FACULTY OF ARCHITECTURE

1966 HANDBOOK

THE UNIVERSITY OF NEW SOUTH WALES

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THE UNIVERSITY OF NEW SOUTH WALES
P.O. Box 1, Kensington, N.S.W.
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FOREWORD

Since the dawn of civilization man has sought to endow his environment with physical and spiritual qualities appropriate to his way of life, to explore the limits of his materials and techniques, and in so doing, to create buildings of enduring beauty. In each great culture of the past this search produced a characteristic architecture which was a true reflection of the aspirations and capabilities of its age.

Today's architects, builders and town planners face the same age-old problem, but their task is made infinitely more difficult by the complexity of modern requirements and the diversity of new materials and techniques available to them. For the first time in history material progress threatens to outstrip man's visionary powers and to overwhelm his capacity for assimilation.

Within the next twenty years the world must face a gigantic population explosion. Our building industry must undergo a revolution if it is to meet even the most elementary needs of the community, and our search for appropriate building forms must be related to the practical necessities of mass production on a hitherto unprecedented scale. The pressure will be felt in every field of human endeavour, but to those who choose to enter the land-use professions it will represent the greatest challenge and the greatest opportunity of all time.

CALENDAR OF DATES FOR 1966

Term 1: March 7 to May 21
Term 2: June 6 to August 13
Term 3: September 5 to November 5

JANUARY	
Monday, 24	Last day for acceptance of applications to enrol by new students and students repeating First Year
Monday, 24 to Saturday, Feb. 5	Deferred examinations
Monday, 31	Australia Day—Public Holiday
FEBRUARY	
Monday, 21	Enrolment Week commences for new First Year students
Monday, 28	Enrolment Week commences for students re-enrolling
MARCH	
Monday, 7	First Term lectures commence
Friday, 18	Last day of enrolment for new students
Thursday, 31	Last day for later year enrolments
APRIL	
Friday, 8 to Monday, 11	Easter
Monday, 25	Anzac Day—Public Holiday
MAY	
Saturday, 21	First Term ends
JUNE	
Monday, 6	Second Term commences
Monday, 13	Queen's Birthday—Public Holiday
Thursday, 30	Last day for acceptance of applications for re-admission after exclusion under rules governing re-enrolment
JULY	
Tuesday, 5	Foundation Day
AUGUST	
Friday, 12	Last day for acceptance of applications for examinations —30-week courses
Saturday, 13	Second Term ends
SEPTEMBER	
Monday, 5	Third Term commences
OCTOBER	
Monday, 3	Six Hour Day—Public Holiday
NOVEMBER	
Saturday, 5	Third Term lectures cease
Saturday, 12	Examinations commence (30-week courses)

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JANUARY	
Monday, 23 to Saturday, Feb. 4	Deferred examinations
FEBRUARY	
Monday, 20	Enrolment Week commences for new First Year students
Monday, 27	Enrolment Week commences for students re-enrolling
MARCH	
Monday, 6	First Term lectures commence

FACULTY OF ARCHITECTURE

Dean—Professor H. I. Ashworth

Chairman—Professor J. M. Freeland

SCHOOL OF ARCHITECTURE AND BUILDING

Professor of Architecture and Head of School

H. I. Ashworth, OBE, MA, BA(Arch) *Manc.*, FRIBA, FRAIA, MAPI, HonFRAIC

Professor of Architecture

J. M. Freeland, DFC, MArch DTRP *Melb.*, FRAIA

Associate Professors

N. J. Anderson, BArch *Syd.*, MArch *Liv.*, DipTP *Lond.*, FRAIA, AMTPI
G. Molnar, DiplIngArch *Bud.*, FRAIA, ARIBA
P. Spooner, DipLD *Durh.*, ASTC, FRAIA, ARIBA, FILA
J. H. Shaw, BE, DipTCP *Syd.*, MCD *Liv.*, AMTPI, FAPI, AMIEAust

