502
35.505	Building Construction V	5	35.503 or 35.504	nil
29.411	Surveying for Architects and Builders	2	nil	nil
35.551	Building Structures I	6	nil	35.501, 35.601
35.552	Building Structures II	7	35.502	35.551
35.553	Building Structures III	6	35.551	35.505, 35.552
35.581	Hist. Devel. of Building	2	nil	nil

#### Elective Subjects

35.506	Building Construction VI	5	35.505, 35.703	nil
35.507	Building Construction VII	5	35.505, 35.703	nil
35.508	Building Construction VIII	6	35.505, 35.553, 35.704	nil
35.554	Building Structures IV	4	35.553	nil
35.202	Soil Mechanics for Building	2	nil	nil
35.570	Environmental Studies	2	nil	nil
35.580	Building Design Analysis	3	35.505, 35.852, 35.704	nil
36.411	Town Planning	2	35.503	nil

### Building Science Stream

#### Compulsory Subjects

1.931	Physics I (Building)	8	nil	nil
35.670	Mathematics for Builders	6	nil	nil
35.601	Building Science I	4	nil	nil
35.602	Building Science II	6	1.091	nil
35.603	Building Science III	6	35.670	nil
35.651	Building Services I	2	35.602	nil
35.652	Building Services II	2	35.602	35.651

#### Elective Subjects

35.604	Building Science IV	3	35.601	nil
35.605	Building Science V	3	35.601	nil
35.606	Building Science VI	3	35.601	nil
35.607	Building Science VII	3	35.602	nil
35.608	Building Science VIII	6	35.603	nil
35.609	Building Sciences IX (Timber)	3	35.601	nil
35.653	Building Services III	4	35.651, 35.652	nil

### Management Studies Stream

#### Compulsory Subjects

35.701	Building Management I	2	nil	nil
35.702	Building Management II	2	35.701	nil
35.703	Building Management III	2	35.701	35.702

**Building Degree Course (continued)**

No.	Subject Name	Credit Points	Prerequisites	Co-requisites
35.704	Building Management IV	2	35.703, 35.504, 14.051	nil
14.051	Law for Builders I	2	nil	nil
14.052	Law for Builders II	2	14.051	nil

**Elective Subjects**

35.705	Building Management V	3	35.504, 35.703	nil
35.706	Building Management VI	3	35.704	nil
35.707	Building Management VII	3	35.704	nil
35.708	Building Management VIII	3	35.704, 35.910	nil
35.720	Commercial Arbitration	3	35.704	nil
14.053	Law for Builders III	2	14.052	nil

**Building Economics Stream****Compulsory Subjects**

35.801	Quantity Surveying I	4	35.503	nil
35.851	Building Economics I	6	14.002	nil
14.001	Intro. to Accounting A	2	35.702	nil
14.002	Intro. to Accounting B	2	14.001	nil
14.081	Intro. to Financial Anal.	4	14.002	nil

**Elective Subjects**

35.802	Quantity Surveying II	4	35.504, 35.870	nil
35.803	Quantity Surveying III	2	35.802	nil
35.852	Building Economics II	6	35.851	nil
35.853	Building Economics III	6	35.852	nil
35.870	Building Specifications	2	35.801	nil
35.880	Development Project	2	35.504, 35.852	nil

**Others****Compulsory Subjects**

35.900	Thesis	5	120 credit points	nil
35.910	Industry Semester	3	35.504, 35.703, 35.601	nil
	General Studies	3 each	nil	nil

Three General Studies subjects are compulsory and are to be selected from the list of General Studies Electives available.

## School of Town Planning

### Degree Course in Town Planning— BTP

The basic objective of the course is to train the 'general practitioner' in town planning, that is, a graduate who is well equipped to play a significant role in the work of government and local government planning agencies.

The course places emphasis on the several steps in the planning process, from decision making through civic survey, plan preparation, plan approval, to plan implementation and review. As planning is concerned with the creation of a better urban environment, as well as with policies for determining the best use of land at national, regional and local levels, students are also trained in aesthetic and civic design principles. Further attention is given to planning methodology and urban research techniques.

#### General Description of the Course

The course is of five years' duration and requires full-time attendance throughout First, Second and Fifth Years. Students are required to attend the University on a full-time basis for the first session of Third Year and for the second session of Fourth Year, the intervening period being devoted to practical experience as approved by the Head of the School.

The course leads to 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, on the basis of quality of performance throughout the whole course, with particular emphasis on the later years and in accordance with current Faculty regulations.

#### 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.

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### Town Planning Degree Course

#### Bachelor of Town Planning BTP

#### Year 1

		Hours per week	
		S1	S2
11.111	Design I	1	1
11.121	History of Architecture I	1	1
11.131	Graphic Communication I	9	9
11.211	Construction I	5	5
36.431	Town Planning Theory and Practice I	3	3
36.271	Environmental Science	6	6
	General Studies Elective	1½	1½
		26½	26½

First year students may be required to participate in a practical construction program outside the metropolitan area, involving a field exercise of approximately two weeks' duration.

#### Year 2

11.132	Graphic Communication II	6	6
36.432	Town Planning Theory and Practice II	3	3
36.441	Design II for Town Planners	6	6
36.451	History of Town Planning	2	0
36.461	Civic Engineering	2	2
27.294	Physical Geog. for Town Planners	0	4
	Two General Studies Electives	3	3
		22	24

#### Year 3—Part-Time Program

		Hpw	
		S1	S2
19.521	Statistical Methods and Data Processing	4	*
29.431	Surveying and Cartography	4	*
36.433	Town Planning Theory and Practice III	8	*
36.471	Planning Law and Admin.	4	*
		20	—

**Year 4—Part-Time Program**

		Hpw	
		S1	S2
36.434	Town Planning Theory and Practice IV	*	12
36.436	Urban Geography	*	3
53.321	Urban Sociology	*	2
36.438	Urban Government	*	3
			<hr/>
			20
			<hr/>

**Year 5**

8.017	Transportation Engineering	2	2
36.435	Town Planning Theory and Practice V	12	12
36.437	Civic Survey Camp	<hr/>	<hr/>
36.442	Civic and Landscape Design	4	4
36.481	Land Valuation and Economics	2	2
36.491	Thesis	1	1
	Advanced Gen. Studies Elective	1½	1½
		<hr/>	<hr/>
		22½	22½
		<hr/>	<hr/>

\* Practical experience as approved by the Head of the School.

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**Extension Courses**


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The Schools within the Faculty from time to time conduct extension courses in specialist fields of study related to architecture, building and town planning. These courses are normally open to qualified members of the various land-use professions, upon payment of a fee appropriate to the length of the particular course.

Graduate Enrolment Procedures

## Graduate Study

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### Qualifying Programs (for admission to Higher Degree Candidature)

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Students may only enrol in such programs after approval has been obtained from the relevant Higher Degree Committee.

Unless advised to the contrary successful applicants are required to attend for enrolment at the appropriate time and place as listed below. The letter offering a place must be taken to the enrolment centre.

Candidates who are continuing a qualifying program are required to attend for re-enrolment at the appropriate time and place as listed below.

**Note:** All qualifying students must lodge an authorised enrolment form with the Cashier on the day the enrolling officer signs the form. (See **Enrolment Procedures and Fees** section earlier in this handbook).

Friday 4 March  
2.00 pm to 6.00 pm  
Ground Floor Studio  
Faculty of Architecture

### Higher Degree Research Programs

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#### New Students

Students seeking admission to Higher Degree (Research) must make application as set out below.

*Successful applicants will be advised by letter concerning the method of enrolment.*

An application to register as a candidate for the degree of Master of Architecture, Master of Building, Master of Landscape Architecture or Master of Town Planning 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. The following specific conditions will apply:

**Master of Architecture:** An applicant for registration for the degree of Master of Architecture shall have been admitted to the Degree of Bachelor of Architecture in the University of New South Wales or in another approved University.

**Master of Building:** An applicant for registration for the Degree of Master of Building shall have been admitted to the Degree of Bachelor of Building in the University of New South Wales or in another approved University.

**Master of Landscape Architecture:** An applicant for registration for the degree of Master of Landscape Architecture shall have been admitted to the degree of Bachelor in the University of New South Wales or in another approved University, in an appropriate field.

**Master of Town Planning:** An applicant for registration for the Degree of Master of Town Planning shall have been admitted to the degree of Bachelor of Town Planning in the University of New South Wales or to a Bachelor Degree in Town or Regional Planning in another approved University.

### Re-enrolling Students

*Candidates registered for Higher Degrees (Research) are required to re-enrol at the commencement of each academic year. Unless advised to the contrary candidates should obtain re-enrolment forms and advice on procedure and fees from the office of the appropriate School after 1 January 1977. Each candidate must complete a re-enrolment form and submit it to the Cashier. (See Enrolment Procedures and Fees section earlier in this handbook.)*

A candidate who has completed all the work for a graduate degree except for the submission of a thesis is required to re-enrol as above *unless* the thesis is submitted by 18 March 1977 in which case the candidate is not required to re-enrol.

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## Masters Degree and Graduate Diploma Courses

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*Note:* All formal masters degree and graduate diploma students must lodge an authorised enrolment form with the Cashier on the day the enrolling officer signs the form. (See Enrolment Procedures and Fees section earlier in this handbook.)

### New Students

Students seeking admission to formal masters courses and graduate diploma courses are required to apply on the appropriate form and by the closing date specified for the particular course. Unless advised to the contrary successful applicants are required to attend for enrolment at the appropriate time and place as shown under 'Qualifying Programs'. The letter offering a place must be taken to the enrolment centre.

### Re-enrolling Students

Candidates continuing formal graduate courses including those who have completed their formal examination but have not submitted their project report are required to attend for re-enrolment at the appropriate time and place as listed under 'Qualified Programs'.

## Graduate Study

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### Higher Degrees—Research

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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 degree of Master of Architecture, Master of Building, Master of Landscape Architecture or Master of Town Planning. Facilities are also available 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.

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### Summary of the Conditions for the Award of a Master's Degree

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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, 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 with Honours 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.

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### Graduate Courses

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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 (Building Services)
4. Graduate Diploma in Housing and Neighbourhood Planning
5. 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.

## School of Architecture

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

This course provides for graduate study in several important aspects of acoustics, eg noise control in buildings, community noise control, auditorium design, machine, ventilation and air conditioning noise control, and acoustical systems and structures. It is designed for graduates in architecture, engineering or science who wish to specialize in acoustics, and is suitable for those who wish to practise as consultants or to find employment in industry, research establishments or in larger architectural and engineering offices.

#### 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.

1. A candidate for admission holding the degree of Bachelor of Science (Architecture) or Bachelor of Science (Pass Degree) of the University of New South Wales or equivalent qualification will be required to complete a preparatory year before admission to the course. Generally candidates from architecture faculties will be required to complete the qualifying subjects marked \* and candidates from science faculties will be required to complete the qualifying subjects marked †.

2. A candidate for admission holding the degree of Bachelor of Architecture, Bachelor of Building, Bachelor of Engineering or Bachelor of Science (Honours) of the University of New South Wales or equivalent qualification may be required to complete certain qualifying subjects as co-requisites. Generally candidates from architecture faculties will be required to complete the qualifying subjects marked \* and candidates from engineering and science faculties will be required to complete the qualifying subjects marked † unless they have already studied similar topics in their first degree courses.

#### Course Structure

The course has a duration of four sessions of part-time study. A credit point system has been adopted, one credit point being awarded for each hour/week time-

tabled. Session 1 provides 7 credit points and Session 2 9 credit points. Each student must obtain 16 credit points before being permitted to enrol in Session 3. Year 2 consists of a compulsory graduate project (6 credit points total), and electives (4 credit points each). Each student must complete at least 3 electives. Thus the minimum number of credit points for the award of the degree is  $(16 + 6 + 12) = 34$ . The number of electives offered in any session will depend on student numbers and interests.

		Hours per week	
		L.	T.
1.281G	Vibration and Wave Theory I*	3	0
1.287G	Vibration and Wave Theory II*	0	3
1.987G	Measurement Techniques	0	2
11.990G	Construction, Contracts and Documentation I†	3	0
11.991G	Construction, Contracts and Documentation II†	0	3
35.360G	Computer Techniques*†	3	0

\* Candidates holding the degree of BSc (Architecture) are required to complete these subjects.

† Candidates from Science Faculties are required to complete these subjects unless they have already studied similar topics in their first degree course.

#### Year 1

1.282G	Acoustic Theory	2	0
1.283G	Acoustic Measuring Systems	1	0
1.284G	Electro-acoustics	0	1
1.286G	Acoustic Laboratory and Analysis	0	3
11.651G	Mechanical Noise Sources	2	0
11.992G	Acoustics of Speech and Music	1	0
11.993G	The Ear and Hearing	1	0
11.994G	Hearing Conservation	0	1
11.995G	Community Noise	0	4
		7	9

#### Year 2\*

11.996G	Graduate Project (equivalent hours)	3	3
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#### Electives\*

1.285G	Advanced Physical Acoustics	4	0
5.652G	Noise Suppression Techniques	4	0
11.997G	Auditorium Acoustics	4	0
11.998G	Airborne & Impact Noise Control in Buildings	0	4
11.999G	Advanced Acoustics of Speech and Music	0	4

\* See Course Structure above.

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## Landscape Design Graduate Diploma Course\*

### GradDip

This course has been designed to extend the knowledge of architects to embrace an important environmental study closely associated with that of their own profession. It is a discipline which has so far received little attention in this country, yet may be expected to play a significant part in the future shaping of our environment.

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

### Admission Requirements

An applicant for admission to the Landscape Design 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.

### Year 1—Part-Time

		Hours per week			
		S1		S2	
		Lec.	Prac.	Lec.	Prac.
11.910G	History of Landscape Design	1	0	0	0
11.912G	Landscape Engineering	2	0	0	0
27.294	Physical Geography for Town Planners	0	0	2	2
43.215G	Plant Biology	1	2	0	0
43.216G	Ecology and Systematics	0	0	1	2
		4	2	3	4

### Year 2

11.913G	Theory and Practice of Landscape	1	0	1	0
11.914G	Forestry and Horticulture*	2	1	2	1
11.915G	Landscape Design	0	3	0	3
		3	4	3	4

\* Practical work involves a number of Saturday excursions.

## School of Building

## The Degrees of Master of Science (Building) and Master of Science (Building Services)

### Admission Requirements

The general conditions governing registration as a candidate for the degrees Master of Science (Building) and Master of Science (Building Services) 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 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 in exceptional circumstances to the course proper.
3. Applicants who have been admitted to the degree of Bachelor of Science (Architecture) at the University of New South Wales, or another approved University, will be required to complete those preparatory subjects listed below and indicated by an asterisk.
4. Other eligible applicants will be required to complete all the preparatory subjects listed below. However, applicants may receive exemption from one or more subjects, at the discretion of the Higher Degree Committee of the Faculty of Architecture, whose decision will be influenced by the education and experience of each applicant. Graduate experience in the building industry is considered an advantage in the selection of candidates.

### Preparatory Subjects

		Hours per semester
14.001	Introduction to Accounting A*	2
14.002	Introduction to Accounting B*	2
14.051	Law for Builders I*	2
14.052	Law for Builders II*	2
14.053	Law for Builders III*	2
35.504	Building Construction IV	6
35.506	Building Construction VI*	5
35.601	Building Science I	4
35.652	Building Services II*	4
35.704	Building Management IV	2
35.705	Building Management V	3

### Course Structure

Both courses are formal four-semester part-time courses comprising 36 credit points. Each credit point consists of class contact of one hour for one semester, except for the Graduate Project which is worth 7 credit points.

The first two semesters of both courses are devoted to general studies in computations, environmental requirements, building economics, operations planning, contract law and documentation and the interaction of the architecture, the structure and the services.