Associate Professor of Building

E. Balint, MCE *Melb.* AMIEAust, AMICE, AAIB

Senior Lecturers

R. D. Chalmers, BSc(Eng) *Lond.*, AMIEAust, AAIB
J. Conner, DipArch *Aberd.Tech.Coll.*, ARIBA, ARIAS
E. C. Daniels, MArch *N.S.W.*, ASTC, ARAIA
W. A. Fraser, ASTC
L. P. Kollar, MArch *N.S.W.*, ASTC, ARAIA
G. H. B. McDonell, BArch *Syd.*, FRAIA
A. H. Mack, BArch *Syd.*, ARIBA, FRAIA
R. O. Phillips, BArch *Syd.*, MArch *N.S.W.*, ARAIA, FIESAust
R. G. Sutton, SM *M.I.T.*, ASTC, AAIB

Lecturers

C. W. Anderson, ASTC, AAIB
N. F. Bazeley, ASTC
C. L. Bell, BA(Arch) *Calif.*
M. R. Coote, BArch *CapeT.*, ARIBA
E. D. Duek-Cohen, MA *Oxon.*, BArch *Liv.*, DipTP *Lond.*, ARIBA, ARAIA, AMTPI, MAPI, AMTPIC
R. A. G. Head, ASTC, ARAIA
R. C. Irving, ARMTC, ARAIA
A. A. Jack, ASTC, AAIB
J. L. King, BArch, DipTCP *Syd.*, MAPI
Mrs. Anita B. Lawrence, MArch *N.S.W.*, ARAIA
D. Lennon, BArch *Syd.*, ARIBA, ARAIA, MAPI
B. P. Lim, BArch, PhD, DipTCP *Syd.*, ARIBA, ARAIA
Lorna M. Nimmo, ASTC
I. R. Patrick, ASTC, ARIBA, ARAIA
A. E. R. Purkis, ARIBA, ARAIA
C. W. Stevens, DipTCP *Syd.*, ASTC, ARAIA
B. V. Wollaston, BArch *Syd.*, ARAIA

Senior Tutors

Mrs. Judith Macintosh, BArch *Syd.*, ARAIA
W. M. Nicholson
C. D. Smythe, ASTC

Teaching Fellows

S. Manohar, BA *Agra.*, BScArch *Cinc.*, MRP *N.Carolina*, AMTPI
G. J. Richter, BBuild *N.S.W.*

Administrative Assistant

C. L. Durant, SC

Secretary to the Dean

Mrs. M. Conning

GENERAL INFORMATION

ADMISSIONS OFFICE

The Admissions Office provides intending students (both local and overseas) with information regarding courses, admission requirements, scholarships and enrolment.

Applications for special admission or admission with advanced standing to courses should be made at the Admissions Office. Local residents should apply prior to 31st December of the year preceding that in which admission is sought. Where applicable documentary evidence should be tendered with the application, and copies should accompany original documents, as this will allow the immediate return of the latter. Students applying from overseas for admission to undergraduate courses and to those post-graduate courses which require completion of formal lecture courses should lodge their applications prior to 1st October of the year preceding that in which admission is sought.

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 had 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 discuss their proposals initially with 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 the School, refers the application to the appropriate Faculty or Board of Studies Higher Degree Committee.

The Admissions Office also receives applications from students who wish to transfer from one course to another, or seek any concession in relation to a course in which they are enrolled. These applications should, wherever possible, be lodged before the commencement of the academic year in which the concession is to apply.

Students wishing to resume their studies after an absence of twelve months or more are required to apply to the Admissions

Office for permission to re-enrol. It should be noted that, unless permission has been given to defer their studies for a specified period which will not normally exceed twelve months, students will be required to re-enter the course under the regulations prevailing at the time of resumption. This condition will apply also to students who have been re-admitted to a course after exclusion under the rules restricting students re-enrolling.

The Admissions Office operates an Enrolment Bureau for undergraduate students enrolling in the University for the first time. Details of the procedure to be followed by such students will be published in the preamble to the Leaving Certificate Examination results, or may be obtained on application to the Admissions Office.

The Admissions Office is at present located in the Main Building at Kensington, telephone 663-0351. Office hours are from 9 a.m. to 1 p.m. and 1.45 p.m. to 5 p.m. Monday to Friday, although an evening service is provided during the enrolment period. As from March 1966 the Office will be located on the upper campus in the Chancellery.

REQUIREMENTS FOR ADMISSION*

For admission to the degree courses in Architecture and Building, candidates must satisfy one of the following requirements:

(a) Pass the New South Wales Leaving Certificate or University of Sydney Matriculation Examination in at least five approved subjects at the one examination.