In the second two semesters, Master of Science (Building) students may choose elective subjects from the list below to make up a minimum of 13 credit points.

Master of Science (Building Services) students concentrate on practical aspects of building engineering in the second two semesters; a more detailed study of the various services and environmental factors; cost analyses and comparisons; overall studies of building feasibility and the role played by engineering services; responsibility of the various parties; all in all a broad view of the construction operation with some emphasis on engineering aspects.

### Master of Science (Building)

This four-session part-time course has been designed to provide opportunities for advanced study in the science of construction. It allows a certain amount of specialization in three inter-related 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; and
3. development and research aspects of construction with relevance to design, construction, product manufacture or research.

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

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### Master of Science (Building)

#### MSc(Building)

#### Semesters 1 and 2

		Hours per week	
		Semester 1	Semester 2
35.210G	Building Contracts and Documentation	2	
35.220G	Building Economics and Property Valuation		2
35.230G	Operations Planning I		4
35.360G	Computer Techniques	3	
35.380G	Services and the Environment	3	
35.390G	Building Structures and Services		2
Total		8	8

#### Semesters 3 and 4

		Hpw	
		S1	S2
35.240G	Graduate Project	3½	3½

In addition, at least 13 credit points from a selection of the following subjects, grouped according to the specializations described above.

#### Group A

		Hours per week for one semester
35.250G	Office and Personnel Management	2
35.260G	Architectural Programming	2
35.270G	Estate Management	2
35.280G	History of Building	2

#### Group B

35.290G	Advanced Construction I	4
35.300G	Advanced Construction II	4
35.310G	Advanced Equipment and Services	2

#### Group C

		Hours per week for one semester
35.320G	Operations Planning II	4
35.330G	Cost Planning and Analysis	2
35.340G	Computer Applications I	2
35.350G	Computer Applications II	2
35.370G	Experimental Techniques	2

The grouping is arbitrary, and the student is allowed to select subjects from any one of the three groups if they are available. Availability depends on the number of enrolments and on the numbers of students wishing to specialize in each of the groups. While the intention is to offer as many electives as possible, students should realize that the full range may not be offered in any one year.

### Master of Science (Building Services)

This four-session part-time course has been designed to provide specialist study in services and environmental engineering for graduates in Architecture and building, and for Engineering graduates who are involved in the building industry. The graduate program is directed at problems concerned with thermal conditions, illumination, noise, humidity and air purity and offers multi-disciplinary training, pointing to optimum solutions consistent with considerations of capital and maintenance costs. Special attention is given to the inter-relation of the building envelope and structure with thermal, electrical and hydraulic services and the performance of the building as a whole.

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# **Master of Science (Building Services)** **MSc(BuildServ)**

		Hours per week	
		Semester 1	Semester 2
<b>Semesters 1 and 2</b>			
35.210G	Building Contracts and Documentation	2	
35.220G	Building Economics and Property Valuation		2
35.230G	Operations Planning I		4
35.360G	Computer Techniques	3	
35.380G	Services and the Environment	3	
35.390G	Building Structures and Services		2
Total		8	8

## **Semesters 3 and 4**

35.240G	Graduate Project	3½	3½
35.400G	Economics and Services		2
35.410G	Materials for Services	2	
35.420G	Thermal Services	3	
35.430G	Electrical Services		3
35.440G	Hydraulic Services		2
35.450G	Energy Balance in Buildings	1	
Total		7½	8½

Students may choose to take additional elective subjects from the groups A, B and C above, subject to availability.

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**

A candidate 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.

## **Year 1—Part-Time**

		Hours per week	
		S1	S2
36.920G	Theory of Neighbourhood Planning	1	1
36.921G	Practice of Neighbourhood Planning	3	3
36.923G	Land and Housing Economics	0	2
36.924G	Urban Sociology	2	0
		6	6

## **Year 2**

36.921G	Practice of Neighbourhood Planning	4	4
36.922G	Communications and Public Utilities	0	2
36.925G	Housing Law and Administration	2	0
		6	6

## **School of Town Planning**

The School offers a graduate course leading to the award of a Graduate Diploma in Housing and Neighbourhood Planning (GradDip). This course is normally conducted over two years part-time, but may be offered over one year full-time, depending upon demand.

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# **Housing and Neighbourhood Planning** **Graduate Diploma Course** **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

# Conditions for the Award of Higher Degrees

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

## First Degrees

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

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.

## Higher Degrees

For the list of graduate degrees by research and course work, arranged in faculty order, see **Disciplines of the University: Faculty Table (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.

Title	Abbreviation	Calendar/Handbook
Doctor of Science	DSc	Calendar
Doctor of Letters	DLitt	Calendar
Doctor of Laws	LLD	Calendar
Doctor of Medicine in the Faculty of Medicine	MD	Calendar Medicine
Doctor of Philosophy	PhD	Calendar and all faculties
Master of Applied Science	MAppSc	Applied Science
Master of Architecture	MArch	Architecture

## Higher Degrees

\*Not including General Studies Handbook.

**Higher Degrees  
(continued)**

Title	Abbreviation	Calendar/Handbook
Master of Arts	MA(Hons) MA	Arts Military Studies Arts Military Studies
<b>Master of Building</b>	<b>MBuild</b>	<b>Architecture</b>
Master of Business Administration	MBA	Commerce**
Master of Business Administration	MBA	AGSM
Master of Chemistry by Formal Course Work	MChem	Sciences*
Master of Commerce (Honours)	MCom(Hons)	Commerce
Master of Commerce by Formal Course Work	MCom	Commerce
Master of Education	MEd	Professional Studies
Master of Engineering	ME	Applied Science Engineering
Master of Engineering without Supervision		Military Studies Sciences*
Master of Engineering Science	MEngSc	Engineering
Master of General Studies	MGenStud	General Studies
Master of Health Administration	MHA	Professional Studies
Master of Health Personnel Education	MHPed	Calendar†
Master of Health Planning	MHP	Professional Studies
<b>Master of Landscape Architecture</b>	<b>MLArch</b>	<b>Architecture</b>
Master of Laws by Research	LLM	Law
Master of Librarianship by Formal Course Work	MLib	Professional Studies
Master of Librarianship by Research		
Master of Mathematics	MMath	Sciences*
Master of Optometry	MOptom	Sciences*
Master of Psychology	MPsychol	Sciences‡
Master of Public Administration	MPA	AGSM
Master of Science	MSc	Applied Science Engineering
Master of Science without Supervision		Medicine Military Studies Professional Studies Sciences*‡
<b>Master of Science (Acoustics)</b>	<b>MSc(Acoustics)</b>	<b>Architecture</b>
Master of Science and Society by Formal Course Work	MScSoc	Sciences*
Master of Science (Biotechnology)	MSc(Biotech)	Sciences‡
<b>Master of Science (Building)</b>	<b>MSc(Building)</b>	<b>Architecture</b>
<b>Master of Science (Building Services)</b>	<b>MSc(Building Services)</b>	<b>Architecture</b>
Master of Social Work by Research	MSW	Professional Studies
Master of Social Work by Formal Course Work		
Master of Statistics	MStats	Sciences*

Title	Abbreviation	Calendar/Handbook	
Master of Surgery	MS	Medicine	
Master of Surveying	MSurv	Engineering	
Master of Surveying without Supervision			
Master of Surveying Science	MSurvSc	Engineering	
Master of Town Planning	MTP	Architecture	
Graduate Diploma	GradDip	Applied Science Architecture Engineering Sciences*‡	<b>Graduate Diplomas</b>
Graduate Diploma in the Faculty of Professional Studies	DipArchivAdmin DipEd DipLib GradDip	Professional Studies	

\*\*Course withdrawn at end of 1977.

\*Faculty of Science.

†Professorial Board.

‡Faculty of Biological Sciences.

**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:

**Doctor of Philosophy (PhD)**

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

**Qualifications**

**A** hold an honours degree from the University of New South Wales; or

**B** hold an honours degree of equivalent standing from another approved university; or

**C** if he 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 appropriate Faculty or Board of Studies as equivalent to honours; or

**D** 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 Faculty or Board of Studies.

**3.** When the Faculty or Board of Studies is not satisfied with the qualifications submitted by a candidate, the Faculty or Board of Studies may require him, before he is permitted to register, to undergo such examination or carry out such work as the Faculty or Board of Studies may prescribe.

**4.** A candidate for registration for a course of study leading to the degree of Doctor of Philosophy shall:

**Registration**

**A** apply to the Registrar on the prescribed form at least one calendar month before the commencement of the session in which he desires to register; and

**B** submit with his application a certificate from the head of the University school in which he proposes to study stating that the candidate is a fit person to undertake a course of study and research leading to the degree of Doctor of Philosophy and that the school is willing to undertake the responsibility of supervising the work of the candidate and of reporting to the Faculty or Board of Studies at the end of the course on the merits of the candidate's performance in the prescribed course.

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

**A** a candidate fully engaged in advanced study and research for his degree, who before registration was engaged upon research to the satisfaction of the Faculty or Board of Studies, may be exempted from not more than two academic sessions;

**B** in special circumstances the Faculty or Board of Studies may grant permission for the candidate to spend not more than one calendar year of his program in advanced study and research at another institution provided that his work can be supervised in a manner satisfactory to the Faculty or Board of Studies;

**C** in exceptional cases, the Professorial Board on the recommendation of the Faculty or Board of Studies 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 himself for examination not later than ten academic sessions from the date of his registration. A candidate not fully engaged in research shall present himself for examination not later than twelve academic sessions from the date of his registration. In special cases an extension of these times may be granted by the Faculty or Board of Studies.

**7.** The candidate shall be required to devote his whole time to advanced study and research, save that:

**A** the Faculty or Board of Studies may permit a candidate on application to undertake a limited amount of University teaching or outside work which in its judgement will not interfere with the continuous pursuit of the proposed course of advanced study and research;

**B** 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 Faculty or Board of Studies shall prescribe a minimum period for the duration of the program;

**C** in special circumstances, the Faculty or Board of Studies 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 his program in a school of the University. In such a case the Faculty or Board of Studies shall prescribe for the duration of his program a minimum period which, in its opinion, having regard to the proportion of his time which he is able to devote to the program in the appropriate University school is equivalent to the six sessions ordinarily required.

**8.** Every candidate shall pursue his program under the direction of a supervisor appointed by the Faculty or Board of Studies 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 Faculty or Board of Studies may permit candidates to conduct their 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 his research for approval by the Faculty or Board of Studies. After the topic has been approved it may not be changed except with the permission of the Faculty or Board of Studies.

**10.** A candidate may be required by the Faculty or Board of Studies to attend a formal course of study appropriate to his work.

**Thesis**

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

**A** the greater proportion of the work described must have been completed subsequent to registration for the PhD degree;



**B** it must be an original and significant contribution to the knowledge of the subject;

**C** 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;

**D** it must reach a satisfactory standard of expression and presentation.

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

**13.** Every candidate shall be required to submit with his thesis a short abstract of the thesis comprising not more than 600 words.

*The abstract shall indicate:*

**A** the problem investigated;

**B** the procedures followed;

**C** the general results obtained;

**D** 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 his thesis any work or material which he has previously submitted for a university degree or other similar award.

**15.** The candidate shall give in writing two months' notice of his intention to submit his thesis and such notice shall be accompanied by the appropriate fee.

Entry for  
Examination

**16.** Four copies of the thesis shall be submitted together with a certificate from the supervisor that the candidate has completed the course of study prescribed in his case. The 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 he has 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 Faculty or Board of Studies, at least one of whom shall be an external examiner.

**19.** After examining the thesis the examiners may:

**A** decide that the thesis reaches a satisfactory standard; or

**B** recommend that the candidate be required to re-submit his thesis in revised form after a further period of study and/or research; or

**C** recommend without further test that the candidate be not awarded the degree of Doctor of Philosophy.

**20.** If the thesis reaches the required standard, the examiners shall arrange for the candidate to be examined orally, and, at their discretion, by written papers and/or practical examinations on the subject of the thesis and/or subjects relevant thereto, save that on the recommendation of the examiners the Faculty or Board of Studies may dispense with the oral examination.

**21.** If the thesis is of satisfactory standard but the candidate fails to satisfy the examiners at the oral or other examinations, the examiners may recommend the University to permit the candidate to represent the same thesis and submit to a further oral, practical or written examination within a period specified by them but not exceeding eighteen months.

**22.** At the conclusion of the examination, the examiners will submit to the Faculty or Board of Studies a concise report on the merits of the thesis and on the examination results, and the Faculty or Board of Studies shall recommend whether or not the candidate may be admitted to the degree.

**23.** A candidate shall be required to pay such fees as may be determined from time to time by the council.

**Master of  
Architecture (MArch)**

**1.** An application to register as a candidate for the degree of Master of Architecture 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. A** 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.

**B** In special circumstances a person may be permitted to register as a candidate for the degree if he submits evidence of such academic and professional attainments as may be approved by the Faculty of Architecture (hereinafter referred to as 'the Faculty') on the recommendation of its Higher Degree Committee.

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

**4.** In every case, before permitting an applicant to register as a candidate, the Faculty shall be satisfied that adequate supervision and facilities are available.

**5.** 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;

and shall pay such fees as may be determined from time to time by the Council.

**6.** 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, three copies of which shall be presented in a form which complies with the requirements of the University for the preparation and submission of higher degrees theses.† The candidate may submit also for examination any work he has published, whether or not such work is related to the thesis.

**7.** 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.

**8.** The investigation, design and other work as provided in paragraph **6.** shall be carried out under the direction of a supervisor appointed by the Faculty or under such conditions as the Faculty may determine.

**9.** 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 Faculty, be reduced by up to two sessions.

**10.** For each candidate there shall be at least two examiners appointed by the Professorial Board on the recommendation of the Faculty, one of whom shall, if possible, be an external examiner.

**1.** An application to register as a candidate for the degree of Master of Building 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.

**Master of Building  
(MBuild)**

**2. A** 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.

**B** In special circumstances a person may be permitted to register as a candidate for the degree if he submits evidence of such academic and professional attainments as may be approved by the Faculty of Architecture (hereinafter referred to as 'the Faculty') on the recommendation of its Higher Degree Committee.

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

**4.** In every case, before permitting an applicant to register as a candidate, the Faculty shall be satisfied that adequate supervision and facilities are available.

**5.** 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;

and shall pay such fees as may be determined from time to time by the Council.

**6.** 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 building, three copies of 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.

**7.** 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.

**8.** The investigation, design and other work as provided in paragraph **6.** shall be carried out under the direction of a supervisor appointed by the Faculty or under such conditions as the Faculty may determine.

**9.** 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 Faculty, be reduced by up to two sessions.

**10.** For each candidate there shall be at least two examiners appointed by the Professorial Board on the recommendation of the Faculty, one of whom shall, if possible, be an external examiner.

### **Master of Landscape Architecture (MLArch)**

**1.** An applicant to register for the degree of Master of Landscape Architecture (MLArch) 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.

**2. A** 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 field.

**B** In special circumstances a person may be permitted to register as a candidate for the degree if he submits evidence of such academic and professional attainments as may be approved by the Faculty of Architecture (hereinafter referred to as 'the Faculty') on the recommendation of its Higher Degree Committee.

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

**4.** In every case, before permitting an applicant to register as a candidate, the Faculty shall be satisfied that adequate supervision and facilities are available.

**5.** 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;

and shall pay such fees as may be determined from time to time by the Council.

**6.** 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 Landscape Architecture, three copies of 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.

\*See Conditions for the Award of Degrees in the Calendar.

**7.** 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.

**8.** The investigation, design and other work as provided in paragraph **6.** shall be carried out under the direction of a supervisor appointed by the Faculty or under such conditions as the Faculty may determine.

**9.** 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 Faculty, be reduced by up to two sessions.

**10.** For each candidate there shall be at least two examiners appointed by the Professorial Board on the recommendation of the Faculty, one of whom shall, if possible, be an external examiner.

**1.** The degree of Master of Science (Acoustics) may be awarded by the Council on the recommendation of the Professorial Board to a candidate who has satisfactorily completed a program of advanced study comprising formal course work and including the submission of a report on a project approved by the Higher Degree Committee of the Faculty of Architecture.

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

**2. A** An applicant for registration for the degree shall have been admitted to the degree of Bachelor of Science (Architecture), Bachelor of Architecture, Bachelor of Building, Bachelor of Science or Bachelor of Engineering in the University of New South Wales or an equivalent degree of another approved university.

**Qualifications**

**B** 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.

**C** 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.

**3. A** An application to register as a candidate for the degree of Master shall be made on the prescribed form which shall be lodged with the Registrar at least six (6) weeks before the commencement of the course.

**Registration**

**B** A candidate for the degree shall be required to undertake such course of formal study, pass such examinations and submit a report on a project as prescribed by the Higher Degree Committee of the Faculty of Architecture.

**C** 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.

**D** The progress of a candidate shall be reviewed annually by the Higher Degree Committee of the Faculty of Architecture on the recommendation of the Head of School in which the candidate is registered and as a result of such review the Higher Degree Committee may terminate the candidature.

**4. A** A report on a project approved by the Higher Degree Committee of the Faculty of Architecture 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**

**B** The format of the report shall accord with the instructions of the Head of the School and shall comply with the requirements of the Higher Degree Committee of the Faculty of Architecture for the submission of project reports.

**C 1.** The report shall be examined by two examiners appointed by the Higher Degree Committee of the Faculty of Architecture.

**2.** A candidate may be required to attend for an oral or written examination.

**5.** Consequent upon consideration of the examiners' reports, and the candidate's other results in the prescribed course of study, the Higher Degree Committee of the Faculty of Architecture shall recommend to the Professorial Board 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 (Building Services) (MSc (Building Services))**

**1.** The degree of Master of Science (Building Services) may be awarded by the Council on the recommendation of the Professorial Board to a candidate who has satisfactorily completed a program of advanced study comprising formal course work and including the submission of a report on a project approved by the Higher Degree Committee of the Faculty of Architecture, hereinafter referred to as 'the Committee'.

## Qualifications

**2. A** An applicant for registration for the degrees shall normally have been admitted to an appropriate degree in the University of New South Wales or other approved university at a level acceptable to the Committee.

**B** 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.

**C** Notwithstanding any other provisions of these conditions the Committee may require an applicant to demonstrate fitness for registration by completing a qualifying program as determined by the Committee.

## Registration

**3. A** An application to register as a candidate for the degree shall be made on the prescribed form which shall be lodged with the Registrar six weeks before commencement of the course. The Committee shall determine the date of registration.

**B** A candidate for the degree shall be required to undertake such formal courses of study and pass such examinations as may be prescribed by the Committee, and, where specified, submit a report on a project.

**C** The progress of a candidate shall be reviewed at least once annually by the Committee and as a result of its review the Committee may terminate candidature or take such other action as it considers appropriate.

**D** The course is offered on a part-time basis only. Normally, a part-time candidate shall not be considered for the award of the degree until the lapse of four sessions from the date of registration. The maximum period of candidature shall be 6 academic sessions for a part-time student. In special cases an extension of time may be granted by the Committee.

<p><b>4. A</b> Where specified, a report on a project approved by the Committee may be submitted at, or before, the completion of the formal section of the course but, unless exceptional circumstances prevail, shall be submitted not later than one session after completion of the course.</p> <p><b>B</b> The format of the report shall accord with the instructions of the School and shall comply with the requirements of the University for the submission of project reports as stated elsewhere in the Calendar.</p> <p><b>C</b> The examination of the project will be conducted by the Committee which will appoint two examiners who shall advise the Committee that the report is:</p> <ol style="list-style-type: none"> <li>1. very satisfactory;</li> <li>2. satisfactory;</li> <li>3. satisfactory subject to minor corrections as listed being made to the satisfaction of the Head of School;</li> <li>4. not satisfactory but may be re-submitted in a revised form;</li> <li>5. not satisfactory and may not be re-submitted in a revised form.</li> </ol> <p><b>D</b> In considering a recommendation made in terms of <b>4.</b> of sub-condition <b>C</b> of this condition, the Committee may specify the period within which the report is to be re-submitted.</p>	<p><b>Project</b></p>
<p><b>5.</b> The Committee, after considering the candidate's work in the prescribed course of study, shall recommend to the Professorial Board whether or not the candidate should be admitted to the degree.</p>	<p><b>Recommendation for Admission to Degree</b></p>
<p><b>6.</b> An approved candidate shall pay such fees as may be determined from time to time by the Council.</p>	<p><b>Fees</b></p>
<p><b>1.</b> The degree of Master of Science (Building) may be awarded by Council on the recommendation of the Professorial Board to a candidate who has satisfactorily completed a program of advanced study comprising formal course work and including the submission of a report on a project approved by the Higher Degree Committee of the Faculty of Architecture.</p>	<p><b>Master of Science (Building) (MSc(Building))</b></p>
<p><b>2. A</b> 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 Higher Degree Committee of Faculty.</p> <p><b>B</b> 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 Faculty.</p> <p><b>C</b> Notwithstanding any other provisions of these conditions the Higher Degree Committee of the Faculty 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 may determine.</p>	<p><b>Registration</b></p>

## Qualifications

**3. A** An application to register as a candidate for the degree of Master shall be made on the prescribed form which shall be lodged with the Registrar at least six (6) weeks before the commencement of the course.

**B** A candidate for the degree, shall be required to undertake such course of formal study, pass such examinations and, where specified, submit a report on a project, as prescribed by the Higher Degree Committee of the Faculty.

**C** No candidate shall be considered for the award of the degree until the lapse of four sessions from the date from which registration becomes effective.

**D** The progress of a candidate shall be reviewed annually by the Higher Degree Committee of the Faculty on the recommendation of the Head of School in which the candidate is registered and as a result of such review the Higher Degree Committee may terminate the candidature.

## Project

**4. A** A report on Graduate project approved by the Higher Degree Committee of the Faculty shall be submitted at the completion of the formal section of the course, not later than one year after the completion of the course.

**B** The format of the report shall accord with the instructions of the Head of School and shall comply with the requirements of the Higher Degree Committee of the Faculty for the submission of project reports.

**C 1.** The report shall be examined by two examiners appointed by the Higher Degree Committee of the Faculty.

**2.** A candidate may be required to attend for an oral or written examination.

**5.** Consequent upon consideration of the examiners' reports, where appropriate, and the candidate's other results in the prescribed course of study, the Higher Degree Committee of the Faculty shall recommend to the Professorial Board 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 Town Planning (MTP)

**1.** An application to register as a candidate for the degree of Master of Town Planning 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. A** 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.

**B** In special circumstances a person may be permitted to register as a candidate for the degree if he submits evidence of such academic and professional attainments as may be approved by the Faculty of Architecture (hereinafter referred to as 'the Faculty') on the recommendation of its Higher Degree Committee.

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



**4.** In every case, before permitting an applicant to register as a candidate, the Faculty shall be satisfied that adequate supervision and facilities are available.

**5.** 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;

and shall pay such fees as may be determined from time to time by the Council.

**6.** 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 Town or Regional Planning, three copies of 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.

**7.** 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.

**8.** The investigation, design and other work as provided in paragraph **6.** shall be carried out under the direction of a supervisor appointed by the Faculty or under such conditions as the Faculty may determine.

**9.** 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 Faculty, be reduced by up to two sessions.

**10.** For each candidate there shall be at least two examiners appointed by the Professorial Board on the recommendation of the Faculty, one of whom shall, if possible, be an external examiner.

\*See Conditions for the Award of Degrees in the Calendar.

## Graduate Diploma

### Graduate Diploma

**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:

**A** a graduate of the University of New South Wales or other approved university,

**B** 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 and Textbooks

## Identification of Subjects by Numbers

Each of the subjects taught in the University is identifiable both by number and by name. This is a fail-safe measure at the points of enrolment and examination against a student nominating a subject other than the one intended. Subject numbers are allocated by the Assistant Registrar, Examinations and Student Records, and the system of allocation is:

1. The School offering a subject is indicated by the number before the decimal point;
2. If a subject is offered by a Department within a School, the first number after the decimal point identifies that Department;
3. The position of a subject in a sequence is indicated by the third number after the decimal point. For example, 2 would indicate that the subject is the second in a sequence of subjects;
4. Graduate subjects are indicated by the suffix G.

As indicated above, a subject number is required to identify each subject in which a student is to be enrolled and for which a result is to be returned. Where students may take electives within a subject, they should desirably be enrolled initially in the particular elective, and the subject numbers allotted should clearly indicate the elective. Where it is not possible for a student to decide on an elective when enrolling or re-enrolling, and separate examinations are to be held in the electives, Schools should provide to the Examinations and Student Record Section in April (Session 1) and August (Session 2) the names of students taking each elective. Details of the actual dates in April and August are set out in the Calendar of Dates earlier in this volume.

Those subjects taught in each Faculty are listed in full in the handbook of that Faculty, together with the subject description and the required textbook list, in the section entitled Subject Descriptions and Textbooks.

The identifying numbers for each School are set out below.

### Information Key

The following is the key to the information supplied about each subject listed below: S1 (Session 1); S2 (Session 2); S1 + S2 (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 not known at time of publication); L (Lecture, followed by hours per week); T (Laboratory/Tutorial, followed by hours per week).

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*Subjects also offered for courses in this Handbook		
1 School of Physics*	Science	65
2 School of Chemistry	Science	
3 School of Chemical Engineering	Applied Science	
4 School of Metallurgy	Applied Science	
5 School of Mechanical and Industrial Engineering*	Engineering	65
6 School of Electrical Engineering	Engineering	
7 School of Mining Engineering	Applied Science	
8 School of Civil Engineering*	Engineering	66
9 School of Wool and Pastoral Sciences	Applied Science	
10 School of Mathematics	Science	
11 School of Architecture	Architecture	66
12 School of Psychology	Biological Sciences	
13 School of Textile Technology	Applied Science	
14 School of Accountancy*	Commerce	76
15 School of Economics*	Commerce	77
16 School of Health Administration	Professional Studies	
17 Biological Sciences*	Biological Sciences	77
18 Department of Industrial Engineering	Engineering	
19 School of Transportation and Traffic*	Engineering	78
20 School of Highway Engineering	Engineering	
21 Department of Industrial Arts	Professional Studies	
22 School of Chemical Technology	Applied Science	
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	78
28 School of Marketing	Commerce	
29 School of Surveying*	Engineering	78
30 Department of Behavioural Science	Commerce	
31 School of Optometry	Science	
33 Graduate School of Business	Commerce	
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School, Department etc	Faculty	Page
*Subjects also offered for courses in this Handbook		
38 School of Food Technology	Applied Science	
40 Professorial Board		
41 School of Biochemistry	Biological Sciences	
42 School of Biological Technology	Biological Sciences	
43 School of Botany*	Biological Sciences	
44 School of Microbiology	Biological Sciences	
45 School of Zoology	Biological Sciences	
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	
59 School of Russian	Arts	
62 School of History and Philosophy of Science	Arts	
63 School of Social Work	Professional Studies	
64 School of German	Arts	
65 School of Spanish and Latin American Studies	Arts	
66 Subjects Available from Other Universities		
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	
85 Australian Graduate School of Management	AGSM	
90 Faculty of Law	Law	
97 Division of Postgraduate Extension Studies		

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## School of Physics

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### Undergraduate Study

#### 1.931

#### Physics I (Building)

8 credit points; compulsory. Prerequisites: nil.

Mechanics of solids: Kinematics. Newton's Laws of motion, work and energy. Atomistic description of mechanical properties of matter. Atomic structure of matter. Elasticity. Plasticity: dislocations, fracture, viscosity. Electrostatics, electromagnetism and D.C. circuits: Coulomb's Law. Electric field. Electric potential. Capacitance. Electrical energy sources. Conductors. Resistivity. Atomic view of conduction. EMF. Kirchhoff'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. Convection. Conduction. Radiation. Black body. Emission. Absorption. Light. Electro-magnetic spectrum. Huyghens' principle. Curved mirrors. Lenses. Dispersion. Interference. Polarization. Photometry. Colorimetry. Sound. Longitudinal waves. Overtones. Intensity levels. Decibels. Quality of sound.

### Graduate Study

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

#### 1.281G

#### Vibration and Wave Theory I

S1 L2T1

For MSc(Acoustics) students.

Simple oscillator, damped oscillator, ordinary differential equations, complex numbers, forced vibrations and resonance, coupled oscillators. Plane waves, interference and diffraction.

#### 1.282G

#### Acoustic Theory

S2 L1½ T½

For MSc(Acoustics) students.

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.

#### 1.283G

#### Acoustic Measuring Systems

S1 L1T0

For MSc(Acoustics) students.

Microphones, amplifiers, loudspeakers, filters, recorders, pickups, noise generators. Acoustic measuring instruments.

#### 1.284G

#### Electro-Acoustics

S2 L1T0

For MSc(Acoustics) students.

Sound reinforcement systems; ambiophony; assisted resonance. Special requirements for translation; language laboratories.

#### 1.285G

#### Advanced Physical

#### Acoustics (Elective)

S1 L3T1

For MSc(Acoustics) students.

Vibrating systems; coupled oscillators, beams, membranes, plates, resonators, acoustic filters; analogues, 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.

#### 1.286G

#### Acoustic Laboratory and Analysis

S1 L1T2

For MSc(Acoustics) students.

Practical experiments related to the subject matter of 1.282G Acoustic Theory.

Theory and practice of digital methods of analysis in the time and frequency domains.

#### 1.287G

#### Vibration and Wave Theory II

S2 L2½ T½

For MSc(Acoustics) students.

Fourier analysis, guided waves, electrical analogs, analysis of networks. Statistical distributions, probability, noise, correlation, sampling and digital procedures.

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## School of Mechanical and Industrial Engineering

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### Graduate Study

#### 5.652G

#### Noise Suppression Techniques (Elective)

Noise reduction requirements; noise codes (industrial and community). Noise measurement methods and instruments; random noise, spectral analysis, microphone sensitivity, directivity, etc. Power determination. Ventilation system noise; excitation, propagation (cut-off, rotating modes, acoustic modes). Silencing techniques (splitters, absorbers); transmission and insertion loss; measurement; radiation into rooms. Jet flow noise.

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## School of Civil Engineering

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### Undergraduate Study

**8.017**

#### Transportation Engineering

History, development and characteristics of modes of transport. Fundamentals and evaluation of transport systems—performance and output. Interaction between land use and traffic demand.

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## School of Architecture

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### Undergraduate Study

#### Design

The design and construction of building and environment, including the solution of functional problems, study and application of specialized building techniques, engineering services and equipment; documentation; estimating and building job organization. In all years theoretical aspects are covered in lectures and applied by students in studio work.

The first three years give a basic understanding primarily in the functional and practical aspects of architecture; the last two years involve students additionally in aesthetic and philosophic values.

**11.111**

#### Design I

A survey of the visual environment of man: large scale environment, natural, modified by man and man-made; man's settlements: cities, towns and villages. Urban precincts, squares, streets, parks. The 'equipment' of public environment. Buildings. Architectural provisions for individual man.

(In studio work of other subjects the principles of two- and three-dimensional composition are introduced and exercises are given beginning with the simple elements including building elements and simple spaces with simple functions.)