(b) Hold a Diploma from the New South Wales Department of Technical Education, or any other technical college which may from time to time be recognized by the University, subject to the Professorial Board being satisfied that the applicant's qualifications are sufficient for matriculation.

(c) Be a graduate of any approved university or a matriculant of any university whose requirements for entry are, in the opinion of the Professorial Board, comparable with those of the University of New South Wales.

*With the introduction of the Higher School Certificate Examination in November 1967, the matriculation requirements will be amended. Details of the amended requirements for admission in 1968 and subsequent years may be secured on application to the Registrar.

(d) Produce evidence of at least one year's training at the Royal Military College of Australia or the Royal Australian Air Force College, or evidence of having satisfactorily completed the passing out examination of the Royal Australian Naval College.

The Professorial Board may in special cases declare any person qualified to enter a Faculty as a "provisionally matriculated student" although he has not complied with the requirements outlined above.

Intending applicants are advised to consult the University Calendar for details of approved matriculation subjects and conditions governing each of the above categories, or to contact the Admissions Office in the Main Building at Kensington between 9 a.m. and 5 p.m. Telephone 663-0351.

ENROLMENT PROCEDURE

First Enrolments. Application for enrolment in First Year must wherever possible be made in person to the Student Enrolment Bureau, Kensington, as soon as the results of the Leaving Certificate Examination are published, but in any event not later than 24th January.

Country residents who wish to enrol with the University should write to the Registrar, P.O. Box 1, Kensington, for a form on which to make their preliminary application. This form must be returned not later than 24th January.

Applicants for enrolment with advanced standing or applicants relying on overseas examinations for matriculation should lodge an application with the Admissions Office prior to 1st October of the year preceding that in which admission is sought.

First Year Repeats. First Year students who fail all subjects at the annual examinations and who are not granted any deferred examinations must apply for re-enrolment to the Student Enrolment Bureau at the time set out above for First Enrolments. Other first Year repeat students follow the procedure set out below for Later Year Enrolments.

Later Year Enrolments. All students enrolling other than for the first time should enrol through the appropriate School and bring with them their notification of examination results for the previous year. This enrolment must be effected before or during the week before the commencement of First Term in accordance with the special arrangements made by the individual Schools.

Conversion Course Enrolments. Enrolment in conversion courses must commence with an application to the Registrar for admission, and the applicant will be notified of the subsequent procedure.

Miscellaneous Subject Enrolments. Students may be permitted to enrol for miscellaneous subjects (i.e. as students not proceeding to a degree or diploma) provided the Head of the School offering the subject considers it will be of benefit to the student and there is accommodation available. Under no circumstances will subjects taken in this way count towards a degree or diploma.

Students who have completed the final examinations but have a thesis still outstanding are required to enrol for the period necessary to complete the thesis and to pay the requisite fees.

Course details must be completed during the prescribed Enrolment Week. For details of fee requirements, including late fee provisions, see under Fees.

Final Dates for Enrolment. No enrolments will be accepted from *new students* after the end of the second week of term (18th March, 1966) except with the express approval of the Registrar and the Head of the School concerned; no *later year enrolments* will be accepted after 31st March without the express approval of the Registrar which will be given in exceptional circumstances only.

Post-graduate Enrolments. Students enrolling in post-graduate courses which include formal instruction are required to attend the appropriate enrolment centre as prescribed annually in the leaflet "Enrolment Procedure for Students Re-enrolling".

UNIVERSITY UNION CARD

All students other than miscellaneous students are issued with a University Union Membership Card. This card must be carried during attendance at the University and shown on request.

The number appearing on the front of the card in the space at the top right-hand corner is the student registration number used in the University's records. This number should be quoted in all correspondence.

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

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

New students will be issued with University Union cards by mail to their address as soon as possible after fee payment. In the meantime, the fees receipt form should be carried during attendance at the University and shown on request. If the Union card is not received within three weeks of fee payment, the University Union should be notified.

FEES*

Fees for Undergraduate Courses

Fees for undergraduate courses in Architecture and Building are assessed on a term basis.

A full-time course fee will be charged for any term where more than 15 hours' per week instruction, etc., is involved.