**11.112**

#### Design II

The design process. Design for needs of individuals and small groups based on physical factors of health, comfort, safety and convenience. Emphasis on internal environment.

Inter-relation of people within small groups. Relationship between internal and external spaces. Design of small and simple multi-cell buildings. Influence of climate, structure and materials on architecture.

**11.113**

#### Design III

Design process and its application in larger and more complex architectural problems. Larger groups of people and adequate provision for their needs. Design of buildings becoming more complex in function, form and structure.

Related buildings with simple functions and massing, and control of external spaces. Design for comfort and efficiency under diverse conditions. Design of buildings with special requirements of structure, material and/or equipment.

**11.151**

#### Architecture A

Discussion and application in the studios. The study of various theories and philosophies of architecture with the emphasis on aesthetics. The aims and responsibilities of the architect. Study of spatial relationships. Group building design and equipment of interior and exterior spaces. Landscaping.

The concept of the totality of architecture and an awareness of the inter-relation of the multiplicity of factors and influences which determine the final result. Problems in urban design within the concept of total architecture, involving the creation and control of the human environment, its construction and implementation in all aspects.

**11.152**

#### Architecture B

A personal philosophy of architecture with the emphasis on mental and spiritual needs. The continuation at a more detailed and complex level of the concept of 'total architecture'. Problems involving the mental and spiritual needs of the individual and the society. Advanced planning involving urban and environmental design; the associated questions of economics and services; and an awareness of developing trends in management and construction techniques in the building world.

**11.501**

#### Introduction to Landscape Architecture

A historical overview of social attitudes to landscape. Contemporary landscape philosophies and policies. The role of the landscape architect as a professional and as a member of a multi-disciplinary team involved with the management and design of natural and modified ecosystems.

**11.513**

#### Landscape Design III

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.

**11.514****Landscape Design IV**

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.

**11.541****Physical Environment**

Basic climatology, geology, geomorphology, and pedology, with particular emphasis on the Sydney region. Observation, selection and interpretation of physical resource data.

**11.551****Natural Communities**

*Prerequisites: 11.541 Physical Environment and 17.011 Biology of Mankind.*

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.

**11.561****Fundamental Landscape Techniques**

Acquisition of basic skills in report writing, map reading (including appreciation of landforms, drainage patterns, contours and slope gradients), land measurement and elementary surveying methods.

**11.571****Landscape Appreciation**

*Prerequisite: 11.561 Fundamental Landscape Techniques.*  
*Co-requisite: 11.551 Natural Communities.*

Observation and interpretation of both the physical and biological environment 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.

**11.8111****Theory of Architecture A1 (Elective)**

The theory of synthesis of form. Sources of architectural form: the human context, the environmental context, materials of construction. The central core or 'idea' of the architectural synthesis. Priorities of criteria. Decision theory. Models of the design-process from objective and subjective points of view.

The parameters of a problem. Conflict and limitation. Economy and waste. The theory of balanced solutions. Interrelation between the whole and the parts of the formal synthesis.

**11.8112****Theory of Architecture A2 (Elective)**

The speculative approach to the use of building materials, of structural elements and construction methods in relation to the mental realm. Relationship of the building to instructive, emotional, rational, intentional and intuitive needs and responses. Architectural ethics. Honesty and falsehood in architecture. The question of styles, the original and the copy. Relation between function and truth, truth and beauty. Introduction to the philosophy of aesthetics.

**11.8121****Theory of Architecture B1 (Elective)**

The philosophical approach to the order and directions of space. The meaning of number and geometry in architecture. The principle of proportion. The metaphysical basis of the spatial order in architecture. Principles of architectural symbolism and principles of sacred architecture.

**11.8122****Theory of Architecture B2 (Elective)**

Principles of sacred architecture in the great spiritual traditions. Elements of sacred geometry incorporated into sacred architecture in a general sense. The meaning and symbolism of the architectural elements according to the Christian, Moslem, Hindu and Buddhist doctrines. The universality of the idea of the sacrifice built into the traditional house, the tent, the temple and the cathedral in sacred architecture.

**11.8711****Landscape Design A1 (Elective)**

Physiography and Soils. An examination of landscape forms with reference to their origin and progressive modification through natural forces. The origin, classification and distribution of soils. Erosion and soil stabilization techniques with particular reference to the Australian continent.

**11.8712****Landscape Design A2 (Elective)**

Plants and Plant Selection. Elementary plant morphology and physiology with special reference to problems associated with site development and atmospheric pollution. Ecology as a basis of Landscape Design and plant selection. Distribution of major plant species in New South Wales with special reference to the coastal zone.

**11.8721****Landscape Elective B1—Urban Landscaping**

Urban Landscaping. A series of lectures concerned with analysis, design and techniques of the man-modified environment. The treatment of spaces between buildings; their design, purpose, function and maintenance is investigated, together with construction techniques and costing. Linkages with the total environment and open space concepts are studied.

## 11.8722

### Landscape Elective B2—Landscape Planning

Landscape Planning. Current techniques and recent case studies of land use planning based upon an analysis of natural phenomena and features. Examples studied may include national park and recreational park policies and issues concerning agricultural lands, extractive industries and conservation.

## History of Architecture

### 11.121

#### History of Architecture I

A broad and general treatment of the history of architecture from the earliest times to the present day. **1.** Introduction. A framework of reference for architectural history: A Architecture as the 'built environment'; a partnership of man and nature. B The Human and environmental influences that affect architecture throughout history. **2.** A general chronological survey: Primitive and communal architecture; the ancient world; the classic world of Greece and Rome; the Dark Ages; Medieval architecture; Renaissance architecture. **3.** A general chronological survey: Baroque and Rococo architecture; Rationalism, Romanticism and the Industrial Revolution; the twentieth century.

### 11.122

#### History of Architecture II

A more detailed treatment of some aspects of history of architecture and their relevance today. **1.** A brief history of planning and urban design as a response to human needs and its expression as architectural space. **2.** Some important structural, constructional, technological and organizational innovations and their influences, particularly in the Middle Ages, nineteenth and twentieth centuries. **3.** The evolution of form, proportion and detail, and other related visual aspects of architecture, particularly in Classic, Renaissance and twentieth century architecture.

### 11.123

#### History of Architecture III

A history of architecture in Australia, in which the general studies of first and second years find more particular application. **1.** The historical, human and environmental context of Australian architecture. **2.** Architecture from the foundation of the colony to the end of World War I. **3.** Architecture since World War I.

#### Textbooks

*History of Architecture I, II & III:*

Fletcher Sir B. F. *A History of Architecture on the Comparative Method* 17th ed Athlone

Pevsner N. *An Outline of European Architecture* 7th ed Penguin

*For History of Architecture III only:*

Freeland J. M. *Architecture in Australia: A History* Cheshire

## 11.531

### Landscape Pre-History

The history of landscape evolution with particular reference to the Australian region. Continental drift, orogenesis, ice ages and climatic change. First pre-literate human societies. Hunter-gatherers, herders and farmers. The effects of man's activities upon the environment. Extant primitive societies.

## 11.532

### History of Landscape Architecture

*Prerequisites: 11.531 Landscape Prehistory.*

Changing patterns of land-use throughout history as a reflection of their times and an expression of man's attitude toward nature and of 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. Eastern landscape traditions—Chinese, Indian and Japanese garden design and their influence on western landscape architecture. The emergence of landscape architecture in North America and Australia.

## 11.8511

### Historical Research A1 (Elective)

## 11.8512

### Historical Research A2 (Elective)

A basic knowledge and training in research in the field of Australian architectural history. An appreciation of the purpose of the research, familiarization with sources of materials and the way in which these are best used; proper techniques in the recording and cataloguing of material together with its critical assessment and evaluation and its integration, interpretation and presentation. Application and practice in a small but thorough research project.

## 11.8521

### Historical Research B1 (Elective)

## 11.8522

### Historical Research B2 (Elective)

*Prerequisites: 11.8511; 11.8512.*

A development of Historical Research A in which the students' endeavours are directed towards the initiation and completion of an original research project in Australian architectural history.

## 11.8811

### The Evolution of Modern Architecture A1

Refer to Head of School for subject content.

## 11.8812

### The Evolution of Modern Architecture A2

Refer to Head of School for subject content.



## Graphic Communication

The development of visual awareness and the practical skills basic to the observation, analysis and recording of appearance and to the construction of visualization and co-ordination drawings.

**11.131**

### Graphic Communication I

**Graphic Structure.** Theory applied in technical and visual drawing. Vision and perception. Vision and illusion. Plastic elements. Symbol elements. Analysis and experiment with traditional media and grounds. Synthesis and application in the graphic design problems. The dependence of pictorial content on pictorial structure.

**Technical Drawing.** Plane geometry. Plane curves of loci. Conics. Parallel projections of solid figures. Sections, intersections and interpenetrations. Surface developments, Architectural drawing conventions.

**Visual Drawing.** Perspective projection theory, and construction methods. Expedients and mechanical aids. Sciagraphy. Relationship to the three-dimensional illusion. Testing of theory through observation and experiment.

**11.1311**

### Graphic Communication 1A

**11.1312**

### Graphic Communication 1B

The syllabus of Graphic Communication I taken over two years.

**11.132**

### Graphic Communication II

**Graphic Structure.** Analysis and synthesis, in theory and in practice, of a communication process. Studies in the development of symbolic and literal systems of representation. Media studies include the more sophisticated contemporary range.

**Technical Drawing.** Extension and development from the Stage 1 series in the context of the Architectural design and construction program.

**Visual Drawing.** Extension and development from the Stage 1 series in the construction of visualization and co-ordination drawings.

**11.133**

### Graphic Communication III

Further extension of Graphic Communication II with special emphasis on analytical observation and the capacity to construct visualization and co-ordination drawings.

#### Textbooks

For 11.131, 11.132 and 11.133:

Biggs J. R. *The Craft of Lettering* Blandford

Center R. A. *Architectural Shadow Projection* Cassell

De Sausmarez M. *Basic Design: the Dynamics of Visual Form* Reinhold

Fairweather L. & Sliwa J. A. *A.J. Metric Handbook* 3rd ed Architectural Press

Hollis H. F. *Teach Yourself Perspective Drawing* EUP

**11.581**

### Landscape Graphics I

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.

**11.582**

### Landscape Graphics II

*Prerequisites: 11.581, 11.591. Co-requisites: 11.562.*

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. Major graphic project integrated with Design and Construction A.

**11.591**

### Landscape Graphics Art I

Practical exercises in the basic grammar of form as elements of composition.

Projects planned to develop:

Appreciation of the principles of composition in relation to a total graphic structure.

Effective graphic communication of ideas and concept in terms of a variety of media.

The use of methods and techniques to effect clear graphic statements with an economy of means.

**11.592**

### Landscape Graphics Art II

Projects planned to develop:

A more complex and able employment of the graphic language.

An increasing ability to balance and judge the demands of pictorial content and formal structure in the graphic presentation of pictorial material or plans.

The potential of the individual student towards a personal expression based on increasing technical command of materials in a lucid graphic style.

## Construction

The study of the fabric of buildings: the materials, elements, systems, procedures for erection and performance of the fabric determined by considerations of building functions, material properties, environment, climate and site: methods of communicating information. The order of study is from simple buildings for basic functions to buildings for multiple functions and complex procedures.

Theoretical lecture material reinforced by visits to factories and building works and applied and integrated with design in the studio and special projects.

## 11.211

### Construction I

Unit shelter for simple activity: single storey: level site. **A** Single roofs: solid and framed walls: footings. Stones, bricks, tiles, slates, sheets, timber, lime and cement. **B** External doors: cavities, d.p.c.; floors, linings. Wrot timber, concrete, plasters, d.p. materials. **C** Windows, ventilators. Glass, metals. Cold water supply, waste and rain water disposal.

## 11.212

### Construction II

Single and two-storey, multi-cell shelters: group activity shelter; sloping sites.

**A** Ridged roofs: partitions: storage fitments. Plywood, finishes, hardware. Plane surveys, chaining, angular measurement. The level, differential levelling, booking: contours: the theodolite. Setting out. **B** Upper timber floors, stairs: retaining walls and membranes, semi-basements, concrete floors on the ground. Fuels and power supplies; thermal insulation: condensation; vapour barriers. Hot water supply; drainage and sanitary plumbing. **C** Roof coverings; lighting. Introduction of steel and concrete as structural materials; simple trusses and connections; single span r.c. floors. Tiles, renders, paints, steel sections, concrete mixes. Ventilation, ducting, pumps. Heating and cooling appliances and plant.

## 11.213

### Construction III

Buildings requiring structural frames: multiple activities. **A** Framing systems and floors. Water and drainage services, fire protection and fire-fighting. Lifts and escalators. **B** Roofs, claddings, internal provisions. Central conditioning plant. Light fittings. Integration of services. **C** Basements, tanking, footings. Additions and alterations, adjustable and demountable structures. Procedures, economics. Communication systems.

## 11.2131

### Construction IIIA

The same theoretical and lecture material, together with specific construction assignments as for Construction III.

## 11.2132

### Construction IIIB

The construction assignments of Construction III taken in connection with Design III.

#### Textbooks

For 11.211, 11.212, 11.213.

Australia—Department of Housing & Construction *A Short Glossary of Building Terms* Latest ed The Department Canberra

Australia—Experimental Building Station, Department of Housing & Construction *Notes on the Science of Building* No. 1 to latest issue

NSW—Parliament—Statutes, Local Government Act 1919 *Ordinance No. 70* amended to date Government Printer Sydney

Standards Association of Australia, Australian Standard 1640 *Rules for Brickwork in Buildings* Australian Standard Brickwork Code. The Association Sydney

Standards Association of Australia, Australian Standard 1684 *Light Timber Framing Code* The Association Sydney

Standards Association of Australia *Metric Data for Building Designers: SAA MH 2-1975* The Association Sydney

## 11.523

### Landscape Construction III

Earthmoving equipment and techniques. Construction of roads and vehicle parks. Sports fields, tennis courts and bowling greens. Pressurized irrigation systems. Pools and fountains. Lighting.

## 11.553

### Plants and Planting Methods

Native and exotic plants in general use within the various climatic zones of Australia. Availability, uses and limitations. Methods of propagation, planting, fertilizing and after-care. Commercial Forestry. Native and exotic grasses, turf culture. Plant pests and diseases and their control by chemical and other means.

The subject involves a number of visits to commercial plant nurseries.

## 11.562

### Landscape Design and Construction A

*Prerequisites:* 11.601, 11.551, 11.571, 11.581.

Landscape Design and Construction studies as an integrated process. Material properties and construction techniques. The development of a logical design process. Simple landscape design exercises in applying the materials and techniques of construction to small scale projects.

Development of design ability incorporating sophisticated construction techniques and basic specification clauses with an emphasis on user requirements. Design and construction associated with medium scale projects.

A specific project is constructed during a one week camp.

## 11.572

### Man in His Environment

*Prerequisites:* 11.531, 17.011. *Co-requisite:* 11.562.

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.

## 11.8211

### Construction A1 (Elective)

Principles of construction in relation to stability, loadings, safety and special applications of services. Topics also include principles of earthquake resistant construction, non-structural function of the building fabric, movement in buildings; plant and erection techniques.

**11.8212****Construction A2 (Elective)**

Methods and research into new forms of construction, modular co-ordination, standardization and tools of research. Topics include flat-plate and lift-slab construction, prefabrication, construction planning and management, computer application to communication, erection, quality and management control.

**11.8221****Construction B1 (Elective)**

Experimental investigation and research and interpretation of the results in an elected construction subject. Seminars for the exchange of discovered information. The topics concentrate on development methods and techniques in construction including research tools, computers and model analysis.

**11.8222****Construction B2 (Elective)**

Current and future trends in construction. Topics include limitation and disposal of wastes, economic use of energy and materials, mechanical devices in building, industrialized building, construction planning and control, maintenance planning, earthquake and cyclone resistant construction, testing and evaluating materials and systems of construction.

**Structures**

Research and experimental investigation in an elected construction subject. Seminars for the discussion and exchange of discovered information. The topics concentrate on development methods and techniques in construction including research tools, computers and model analysis.

A study of the role of structure in Architecture, with emphasis on the selection and behaviour of structural systems. Exercises in structural design and laboratory experiments supplement the lectures, which are intended to relate closely to work done in the Studios.

**11.221****Structures I**

Force, stress, strain. Equilibrium. Properties of sections. Bending moment and shear force for determinate beams. Bending stresses and shear stresses. Basic design of timber beams. Loadings on structures. Bracing of buildings. Forces in determinate plane frames; polygon of forces, method of sections, resolution of forces. Laboratory work in connection with the above.

**Textbooks**

Hodgkinson A. A.J. *Handbook of Building Structure* Architectural Press

Wyatt K. J. *Principles of Structure* UNSWP

**11.222****Structures II**

Buckling of columns and struts related to timber, steel and concrete. Design of beams in timber, steel and concrete. Design of reinforced concrete slabs and stairs. Three-hinged arch. Indeterminate beams. Deflection of beams. Unsymmetrical bending. Simple building systems. Materials of construction: concrete (ingredients, properties, mix design, manufacture), steel, timber and plywood, etc. Laboratory work associated with the above.

**Textbooks**

Hodgkinson A. A.J. *Handbook of Building Structure* Architectural Press

Hough R. *Structures Design Package* UNSW Faculty of Architecture

**11.223****Structures III**

Analysis of indeterminate frames. Arches, portals, multi-storey frames. Two-way slabs. Columns, retaining walls and footings in reinforced concrete. Pre-stressed concrete elements. Flat plates. Ultimate design methods. Structural sandwich panels. Cold-rolled and tubular steel sections. Space structures. Laboratory work in connection with the above.

**Textbook**

Hodgkinson A. A.J. *Handbook of Building Structure* Architectural Press

**11.2241****Structures A1 (Elective)**

The mathematical analysis and design of basic architectural structures with an extension of the study into advanced and complex systems and future trends in the field. Typical topics include timber and plywood structures and stressed skin panels.

**11.2242****Structures A2 (Elective)**

A similar study to that of Structures A1, but encompassing large spans, space frames and shells.

**Textbook**

Salvadori M. & Levy M. *Structural Design in Architecture* Prentice-Hall Englewood Cliffs NJ

**11.2251****Structures B1 (Elective)****11.2252****Structures B2 (Elective)**

Model and physical analysis of the design of basic architectural structures with an extension of the study into advanced and complex structures.

## 11.226

### Properties of Materials (Elective)

The physical and chemical properties relevant to the assessment of new materials and new applications for old materials. Topics include: building material resources and use; structure of solids; elastic and inelastic behaviour; creep and fatigue; corrosion and durability; thermal effects; dimensional change; acoustic properties; fire resistance; experimental methods used in determining these properties.

## 11.227

### Behaviour of Materials (Elective)

Lectures and demonstrations by visiting specialists on the behaviour and characteristics of a range of building materials covering in particular the aspects of corrosion, abrasion, strength, fatigue, thermal and acoustic properties. Emphasis is given to the interaction between different materials.

## 11.601

### Landscape Structures and Materials

Introduction to structural design as applied to landscape architecture. Historical development of structures, understanding of structural terminology and systems of measurement. Conditions of stability and equilibrium as applied to earth retaining structures, materials in common use. Importance of material selection in remote areas.

Behaviour of elevated structures. Beam, column and bracing design. Structural systems for bridging streams, for lookouts, fire towers and specialized buildings.

Importance of equilibrium and stability in elevated structures, analysis of forces and member stresses with commonly used materials.

## Architectural Science

The application of the methods and findings of science to the design and construction of buildings.

Study commences with basic physical phenomena and their mathematical description. The principles so established are applied to the analysis of the functional requirements of buildings, in terms of their ability to withstand and control the natural environment, and to satisfy human, thermal, visual and auditory requirements.

## 11.271

### Architectural Science I

#### Mathematics

**1.** Elementary computer programming; differentiation and integration of simple functions; the definite integral. **2.** Application to curve sketching, arc lengths, areas and volumes, moments of inertia, fluid pressures. **3.** Plane curves; conics and surfaces of revolution; quadric surfaces; ruled and warped surfaces; convex bodies; spherical trigonometry; projective configurations.

#### Physics

**1. Mechanics and Properties of Matter:** Kinematics, Newton's Laws of Motion, work and energy. Atomistic description of mechanical properties of matter. Atomic structure of matter, elasticity, plasticity—dislocation, fracture, viscosity. **2. Wave, Motion, Heat, Light and Sound:** Simple harmonic motion, wave motion, interference, Doppler effect, energy transfer. Sound, longitudinal waves, overtones, intensity levels, decibels, quality of sound. Light, e.m. spectrum, Huygens Principle, curved mirrors, lenses, dispersion, interference, polarization, photometry, colorimetry. Heat, heat capacity, Joule's equivalent, thermometry, convection, conduction, radiation, black body, emittance, absorptance.

#### Architecture

*Psychophysics and Climatology:* environmental design and total comfort; psychophysical measures in the fields of heat, light and sound. Climate and its influence on building design. *Sun Control:* the sky as a sphere; map projections as representations of a spherical surface; geometry of sunlight; sun position and its representation by solar charts; design of hoods, louvres and sun control devices. *Materials Science Part I:* properties of building materials; density, porosity, elasticity and mechanical properties.

#### Textbook

Everett Alan. 'Materials' Mitchell's Building Construction Series Batsford

Fairweather L. & Sliwa J. A. A.J. *Metric Handbook* 3rd ed Architectural Press

Halliday D. & Resnick R. *Physics Parts 1 and 2* Combined ed Wiley

Koenigsberger O. H., Ingersoll T. C., Mayhew A. & Szokolay S. V. *Manual of Tropical Housing and Building Part 1: Climatic Design* Longman

Phillips R. O. 'Sunshine and Shade in Australasia' Australia —Commonwealth Experimental Building Station Bulletin No. 8 1963 (serial)

## 11.2711

### Architectural Science IA

#### Mathematics

As for 11.271 Architectural Science I.

## 11.2712

### Architectural Science IB

#### Physics and Architecture

As for 11.271 Architectural Science I.

## 11.272

### Architectural Science II

#### Materials Science Part 2

Dimensional stability of materials; durability and weathering. Properties of common building materials. Fire in buildings; fire load, fire resistance of materials, protection of buildings, human safety.

#### Thermal Design Part I

Thermal properties of buildings, heat transmission and insulation. Hygrometry and condensation. Radiant energy from the sun.

## Lighting Design Part I

The lighting of buildings, general requirements for good lighting, lighting appraisals, natural lighting design principles, daylight factors, evaluation of daylight levels, indirect components, simplified method of calculation for architects. Practical aids—tables, graphs; quality aspects.

## Acoustic Design Part I

Noise control in buildings, transmission of air-borne and structure-born sound; methods of noise reduction and sound insulation; community noise; planning techniques, barriers.

## Textbooks

Everett A. 'Materials' Mitchell's Building Construction Series Batsford

Drysdale J. W. 'Fire Protection in Buildings' Commonwealth Experimental Building Station Bulletin No. 9 1965

Hassall D. N. H. *Reflective Insulation and the Control of Thermal Environments* Metric ed St. Regis-ACI

Hopkinson R., Petherbridge P. & Longmore L. *Daylighting* Heineman

Parkin & Humphreys *Acoustics, Noise and Buildings* Faber

AS1055-1973 'Noise Assessment in Residential Areas' Standards Association of Australia

## 11.273

### Architectural Science III

#### Thermal Design Part II

Principles of heating, cooling and natural ventilation. Application of thermal design to various buildings.

#### Lighting Design Part II

Artificial lighting; light sources and their spectral characteristics; quality of lighting and glare control; graphical representation of light distribution; lighting design methods and application to buildings. Supplementary artificial lighting of interiors, photometry.

#### Acoustic Design Part II

Auditorium design; geometrical techniques; reverberation control; sound absorbing materials and systems.

#### Architectural Science Research Review

Review of current research in architectural science; the role of research and testing laboratories.

## Textbooks

Hassall D. N. H. *Reflective Insulation and the Control of Thermal Environment* Metric ed St. Regis-ACI

*Interior Lighting Design Handbook* (Metric ed) British Lighting Council

Parkin P. H. & Humphreys G. *Acoustics, Noise and Buildings* Faber

## 11.8411

### Acoustics A1 (Elective)

Practical application of theoretical material. Principal topics include sound insulation and noise reduction in buildings and the use of acoustic models in auditoria design.

## Textbook

Lawrence A. B. *Architectural Acoustics* Elsevier

## 11.8412

### Computer-aided Design A2 (Elective)

The use of the computer and the availability of programs in architecture including computer graphics. Literature computing and the techniques of information storage and retrieval. Practice in the production and application of programs.

## 11.8421

### Acoustics B1 (Elective)

*Prerequisite: 11.8411 Acoustics A1.*

## 11.8422

### Computer-aided Design B2 (Elective)

*Prerequisite: 11.8412 Computer-aided Design A2.*

Supervised individual or group student research into an approved topic within the respective fields.

## 11.8431

### Lighting Design A1 (Elective)

Factors influencing the design of the visual field, the eye and vision, visual performance, apparent brightness and the concept of luminance design, light production and colour rendering, glare evaluation and control, modelling, scalar and vector illuminance. Appraisal sessions.

## 11.8432

### Lighting Design A2 (Elective)

Practical aspects of lighting equipment and design, methods of light control, design and construction of fittings, classification of light distribution, lighting systems including integration of light fittings, maintenance and economics, exterior lighting design and photometry.

## 11.8441

### Lighting Design B1 (Elective)

*Prerequisite: Lighting Design A2.*

Interior Lighting Design, problems of daylighting design, forms of integrated daylighting and artificial lighting, design by apparent brightness, Waldram's designed appearance method, lighting appraisals and studies of lighting design problems.

## 11.8442

### Lighting Design B2 (Elective)

*Prerequisite: Lighting Design A2.*

Experimental investigation and research in an elected aspect of lighting design.

Seminars for the discussion of methodology results and development of techniques in application.

## Management

### 11.321

#### Professional Practice

The ethical, legal and common standards and responsibilities governing the relations between the architect, the client and the builder; office practices and procedures; financial aspects of the practice of architecture and building.

**1.** Historical background; professional institutions; code of ethics; conditions of engagement; scale of professional charges; specialist consultants. **2.** The Architects' Registration Act of New South Wales, Laws of contract; types of contract; articles of agreement; relationship of contracting parties and the architect; architects' responsibilities; negligence; arbitration; litigation; statutory controls; copyright. **3.** Office administration; correspondence; reports; insurance; finance; tenders; contract administration; organization of the building industry; problems of practice.

### 11.331

#### Estimating and Specifications

##### 1. Estimating

An appreciation of:

The functions of the quantity surveyor; methods used for estimating; the Australian standard method of measurement of building works; examples of 'building up' the elements of a unit cost for pricing a bill of quantities; typical problems in estimating costs of building works.

Measuring and methods of adjusting variation; analysis of costs for alternative methods of construction; preparation of preliminary estimates from sketch plans.

Cost planning techniques; costing a design; designing to a cost; cost analysis; cost planning; cost control procedures.

##### 2. Specifications

The principles and methods and the changing trends involved in the compilation of a specification complementing other architectural documents.

Definition, objects and purposes of a specification; specification as a contract, legal and working document. Relationship to Bill of Quantities and drawings; schedules; reference material; 'Master' specifications; outright and performance specifications; prime cost and provisional sums; specification sections, clauses and language; preparation and format; printing, binding and distribution.

Explanation of documents; general conditions; specifications of individual 'trades'; schedule of p.c. and provisional sums; specifications for alterations, additions and new work; specification assignment.

## Landscape

### 11.502

#### Plants and Environment

*Prerequisites:* 11.551, 43.212.

Germination, establishment, growth and reproduction of plants in relationship to natural regeneration and horticultural practice. Familiarization with exotic and native plant material in relationship to land use and management. Consideration of limiting factors in the physical environment which affect the success of plant growth.

### 11.552

#### Introduction to Computer Applications

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 inter-relationships, data processing, file management, use of library programs, interpretation of results, basic programming.

### 11.563

#### Landscape Specifications and Estimates

The principles and methods involved in compilation of landscape specifications and estimates. Outright and performance specifications together with sections, clauses and terms appropriate to each type. Unit rates for commoner landscape operations—excavation—haulage—filling—topsoiling, grassing, paving, etc. Costs of labour, materials and overheads.

### 11.564

#### Landscape Professional Practice

The relationship between landscape architect, client and contractor and the legal responsibilities of each. Code of ethics and scale of charges. Office procedures, documentation and job organization. The Australian Institute of Landscape Architects and allied professional bodies.

### 11.573

#### Public Recreation Planning

Open space capable of use for public recreation is studied as a diminishing national resource, subject to increasing demand. Various open-space classifications—primitive areas, scenic areas, native reserves, national parks, historic sites, foreshore reserves and sports arenas—are examined with respect to their individual characteristics and usage capacity. Current open-space legislation is reviewed, together with the aims and achievements of the National Parks and Wildlife Service, and successful Australian and overseas examples of planned recreational use are studied in detail.

### 11.574

#### Landscape Conservation and Rehabilitation

The various interpretations which have been placed upon both words, of the emotionalism which has clouded numerous conservation issues. Conservation is then studied as 'the rational use of the environment to achieve the highest sustainable quality of living for mankind'. Following the general examination of conservation and rehabilitation principles a number of specific examples are studied, representative of landscapes threatened or adversely affected by increasing recreational use, mineral extraction, waste disposal and industrial blight. The studies include methods of control and rehabilitation.

**11.583****Environmental Impact Studies**

Lectures and seminars designed to familiarize students with systems of impact evaluation and develop their ability in value judgment. The series includes exercises in the use of a matrix, and examines both the policy and procedures for environmental impact studies as established by the New South Wales State Government.

A number of real cases are studied and each student is required to prepare an environmental impact statement relative to a proposed development.

**Theses****11.171A and 11.171B****Thesis (Architecture)**

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 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 is it an essay permitting the student's unsupported opinion. The topic of the thesis is submitted by the student for the approval of the Professor of Architecture at the beginning of the second year and the completed thesis submitted for examination towards the end of the third year.

**11.594****Thesis (Landscape)**

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 his 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 the third year. The completed thesis must be submitted for examination at the close of the fourth year.

**Graduate Study****11.651G****Mechanical Noise Sources**

Basic noise sources; relative efficiencies. Purely mechanical sources; radiation of sound from surfaces, general industrial noise, gear noise, reciprocating engine and compressor noise, electrical machinery noise. Aerodynamic noise; jet flows, fan noise (centrifugal and axial), combustion noise.

**11.910G****History of Landscape Design**

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 humanised landscape. Landscape development in America and Australia.

**11.912G****Landscape Engineering**

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. Bernoulli's Theorem, flow through orifices, over notches, in channels and pipes. Pumps and reticulating equipment.

**11.913G****Theory and Practice of Landscape**

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.

**11.914G****Forestry and Horticulture**

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.

**11.915G****Landscape Design**

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.