(i) Full-time Course Fee (more than 15 hours' attendance per week)	$96 (£48) per term
(ii) Part-time Course Fee (over 4 hours' and up to 15 hours' attendance per week) ...	$48 (£24) per term
(iii) Part-time Course Fee (4 hours' or less attendance per week)	$24 (£12) per term

Fees for Higher Degrees

An approved applicant shall be required to pay the following fees:

(1) A registration fee of $4 (£2).

(2) A combined laboratory and supervision fee of—

(a) $60 (£30) p.a. for students in full-time attendance.

(b) $30 (£15) p.a. for students in part-time attendance.

(c) $20 (£10) p.a. for students working externally to the University.

(3) A fee of $30 (£15) when submitting the thesis for examination.

*The fees quoted may be amended by Council without notice. Intending applicants should therefore refer to the current University Calendar before submitting their application for registration.

Fees for Graduate Diplomas

(i) Registration Fee, $4 (£2).

(ii) Award of Diploma Fee, $6 (£3).

(iii) Course Fee—calculated on the basis of a term's attendance at the rate of $5 (£2/10/-) per hour per week. Thus the fee for a programme requiring an attendance of 24 hours per week for the term is 24 × $5 (£2/10/-) = $120 (£60) per term.

Other Fees

Students in any of the above categories are also required to pay the following fees:

Library Fee*	$10	(£5)
Student Activities Fees*		
University Union†	$12	(£6)
Sports Association†	$2	(£1)
Students' Union†	$4	(£2)
Miscellaneous	$6	(£3)
Total	$24	(£12)

Late Fees

First Enrolments

Fees paid on the late enrolment session and before the commencement of term	$5	(£2/10/-)
Fees paid during the 1st and 2nd weeks of term...	$10	(£5)
Fees paid after the commencement of the 3rd week of term with the express approval of the Registrar and Head of the School concerned	$20	(£10)

Re-Enrolments

First Term

Failure to attend enrolment centre during enrolment week	$5	(£2/10/-)

*Annual fee.

†Life members of these bodies are exempt from the appropriate fee or fees.

Fees paid after the commencement of the 3rd week of term to 31st March	$10	(£5)
Fees paid after 31st March where accepted with the express approval of the Registrar	$20	(£10)

Second and Third Terms

Fees paid in 3rd and 4th weeks of term	$10	(£5)
Fees paid thereafter	$20	(£10)
Late lodgement of Application for Admission to Examinations (late applications will be accepted for three weeks only after the prescribed dates)	$4	(£2)

Withdrawal from Course

Students withdrawing from a course are required to notify the Registrar in writing. Fees for the course accrue until a written notification is received.

PAYMENT OF FEES

Completion of Enrolment

All students are required to attend the appropriate enrolment centre during the prescribed enrolment period* for authorization of course programme. Failure to do so will incur a late fee of $5 (£2/10/-).

First Year students (including students repeating First Year) must complete enrolment (including fee payment) before they are issued with class timetables or permitted to attend classes. A First Year student who has been offered a place in a course to which entry is restricted and fails to complete enrolment (including fee payment) at the appointed time may lose the place allocated.

Fees should be paid during the prescribed enrolment period but will be accepted without incurring a late fee during the first two weeks of First Term. (For late fees see above). No student is regarded as having completed an enrolment until fees have been paid. Fees will not be accepted (i.e. enrolment cannot be completed) from

*The enrolment periods for Sydney students are prescribed annually in the leaflets "Enrolment Procedure for New Students" and "Enrolment Procedure for Students Re-enrolling".

new students after the end of the second week of term (i.e. 18th March, 1966), and after 31st March from students who are re-enrolling, except with the express approval of the Registrar, which will be given in exceptional circumstances only.

Payment of Fees by Term

Students who are unable to pay their fees by the year may pay by the term, in which case they are required to pay First Term course fees and other fees for the year, within the first two weeks of First Term. Students paying under this arrangement will receive accounts from the University for Second and Third Term fees. These fees must be paid within the first two weeks of each term.

Assisted Students

Scholarship holders or Sponsored Students who have not received an enrolment voucher or appropriate letter of authority from their sponsor at the time when they are enrolling should complete their enrolment paying their own fees. A refund of fees will be made when the enrolment voucher or letter of authority is subsequently lodged with the Cashier.