**11.951G****Architectural Management**

Emphasizes architectural practice. *Architectural practices*: types, arrangements, partner relationships, organizational and legal responsibilities, present trends and future types of practice. *Architectural services*: retainer, partial, full and comprehensive services. *Job organization*: systems, research, systems controls, quality and time control. *Office organization*: client relations, administrative, drafting, contractual and accounting organization and control. *Insurance*: types, needs and limitations; statutory and optional insurance. Applications of contract law and insurance law in architectural practice.

**11.990G and 11.991G**

**Construction, Contracts and Documentation I and II**

Construction of single and multi-storey buildings; building services; materials; forms of building contract and sub-contract; tendering; contract documentation; specifications; supervision.

**11.992G**

**Acoustics of Speech and Music**

Acoustic characteristics of speech; speech analysis and recognition; music and musical instruments; room acoustic effects on speech and music.

**11.993G**

**The Ear and Hearing**

Physiological and psychological factors in sound perception; subjective scales and units; masking, discrimination; speech intelligibility; noise annoyance; calculation of loudness.

**11.994G**

**Hearing Conservation**

Threshold shift; impulsive and continuous noise; hearing damage risk criteria; hearing conservation programs and audiometry.

**11.995G**

**Community Noise**

Sources of community noise; sound propagation out-of-doors; land-use zoning, including siting of airports and highways; measurement and assessment of community noise annoyance; barriers.

**11.996G**

**Graduate Project**

An individual topic to be selected from one of the following fields: physical theory; machinery, duct and vibration noise; noise control in buildings; community noise; room acoustics or electro-acoustics.

**11.997G**

**Auditorium Acoustics (Elective)**

Subjective and objective criteria for speech and music; reverberation theory; diffusion; steady state and transient room response; geometrical, physical and model analysis of auditoria; sound reflectors and sound absorbers; methods of measurement of sound absorption coefficients.

**11.998G**

**Airborne and Impact Noise Control in Buildings (Elective)**

Single multiple-leaf and sandwich partitions and floors; airborne and impact noise reduction; flanking transmission; vibration isolation; performance standards and specifications; speech privacy; methods of measuring sound transmission loss and noise reduction in the field and laboratory. Plumbing and services noise control.

**11.999G**

**Advanced Acoustics of Speech and Music (Elective)**

Speech communication; vocoders; development of new musical instruments, including electronic music.

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**School of Accountancy**

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**Undergraduate Study**

**14.001**

**Introduction to Accounting A**

*2 credit points; compulsory. Prerequisites: 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.

**Textbook**

Thacker R. J. *Introduction to Modern Accounting, with Workbook/Student Guide* 2nd ed Prentice-Hall

**14.002**

**Introduction to Accounting B**

*2 credit points; compulsory. Prerequisite: 14.001.*

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

**Textbook**

Horngren C. I. *Accounting for Management Control: An Introduction* 3rd ed Prentice-Hall

**14.051**

**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 obligations. General principles of law of agency. Law of partnership.

**Textbook**

Vermeesch R. B. & Lindgren K. L. *Business Law in Australia* 2nd ed Butterworths



**14.052****Law for Builders II**

2 credit points; compulsory. Prerequisites: 14.051.

Law of negotiable instruments. General principles of insurance law. Sale of goods and a general introduction to the law of bankruptcy and company law. Law related to non-commercial succession to property.

**Textbook**

Vermeesch R. B. & Lindgren K. L. *Business Law in Australia* 2nd ed Butterworths

**14.053****Law for Builders III**

2 credit points. Prerequisites: 14.052.

Industrial law, including references to Commonwealth and State statutory provisions dealing with conciliation and arbitration. State and Commonwealth awards. Industrial disputes. Employers' associations. Trade unions. Real property and local government law.

**Textbooks**

Cullen C. L. & Macken J. J. *An Outline of Industrial Law* 3rd ed Law Book

O'Dea R. *Industrial Relations in Australia* 2nd ed Allen & Unwin

**14.081****Introduction to Financial Analysis**

4 credit points; compulsory. Prerequisites: 14.002.

Basic concepts and principles necessary to make effective financial management decisions. 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 instability and failure. Specific industry studies.

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## Department of Industrial Relations

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**15.501****Introduction to Industrial Relations**

For students enrolled in Faculties other than Commerce and Arts. It is designed to provide a practical introduction to important industrial relations concepts, issues and procedures. Topics include: the origins, evolution and operation of the Australian system of industrial relations, the structure and role of trade unions and employer bodies; the function of industrial tribunals such as the Australian Conciliation and Arbitration Commission and the N.S.W. Industrial Commission, wages structure and determination; employment, unemployment and

retraining; the nature and causes of strikes and other forms of industrial conflict; the processes and procedures for conflict resolution.

Where appropriate to class composition, particular attention is paid to individual industries.

**Preliminary Reading**

Hyman R. *Strikes* Fontana\*

Martin R. *Trade Unions in Australia* Penguin\*

Portus J. H. *Australian Compulsory Arbitration 1900-1970* Hicks Smith

**Textbooks**

Isaac J. E. & Ford G. W. eds *Australian Labour Relations Readings* 2nd ed Sun Books\*

Niland J. R. & Isaac J. E. eds *Australian Labour Economics Readings* Sun Books\*

Rosow J. M. ed *The Worker and the Job: Coping with Change* Prentice Hall\*

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## Biological Sciences

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**Undergraduate Study****17.011****Biology of Mankind**

Mankind evolving; primate evolution; background of early man. Evolution of technological man—biological problems associated with communication and toolmaking; development of man as a hunting predator. Development of utilization of natural resources: development of man as a pastoralist and farmer; animal and plant domestication. Evolution of urban man, culture, society: reproductive biology and genetics of man; population growth, fluctuation, control; natural history of disease, background of medical and industrial microbiology. Effects of modern society: biology of social stress; effect of society in contemporary environments, planning and control.

**17.012****General Ecology**

Prerequisites: 17.011, 43.212.

Evolution and environmental selection in the Australian continent: geological, paleoclimatological, biogeographical and historical background. Organizational structure of biological populations, with special reference to plants, animals and microorganisms. Functional organization of ecosystems: energy budgets, hydrological and biogeochemical cycles. Integrated structure and function of ecosystems: case studies of soil, terrestrial, aquatic and urban ecosystems. Cropping and management of natural resources. Natural history of disease and pest invasion; integrated pest control. Systems analysis and dynamic programming in resource managements and ecological problem-solving.

\*Paperback.

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## School of Transportation and Traffic

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### Undergraduate Study

**19.521**

#### Statistical Methods and Data Processing

Statistical concepts and methods for students in Town Planning. Organization and analysis of data, elementary probability, introduction to the standard distributions, sampling distributions, statistical inference and regression methods. First course in computer programming.

#### Textbook

Guenther C. *Concepts of Statistical Inference* ISE McGraw-Hill/Kogakusha

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## School of Geography

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### Undergraduate Study

**27.294**

#### Physical Geography for Town Planners

The physical bases of landscape: landforms, geology, soil vegetation and climate. Aims and techniques of landscape appraisal. Laboratory classes to support the above, including analysis of topographical, geological and soil maps, air photo interpretation and land assessment. There is a compulsory field excursion equivalent to eight hours of tutorials.

#### Textbook

Strahler A. M. *An Introduction to Physical Geography* Wiley

**27.296**

#### Physical Geography for Landscape Architects

The application of landform and soil studies to landscape architecture. Aims and techniques of landscape appraisal. Laboratory classes to support the above, including map analysis, air photo interpretation and examination of soil properties. Each student is involved in individual project work on an approved aspect of land resource evaluation. There is the equivalent of a one-hour seminar per week.

There is a compulsory field excursion equivalent to eight hours' tutorial time.

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## School of Surveying

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### Undergraduate Study

**29.411**

#### Surveying for Architects and Builders

*2 credit points; compulsory. 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.

**29.431**

#### Surveying and Cartography

Surveying and its relationship to town planning. Types of survey; methods of linear measurement, corrections, chain surveys. The level, differential levelling, contours, volumes of earthworks. The theodolite, applications in building; traversing, setting out; plotting and plan drawing; measurement of areas by planimeters. Basic concepts of land tenure, land registration and cadastral surveying; plan registration. Mapping and map projections; control surveys; photogrammetry and ortho-photographs.

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## School of Building

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### 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

*2 credit points. Prerequisites: 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 stabilisation; introduction to foundation design; laboratory testing of soils.

#### Textbooks

Scott R. F. & Schonstra J. J. *Soil Mechanics and Engineering* McGraw-Hill

Bowles J. E. *Engineering Properties of Soils and their Measurement* McGraw-Hill

**35.500****Building Graphics**

6 credit points; compulsory. Prerequisites: 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 considerations.

Practical exercises in two and three dimensional composition in various media.

**Textbooks**

Reekie A. F. *Draughtsmanship* Arnold

de Sausmarez Maurice *Basic Design—the Dynamics of Visual Form* Studio Vista

**35.501****Building Construction I**

6 credit points; compulsory. Prerequisites: 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 services; plumbing, drainage and electrical at elementary level; methods of setting out and supervision. Practical technical drawing, descriptive geometry and use of drafting equipment.

**Textbooks**

Australia CEBS *Notes on the Science of Building* Progressively revised and extended.

Australia—Department of Labour and National Service—Industrial Training Division. Technical Publications on: *Brick-laying, Drainage, Gasfitting, Sanitary Plumbing and Water Supply*

McKay W. B. *Building Construction*. Vols 1 & 2 Longman

Mitchell's Building Construction Series:

Burberry P. *Environment and Services* Batsford

Everett A. *Materials* Batsford

Foster J. S. *Structure and Fabric* Parts 1 & 2 Batsford

King H. & Everett A. *Components and Finishes* Parts 1 & 2 Batsford

NSW Parliament—Statutes, Ordinances under the Local Government Act. *Ordinance No. 70* Metric ed Govt. Printer Sydney  
NSW *Standard Minimum Requirements for Home Building* Issued jointly by government lending institutions and banks

Randerson H. Y. *Australian Sanitary Engineering Practice* 8th ed A & R

Sharp W. *Australian Methods of Building Construction* 4th ed A & R

Standards Association of Australia SAA *Light Timber Framing Code* Metric ed CA 38 1971

Abbott W. *Practical Geometry and Engineering Graphics* Blackie

Sharp W. *Australian Methods of Building Construction* 1975 ed Sydney UP

**35.502****Building Construction II**

6 credit points; compulsory. Prerequisites: nil. Co-requisites: 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.

**35.503****Building Construction III**

6 credit points; compulsory. Prerequisites: 35.501, 35.551, 35.701. Co-requisites: 35.502.

Small multi-storey buildings from the functional and construction operation viewpoints. Concepts from Building 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.

**Textbooks**

HMSO *Principles of Modern Building* Vols 1 & 2 1973

Standards Association of Australia 1480 *Concrete structures code* 1250 *Steel structures code* 1576 *Metal scaffolding code*

Taylor W. H. *Concrete Technology and Practice* A & R

**35.504****Building Construction IV**

6 credit points; compulsory. Prerequisites: 35.501, 35.552, 35.701. Co-requisites: 35.502.

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.

**Textbooks**

HMSO *Principles of Modern Building* Vols 1 & 2 1973

Standards Association of Australia 1480 *Concrete structures code* 1250 *Steel structures code* 1576 *Metal scaffolding code*

Taylor W. H. *Concrete Technology and Practice* A & R

Constructional Steel Research and Development Organisation *Steel Designers' Manual* 4th ed metric Crosby Lockwood

Gorenc B. E. & Tinyou R. *Steel Designers' Handbook* 2nd ed UNSW

## 35.505

### Building Construction V

5 credit points, compulsory. Prerequisites: 35.503 or 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.

#### Textbooks

ASCE-IABSE *Planning and Design of Tall Buildings* Conference papers Lehigh Univ USA 1972

Antill J. M. & Ryan P. W. S. *Civil Engineering Construction* 4th ed A & R

## 35.506

### Building Construction VI

5 credit points. 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.

#### Textbooks

Antill J. M. & Ryan P. W. S. *Civil Engineering Construction (Metric)* A & R

American Concrete Institute *Formwork for Concrete* ACI Detroit USA 1963

Cement and Concrete Association Technical Papers, various authors

## 35.507

### Building Construction VII

5 credit points. Prerequisites: 35.505, 35.703.

Comparative studies of construction systems for the various types of buildings: industrialized housing, tilt-up, top-to-toe, progressive strength, lift slab, pneumatic structures, cable structures, pneumatic forming, foam structures, mobile buildings.

## 35.508

### Building Construction VIII

6 credit points. Prerequisites: 35.505, 35.553, 35.704.

Industrialized techniques of material and component manufacture. Production planning and control. Factory layout design, materials handling, plant and equipment, automatic and semi automatic processes, numeric control. Production machines and tools. Raw materials technology, timber, metals, ceramics, plastics etc. Storage, packaging and transportation of finished products.

#### Textbooks

*Industrialisation Forum* Subtitle *Building Systems* 6 issues yearly. Universite de Montreal et al 1969-1975

Cement and Concrete Association of Australia *Connection details for precast prestressed concrete*

McMeekin Ivan *Raw Materials and Clay Bodies* Vol 1 NSW UP  
Peter J. *Aluminium in modern architecture* Vols 1 & 2 Reinhold

Taylor W. H. *Concrete Technology and Practice* A & R

Standards Association of Australia 1538 *Cold formed steel structures code MA1.1 Steel structures Pt 1 Planning*

## 35.551

### Building Structures I

6 credit points; compulsory. Prerequisites: nil. Co-requisites: 35.501, 35.601.

External and internal forces. Conditions of equilibrium. Stress, strain. Bending moment, shearing and axial force. Loads on structures. Simple design of beams, trusses and columns. The function of bracing. Structural properties of timber, brick, steel and concrete. Basic structure costs.

#### Textbook

Morgan W. & Williams D. T. *Structural Mechanics* Pitman

## 35.552

### Building Structures II

7 credit points; compulsory. Prerequisite: 35.502. Co-requisite: 35.551.

Revision of forces and equilibrium: oblique forces, cranked beams, beam-columns. Basic principles of space structures. Design of beams in timber, steel and reinforced concrete. Beams of two materials. Deflection of beams. Design of axially loaded columns. Riveted and bolted joints of timber and steel structures. Combination of axial and bending stresses. Stability of eccentrically loaded structures. Costs of elements of simple structures.

#### Textbooks

Morgan W. & Williams D. T. *Structural Mechanics* Pitman

Gorenc B. E. & Tinyou R. *Steel Designers' Handbook* NSW UP

## 35.553

### Building Structures III

6 credit points; compulsory. Prerequisite: 35.551. Co-requisites: 35.505, 35.552.

Revision: equilibrium of forces in plane and space. Principles of statical determinacy. Indeterminate structures: slopes and rotations, the three-moment equation, moment distribution. Use of computer packages in designing building frames. Design of reinforced concrete elements: building frames, complex slabs, footings, retaining walls and continuous members. Principles of limit design. Composite construction. Elements of prestressed concrete beam design. Cost comparison of single-storey frame structures.

#### Textbooks

Cowan H. & Smith P. *The Design of Reinforced Concrete* A & R

Grinter L. E. *Elementary Structural Analysis and Design* McMillan

## 35.554 Building Structures IV

4 credit points. Prerequisite: 35.553.

Revision: equilibrium conditions, with special reference to space frames. Multi-storey, multi-bay frames: comparison of efficiencies, costs. Computer applications in structural analysis. Structural dynamics: elements of vibration analysis. Experimental techniques. Survey of research on building structures and structural materials.

### Textbooks

As for 35.553 Building Structures III with additional books recommended as required.

## 35.570 Environmental Studies

2 credit points. Prerequisites: nil.

Some of the problems faced by those who will be building and managing future projects. A broad introduction on the physical characteristics of the Sydney Region, ie 1. projected land-use growth factors, 2. major transport systems, and a brief summary of the architectural history of the Region. Undesirable impact on the environment: 1. noise; 2. pollution of land, air, water; 3. wastage of resources; 4. re-development problems: A client's view, B architect's view, C landscaper's view, D role of environmental impact studies. Public reaction to the above. Comments and discussions with resident action groups, green ban supporters, etc. Seminars to discuss building techniques and possible structural methods to satisfy both client requirements and public concern.

### Textbooks

Jacobs J. *The Death and Life of Great American Cities* Random House

State Planning Authority of NSW *Sydney Region: Outline Plan —1970-2000*

## 35.580 Building Design Analysis

3 credit points. Prerequisites: 35.505, 35.704, 35.852.

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.

## 35.581 Historical Development of Building

2 credit points; compulsory. Prerequisites: 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.

## 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

4 credit points; compulsory. Prerequisites: 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.

### Textbook

Department of Works, Experimental Building Station. *Notes on the Science of Building*

## 35.602 Building Science II

6 credit points; compulsory. Prerequisite: 1.091.

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 projections, 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.

### Textbooks

Hassall D. N. H. *Reflective Insulation and the Control of Thermal Environments* St. Regis-ACI Sydney 1973

Phillips R. O. *Sunshine and Shade in Australasia* Experimental Building Station

Durrant D. W. ed *Interior Lighting Design* Lighting Industry Federation Limited & The Electricity Council

## 35.603

### Building Science III

6 credit points; compulsory. Prerequisite: 35.670.

Introduction to computer programming and applications. Anatomy of the computer; communication with computers, analysis of problems for solution by computer; elements of the FORTRAN language; programming via batch processing and time-sharing; processing of existing application programs; applications in general; applications in building; social issues.

## 35.604

### Building Science IV

3 credit points. Prerequisite: 35.601.

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

3 credit points. Prerequisite: 35.601.

Concrete technology: Cement, aggregates, water and admixtures, properties of fresh concrete, strength considerations, durability, shrinkage and creep, special concretes, non-destructive testing, mix design.

## 35.606

### Building Science VI

3 credit points. Prerequisite: 35.601.

Metals in building: Structural ferrous alloys, structural and architectural non-ferrous alloys; corrosion and protection; welding; types of failure; brittle fracture, fatigue, creep; impact resistance, tensile properties, hardness, strain hardening.

## 35.607

### Building Science VII

3 credit points. Prerequisite: 35.602.

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.

#### Textbooks

Koenigsberger O. H. *Manual of Tropical Housing Part 1: Climate Design* Longman

Hassall D. N. H. *Reflective Insulation and the Control of Thermal Environments* St. Regis-ACI

Phillips R. O. *Sunshine and Shade in Australasia* Experimental Building Station

## 35.608

### Building Science VIII

6 credit points. Prerequisite: 35.603.

Systems analysis methods. The systems approach of considering the interconnectedness of processes forming part of a larger whole, is introduced as a general concept applicable to biological, social and scientific disciplines. In particular the systems analysis techniques of network analysis, mathematical programming, and simulation is studied in relation to the planning, design and construction management of building projects.

## 35.651

### Building Services I

2 credit points; compulsory. Prerequisite: 35.602.

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

### Building Services II

2 credit points; compulsory. Prerequisite: 35.602. Co-requisite: 35.651.

Environmental services for small to medium size projects: fuels and heating appliances; electrical trunking, switching and wiring; package air conditioning units; garbage disposal and incinerator systems; telephone and security systems; lifts and escalators.

## 35.653

### Building Services III

4 credit points. Prerequisites: 35.651, 35.652.

Hydraulic and environmental services pertaining to major projects such as high-rise buildings: sanitary plumbing systems suitable for multi-storey buildings; air-conditioning loads, psychometrics, central air distribution; electricity supply and distribution, systems of wiring and trunking; fire fighting services and equipment; lift control systems; escalators and moving walks; communication systems, telephone, fire alarms, intercom, pneumatic tubes and mechanical mail conveyors; planned building maintenance; pollution, disposal for special wastes and an introduction to closed ecological systems.

## 35.670

### Mathematics for Builders

6 credit points; compulsory. Prerequisites: nil.

Calculus: elementary functions, differentiation and integration, differential equations. Linear algebra: vectors, matrices.

Systems of linear equations, applications to three dimensional geometry. Probability: revision of sets. Union and intersection of events. Conditional probability, independence, many-stage experiments. Tree diagrams. Binomial experiments. Geometry: Conic sections, generation of surfaces, topology, networks, Euler's theorem, universal paths, one-sided surfaces. Polyhedra. Projective geometry.

## 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 Building Management I

2 credit points; compulsory. Prerequisites: nil.

Scientific management principles, administration and supervision; principles of organisation, individual and group behaviour; technical report writing; the Australian economy and the building and development industry; introduction to scientific methods of construction planning and control; the building and development industry, history, products, markets, resources, future development and career opportunities; the structure of the building and development industry, building acts and regulations, codes, local government authority powers, fees and approvals.

### 35.702 Building Management II

2 credit points; compulsory. Prerequisite: 35.701.

The application of scientific management theory in practice with particular reference to building organisations. 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 Building Management III

2 credit points; compulsory. Prerequisite: 35.701. Co-requisite: 35.702.

Basic decision theory, techniques and procedures. 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. Technical supervision.

### 35.704 Building Management IV

2 credit points; compulsory. Prerequisite: 14.051, 35.504, 35.703.

Building contracts and contract administration. Site organization, plant and equipment. Building methods and materials handling. Construction analysis and production methods.

### 35.705 Building Management V

3 credit points. Prerequisites: 35.504, 35.703.

Macro and micro construction planning methods. A systems approach to construction planning. CPM and PERT as applied

to construction. Planning for repetitive construction. Planning materials handling. Productivity in construction. Preplanning for project financial control. Application of decision theory.

### 35.706 Building Management VI

3 credit points. Prerequisite: 35.704.

Business practice in relation to contract and project building. Industrial relations. Management games.

### 35.707 Building Management VII

3 credit points. Prerequisite: 35.704.

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. 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 Building Management VIII

3 credit points. Prerequisites: 35.704, 35.910.

Finance and 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 together with the nature of financial management; the business environment; financial analysis; planning and control; capital investment decisions; organisation of the financial structure; operating and working capital management; growth and development; and the causes and prevention of financial instability and failure.

#### Textbooks

Holloway R. J. & Hancock R. S. *Marketing in a Changing Environment* Wiley

Pierson G. & Bird R. *Business Finance* McGraw-Hill

### 35.720 Commercial Arbitration

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.

#### Textbooks

Golding D. J. *Arbitration on Building Contract Disputes* MBA Victoria 1970

Walton A. *Russell on Arbitration* 17th ed Butterworth

## 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)

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 storey construction; billing fundamentals of item descriptions; taking off quantities from plans and specifications.

#### Textbook

The Australian Institute of Quantity Surveyors and the Master Builders' Federation of Australia *The Australian Standard Method of Measurement of Building Works (Metric)* 3rd ed

### 35.802

#### Quantity Surveying II (Billing)

4 credit points. Prerequisites: 35.504, 35.870.

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.

#### Textbook

The Australian Institute of Quantity Surveyors and the Master Builders' Federation *The Australian Standard Method of Measurement of Building Works (Metric)* 3rd ed

### 35.803

#### Quantity Surveying III (Cost Planning)

2 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.

### 35.851

#### Building Economics I

6 credit points; compulsory. Prerequisite: 14.002.

The national economy—its relation to and effect upon the building industry. Estimating techniques for building works; analyses of 'all-in' materials, labour and plant rates; analyses of trade unit rates; preliminary items.

#### Textbook

Hillebrandt P. M. *Economic Theory and the Construction Industry* Macmillan

### 35.852

#### Building Economics II

6 credit points. Prerequisite: 35.851.

Legal background to valuation of land and property. Time value of money and equivalence. The annual cost and present worth methods. Case studies of property valuations. Estimating techniques for determining overheads, pricing of a bill of quantities; preliminary estimates and tender preparation. Building plant; capital investment appraisals, economic life and replacement economy, depreciation and effects of taxation, operating costs.

Materials handling: ergonomics, operations research, economic case studies.

### 35.853

#### Building Economics III

6 credit points. Prerequisite: 35.852.

Economic advantages and disadvantages of conventional on-site construction and industrialized building components and system building. Financial controls used in the erection, management, maintenance and demolition of buildings. Cost benefit analysis; utility, costs and benefits; compensation tests and equity; social welfare functions; accounting prices; external effects and public goods; social rate of discount; formulae for project choice; risk and uncertainty; case studies.

### 35.870

#### Building Specifications

2 credit points. Prerequisite: 35.801.

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

2 credit points. Prerequisites: 35.504, 35.852.

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 fitouts and handing over to clients of the completed project.

#### Textbooks

Pierson G. & Bird G. *Business Finance* McGraw-Hill

Weston J. F. *The Scope and Methodology of Finance* Prentice-Hall



## Thesis Requirement

### 35.900

#### Thesis (Building)

*5 credit points; compulsory. Prerequisites: a total of 120 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 of the testing of an hypothesis. Neither is it an essay permitting the student's unsupported opinion. The topic of the thesis is to be submitted by the student for the approval of the Head of the School. A student may not commence the thesis until 120 credit points have been accrued and it must be submitted for examination before the close of the last semester attended by the student.

### 35.910

#### Industry Semester

*Nil credit points; compulsory. Prerequisites: 35.504, 35.601, 35.703.*

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 employment 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 but, in any case, must be completed before attempting the final semester.

During the industry semester, students are under the supervision of a staff member and are required to submit a report on an approved topic.

## Graduate Study

### 35.210G

#### Building Contracts and Documentation

Analysis of present forms of building contract with legal aspects underlined. Relevant aspects of contract law. Forms of contract: serial tendering, negotiated contracts. The sub-contract: nominated sub-contractor; co-contract. Standard methods of communication between parties to the contract. Legal foundations of documentation. Rational methods for contract documentation: specifications, bills of quantities. Standard clauses, terminological standards. Automatic data processing. Preparation of trade literature.

### 35.220G

#### Building Economics and Property Valuation

Structure of the economy; building as an investment. Feasibility, large-scale development, legal aspects. Economic models, optimization. Principles of rational building; dimensional control; system building; component technology. Statutory valuations, market value, unimproved land, valuation of improvements, depreciation and obsolescence, investment properties. Valuation law. Land laws. Feasibility studies on subdivisions.

### 35.230G

#### Operations Planning I

Operations Research Techniques. Linear programming, games theory. Critical path techniques. Queueing and congestion. Mathematical models, simulation, Monte Carlo methods. Decision and information theory.

### 35.240G

#### Graduate Project

*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 graduate project.

### 35.250G

#### Office and Personnel Management

Office structure and organization; statutory and legal obligations of employment; divisions and delegation of responsibility and authority; office funds, accounting, taxation and insurance; staff evaluation, promotion, incentives, training, counselling; communications, information flow, storage and retrieval; assessment of work systems and patterns; case studies.

### 35.260G

#### Architectural Programming

The planning and supervision of an architectural project; the building process; the compilation and dissemination of the brief; personnel potential; information collection; communications and contacts; research and feasibility studies; the economic use of resources; operations and time-tabling; budgeting; forms of documentation and documentation aids; supervision of contract letting; post-contract documents; personnel confrontations and decisions; commissioning procedures; post-completion supervision and documents; public relations.

### 35.270G

#### Estate Management

The building manager. Building performance: feed-back; the 'follow-on' phase. Case studies in building maintenance. Obsolescence, repair and replacement. Insurance, security, cleaning. Principles of property development.

## 35.280G

### History of Building

Development of materials, structures, building methods. The impact of social and political conditions on building. Surveys of present techniques and review of future possibilities in development: industrialization, use of new materials, new philosophy of design.

## 35.290G

### Advanced Construction I

## 35.300G

### Advanced Construction II

Construction methods: plant, formwork, transport, assembly and erection. Buildings elements: foundations, floors and walls, lift slab and flat plate; industrial buildings and frame design; prestressed concrete design and construction. Construction problems of high-rise buildings. Slip forms, climbing forms. Pre-fabrication. Multi-storey load-bearing buildings.

Materials of construction; timber engineering; aluminium and plastics; light-weight aggregate concrete; sandwich panels.

## 35.310G

### Advanced Equipment and Services

Fabrication and installation of services for large building projects: lifts, air-conditioning, fire services. Refrigeration facilities. Cool houses. Large industrial service installations.

## 35.320G

### Operations Planning II

Construction analysis; methods of estimating; use of statistical data and dissection for control functions. Cost analysis and cost control analysis of elements and activities.

## 35.330G

### Cost Planning and Analysis

Cost planning history and background; definitions, coding; analysis; elements; costing a design; designing to a cost. Comparative cost planning, elemental cost planning; cost control. Case study for the pre-tender stage of a building program.

## 35.340G

### Computer Applications I

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.

## 35.350G

### Computer Applications II

Introduction to computer graphics and graphic devices: drum and flat bed 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.

## 35.360G

### Computer Techniques

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.

## 35.370G

### Experimental Techniques

Principles of instrumentation, metering; recording and analysing experiments. Method of dimensions, principle of similarity, testing of scale models. Experimental methods in psychology and sociology; design of subjective experiments and questionnaires.

## 35.380G

### Services and the Environment

Parameters affecting comfort, i.e. psychophysical factors. Thermal energy balance of a building. Effect of building components, materials and services on the environment: effect of walls, floors and fenestration on the thermal, acoustic and lighting environments. Relationship of buildings to the ecology of the region.

## 35.390G

### Building Structures and Services

A qualitative study of structural systems and their interaction with services. Integration of services and structure. Use of computer packages in structures and services. Case studies of special integrated solutions, with particular reference to prefabrication and industrialised building. Space requirements for installations.

## 35.400G

### Economics of Services

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.

## 35.410G

### Materials for Services

Metals: evaluation and acceptance tests, relaxation, fatigue ductility and brittle fracture, structural alloys. Timber and plastics: mechanical and physical properties. Adhesives, laminates, elastomers. Development of plastics for construction purposes.

*Services: General*

The study of *Thermal, Electrical and Hydraulic Services* involves specialist treatment at advanced level with emphasis on interaction of installations, the fabric of the building and the building environment.

**35.420G****Thermal Services**

A study of heating, ventilation and air-conditioning.

**35.430G****Electrical Services**

A study of electrical installations.

**35.440G****Hydraulic Services**

A study of plumbing, drainage and fire services.

**35.450G****Energy Balance of Buildings**

Thermal properties of the building envelope. Thermal balance and energy conservation in buildings. Utilization of solar energy for heating and cooling. Waste recycling. Choice of fuel for energy requirements: solid, oil, gas, solar and nuclear etc.

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**School of Town Planning**


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**Undergraduate Study****36.271****Environmental Science**

*Mathematics:* Elementary computer programming, numerical methods. *Physics:* Mechanics and properties of matter; wave motion, heat, light and sound. *The Environment:* Human comfort requirements; climatic factors; thermal, visual and acoustical environments. Fire protection.

**Textbooks**

Fairweather L. & Sliwa J. A. *A.J. Metric Handbook* 3rd ed Architectural Press

Halliday D. & Resnick R. *Physics Parts 1 and 2* Combined ed Wiley

**36.411****Town Planning**

The urban planning process. The industrial and urban revolution. Regional planning concepts. Housing and new towns. Civic design. Human environment. Social planning: societal values and societal organisation. Social planning: public participation, quality of life. Planning law and administration. Levels of planning and types of plans. Ecological land use planning. Uses of the Lowry Model. Metropolitan planning concepts with particular application to Sydney and Canberra. Neighbourhood planning. The future city.

**36.412****Town Planning A (Elective)**

*Prerequisites:* 36.411 *Town Planning*

An extension of 36.411 *Town Planning* with seminars and studio work in neighbourhood and town design in the Australian context.

**36.431****Town Planning Theory and Practice I**

Theory and practice of planning.

Definition; interaction of land use and movement; social and economic implications of planning; levels of planning; types of plans; evolution of the planning process; citizen participation in planning.

**Textbook**

Roberts M. *An Introduction to Town Planning Techniques* Hutchison Educational

**36.432****Town Planning Theory and Practice II**

Planning at the local level: objectives, surveys, analysis, identification of options. The role and methods of citizen participation. The nature and purpose of zoning. The nature and elements of the neighbourhood. Studio and field exercises in civic survey, environmental studies, preparation of plans for existing neighbourhoods.

**36.433****Town Planning Theory and Practice III**

The town—its function, elements and form. Principles and practice of replanning existing towns and planning new towns. Expanded towns. The 'new towns' movement in Great Britain and its international significance. New towns overseas and in Australia. Special purpose towns such as mining towns. New national capital cities. Studio exercises in town design, townscape and urban renewal.

**Textbook**

Gibberd F. *Town Design* 4th ed Architectural Press

**36.434****Town Planning Theory and Practice IV**

The metropolis—its concept and form. Factors affecting metropolitan structure. Objectives in metropolitan planning. Types of metropolitan plan. Special purpose plans. Transportation studies. Metropolitan planning authorities, plan implementation. Metropolitan economy. Public and private sector decision making. Growth models. How effective are metropolitan plans? Studies of metropolitan plans in Australia.

## 36.435

### Town Planning Theory and Practice V

National and regional planning concepts. National and regional planning activity overseas. Evolution of regional planning in New South Wales. Regional development committees and advisory councils. Responsibilities of Commonwealth, State and Local Governments for planning policies. Industrial development and decentralization issues. Planning strategies. Operational models. Existing and emerging techniques in the collection, analysis and projection of planning data. Urban research objectives and techniques.

## 36.436

### Urban Geography

Nature and scope of urban geography. Rise and diffusion of urbanism, world urban patterns. Economic base studies. Functional classification of towns. Central place theory. Theories of internal urban zonation. Urban centres as market places. Industrial location. Suburban growth, urban sprawl and the rural/urban fringe. Urban transportation. Urban site and situation. Urban settlement in Australia.

#### Textbook

Carter H. *The Study of Urban Geography* Arnold

## 36.437

### Civic Survey Camp

Fifth year students are required to attend a Civic 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.

## 36.438

### Urban Government

Urban Government systems in a number of metropolitan cities are compared, and local governments are studied as participants in these systems and as political entities offering special opportunities for comparative studies. Some general political issues related to urban affairs are examined, especially in Australia. A major aim is to acquaint students with recent developments in the study of government, politics and urban affairs and to show how some of these approaches could be used in the Australian context.

#### Textbooks

Boaden N. *Urban Policy Making* CUP  
Cities A Scientific American Book Pelican

Rose A. J. *Patterns of Cities* Nelson

Stretton H. *Ideas for Australian Cities* Published by the author, Adelaide

Wilson J. Q. *City Politics and Public Policy* Wiley

## 36.441

### Design II for Town Planners

Studio and field exercises in housing at various densities. The layout and design of residential areas including subdivisions, facilities, open space, streets, etc. Small-scale urban design.  
*Prerequisite: 17.011.*

## 36.442

### Civic and Landscape Design

Relationship of buildings, spaces and landscape. Street architecture, street furniture. Height, floor space and building regulations; architectural controls. Design envelopes. Three dimensional redevelopment schemes. Preservation of buildings of architectural and historic interest. History and principles of landscape design. Open spaces. Trees and tree planting.

## 36.451

### History of Town Planning

The origin of urban centres. Geographical, social, economic and political factors influencing urban settlement. Elements of Egyptian, Greek and Roman town planning. Medieval communities. The meaning of the Renaissance. The Baroque city. The Agrarian and Industrial Revolutions. Nineteenth century social reforms and planning theories. The Garden City movement. The City Beautiful movement. The City of Tomorrow. Colonial towns: USA and Australia.

#### Textbook

Mumford L. *The City in History* Secker & Warburg

## 36.461

### Civic Engineering

Road location, design and construction. The provision of public utility services: town water supply, sewerage treatment and disposal, electricity and gas supply, telephone communications. Drainage. Ports, railways, aerodromes.

## 36.471

### Planning Law and Administration

The purpose of town planning legislation and its evolution in the United Kingdom. The NSW Local Government Act, 1919 (and relevant Ordinances), in particular Parts XI, XII and XIII; residential district proclamations, sub-division regulations; preparation, approval and implementation of planning schemes. Interim development control, compensation, betterment, resumption, appeals. The State Planning Authority Act, 1963. Nature of legislation in other States.

#### Textbooks

NSW—Parliament—Statutes *Local Government Act 1919* Govt. Printer Sydney 1966

Spann R. N. *Public Administration in Australia* NSW Govt Printer

## 36.481

### Land Valuation and Economics

The need for land valuations. Legal background to valuation. Economic basis of land valuation. Valuations under Valuation of Land Act (NSW). Legislative schemes for the acquisition of land for public purposes. Compensation. Betterment. Interrelationships of planning, valuation and rating. Urban economics: the land market and planning, location theories, urban structure and growth, economics of externalities and economics of city size. Techniques in urban economics: input-output analysis, regional multipliers, cost benefit studies and planning balance sheet analysis.

#### Textbooks

NSW—Parliament—Statutes *Valuation of Land Act 1916-1961* Govt Printer

Rost R. O. & Collins H. G. *Land Valuation and Compensation in Australia* Commonwealth Institute of Valuers

**36.491****Thesis**

A specialized individual study taken under staff supervision with the object of allowing the student either to gain knowledge in some aspect of town planning 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 is it an essay permitting the student's unsupported opinion. The thesis is submitted by the student for the approval of the Professor of Town Planning at the end of the fourth year of the course and the completed thesis submitted for examination towards the end of the fifth year.

Students participate in seminars on report and thesis writing during fifth year and present progress reports on their theses at the seminars.

**Graduate Study****36.920G****Theory of Neighbourhood Planning**

The neighbourhood concept: its historical evolution and development. The contributions of Ebenezer Howard, Unwin and Parker, Clarence Perry, Stein and Wright, Frank Lloyd Wright, Le Corbusier, Walter Burley Griffin, Frederick Gibberd, Steen Eiler Rasmussen, and others. Neighbourhood structure, elements and form. Relationship to town and metropolitan planning.

**36.921G****Practice of Neighbourhood Planning**

Dwelling types. Residential densities. The design and layout of groups of dwellings, 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.

**36.922G****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 will 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.

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**School of Botany**

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**Undergraduate Study****43.212****Landscape Botany**

*Prerequisite: 17.011.*

Ecological and morphological significance of life forms; vegetation structure and variation in relation to environmental (particularly water and nutrient) gradients; nutrient cycling; comparative morphology and structure of major plant groups; growth and morphogenesis; reproduction and variation; principles of taxonomy and classification of selected angiosperm groups.

**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.

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## School of Sociology

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### Undergraduate Study

#### 53.321

#### 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.

#### Textbook

Reissman L. *The Urban Process* Free Press



# The University of New South Wales      Kensington Campus   1977

## Buildings

Applied Science F10  
 Architecture H14  
 Banks F22  
 Basser College C18  
 Biological Sciences D26  
 Biomedical Lecture Theatres E27  
 Central Lecture Block E19  
 Central Store B13  
 Chancellery C22  
 Civil Engineering H20  
 Classroom Block H3  
 Dalton (Chemistry) F12  
 Electrical Engineering G17  
 Electrical Engineering Theatre F17  
 Goldstein College D16  
 Golf House A27  
 Gymnasium B5  
 House at Pooh Corner N8  
 International House C6  
 John Goodsell (Commerce) F20  
 Keith Burrows Lecture Theatre H14  
 Kensington Colleges C17  
 Main Building K15  
 Maintenance Workshop B13  
 Mechanical and Industrial Engineering J17  
 Medicine (Administration) B27  
 Menzies Library E21  
 Metallurgy E8  
 Morven Brown (Arts) C20  
 New College (Anglican) L6  
 Newton J12  
 Old Main Theatre J14  
 Parade Theatre E3  
 Parking Station H25  
 Philip Baxter College D14  
 Robert Heffron (Chemistry) E12  
 Sam Cracknell Pavilion H8  
 Sciences F23  
 Sciences Lecture Theatre Block D23

Science Theatre F13  
 Shalom College (Jewish) N9  
 Sir John Clancy Auditorium C24  
 Sir Robert Webster (Textile Technology) G14  
 Squash Courts B7  
 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 (Roman Catholic) M7  
 Wool and Pastoral Sciences B8

## General

Accountancy C20  
 Admissions Office B23  
 Anatomy C27  
 Applied Geology F10  
 Applied Physics H12  
 Applied Science (Faculty Office) F10  
 Appointments Office B23  
 Architecture (including Faculty Office) F10  
 Arts (Faculty Office) D20  
 Australian Graduate School of Management F23  
 Biochemistry D26  
 Biological Sciences (Faculty Office) D26  
 Biological Technology D26  
 Biomedical Library F23  
 Bookshop G17  
 Botany D26  
 Building H15  
 Cashier's Office B23

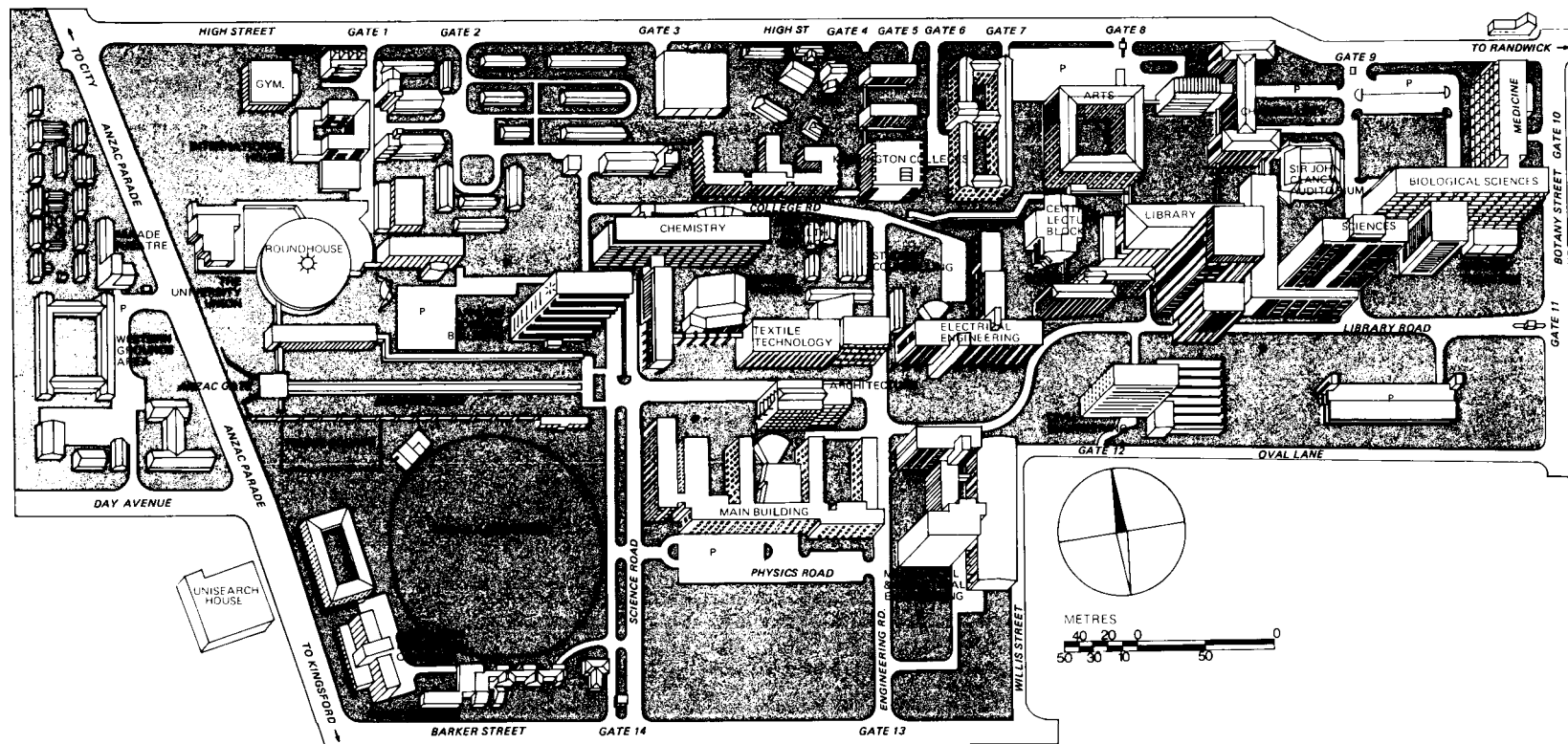
Centre for Medical Education Research and Development F24  
 Chemical Engineering F10  
 Chemical Technology F10  
 Chemistry E12  
 Child Minding Centre N8  
 Civil Engineering H20  
 Closed Circuit Television Centre F19  
 Commerce (Faculty Office) F20  
 Community Medicine E25  
 Computer Services Unit F21  
 Drama D9  
 Economics F20  
 Education G1  
 Electrical Engineering G17  
 Engineering (Faculty Office) K17  
 English C19  
 Examinations and Student Records B22  
 Fees Office B23  
 Food Technology F10  
 French C20  
 General Studies C20  
 Geography K17  
 German C20  
 Health Administration C22  
 History C20  
 History and Philosophy of Science C19  
 Industrial Arts B1  
 Industrial Engineering J17  
 Institute of Administration G2  
 Institute of Languages G14  
 Institute of Rural Technology B8  
 Law (Faculty Office) F21  
 Law Library F21  
 Librarianship B10  
 Library E21  
 Marketing F19  
 Mathematics F23  
 Mechanical Engineering J17  
 Medicine (Faculty Office) B27  
 Metallurgy E8

Microbiology D26  
 Mining Engineering K15  
 Music B11  
 National Institute of Dramatic Art C15  
 Nuclear Engineering F18  
 Optometry H12  
 Pathology C27  
 Patrol and Cleaning Services F20  
 Philosophy C20  
 Physics K13  
 Physical Education and Recreation Centre (PERC), see *Gymnasium and Squash Courts*  
 Physiology and Pharmacology C27  
 Political Science C19  
 Postgraduate Committee in Medical Education B27  
 Postgraduate Extension Studies (Closed Circuit Television) F19  
 Postgraduate Extension Studies (Radio Station and Administration) F23  
 Psychology F23  
 Public Affairs Unit C23  
 Regional Teacher Training Centre F24  
 Russian D20  
 Science (Faculty Office) K14  
 Social Work F1  
 Sociology C20  
 Spanish and Latin American Studies D19  
 Student Amenities and Recreation E15  
 Student Counselling and Research E16  
 Student Employment C22  
 Student Health E15  
 Students' Union E4  
 Surveying H20  
 Teachers' College Liaison Office F16  
 Tertiary Education Research Centre E16  
 Textile Technology G14  
 Town Planning K15  
 University Union G6  
 Wool and Pastoral Sciences B8  
 Zoology D26



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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 \$3 (plus postage and packing, 90 cents). The Handbooks vary in cost. Applied Science, Arts, Commerce and Sciences are \$1.50; Architecture, Engineering, Law, Medicine, Professional Studies and AGSM are \$1.00. Postage is 40c in each case. The exception is General Studies, which is free.