Extension of Time

Any student who is unable to pay fees by the due date may apply in writing to the Registrar for an extension of time. Such application must give year or stage, whether full-time or part-time, and the course in which the applicant wishes to enrol, state clearly and fully the reasons why payment cannot be made and the extension sought, and must be lodged before the date on which a late fee becomes payable. Normally the maximum extension of time for the payment of fees is until 31st March for fees due in First Term and for one month from the date on which a late fee becomes payable in Second and Third Terms.

Where an extension of time is granted to a First Year student in First Term, such student is not permitted to attend classes until fees are paid, and if seeking to enrol in a restricted Faculty may risk losing the place allocated.

Failure to Pay Fees

Any student who is indebted to the University and who fails to make a satisfactory settlement of his indebtedness upon receipt of

due notice ceases to be entitled to membership and privileges of the University. Such a student is not permitted to register for a further term, to attend classes or examinations, or to be granted any official credentials.

No student is eligible to attend the annual examinations in any subject where any portion of his course fees for the year is outstanding after the end of the fourth week of Third Term (30th September, 1966).

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

GENERAL CONDUCT

Acceptance as a member of the University implies an undertaking on the part of the student to observe the regulations, by-laws and other requirements of the University, in accordance with the declaration signed at the time of the enrolment.

In addition, students are expected to conduct themselves at all times in a seemly fashion. Smoking is not permitted during lectures, in examination rooms or in the University Library. Gambling is also forbidden.

Members of the academic staff of the University, senior administrative officers, and other persons authorized for the purpose, have authority, and it is their duty, to check and report on disorderly or improper conduct or any breach of regulations occurring in the University.

ATTENDANCE AT CLASSES

Students are expected to be regular and punctual in attendance at all classes in the course or subject in which they 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 a student may be excused by the Registrar from 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 any longer period.

Applications to the Registrar for exemption from re-attendance at classes, either for lectures or practical work, may only be granted on the recommendation of the Head of the appropriate School. The granting of an exemption from attendance does not carry with it exemption from payment of fees.

Application forms for exemption from lectures are available at the Admissions Office and should be lodged there (with a medical certificate where applicable). If term examinations have been missed this fact should be noted in the application.

Where a student has failed a subject at the annual examinations in any year and re-enrols in the same course in the following year, he must include in his programme of studies for that year the subject in which he has 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.

Where a student has attended less than eighty per cent of the possible classes, he may be refused permission to sit for the examination in that subject.

ANNUAL EXAMINATIONS

The annual examinations take place in November-December for students in 30-week courses, and in September for students in 24-week courses. Students must make application to sit for examinations by a specified date, the procedure being described in the University Calendar. Enquiries should be directed to the Examinations Branch. Examination results are posted to the term addresses of students. No results will be given by phone.

APPLICATION FOR ADMISSION TO DEGREE OR DIPLOMA

Application for admission to a degree or diploma must be made on the appropriate form by 31st January. Applications for the award of a diploma of Associateship of Sydney Technical College (A.S.T.C.) awarded by the N.S.W. Department of Technical Education must be made on the appropriate form by 31st March. Applicants should ensure that they have completed all requirements for the degree or diploma, including industrial training where necessary.

STUDENT FACILITIES

THE ARCHITECTURE CLUB

Students of the School of Architecture and Building are encouraged to participate in extra-curricular activities through the Architecture Club, of which they automatically become members immediately upon registration. The Club, commonly known as T.A.C., is affiliated with the Australian Architectural Students' Association, with the International Union of Architectural Students, and is currently leading a movement to form a graduate club of architects, artists and sculptors with headquarters in the city.

In addition to sending representatives interstate and overseas, T.A.C. arranges outings, social functions and lectures, and produces both a broadsheet each week and a magazine, *Atelier*, each term. It commands the enthusiastic support of all students, and provides a common interest which is invaluable in creating a school spirit.

LIBRARY

The University Library provides a reference and lending service for staff and students, and is open in term during day and evening sessions. Library services are also available to students at Broken Hill and Wollongong.

THE UNIVERSITY OF NEW SOUTH WALES STUDENTS' UNION

The Students' Union is the parent student organization within the University and membership is compulsory for all registered students. It provides a wide range of cultural societies, and social facilities as well as producing a bi-weekly journal. The annual subscription is $4 (£2).

RESIDENTIAL COLLEGES

Accommodation for students is provided within the complex of the Residential Colleges of the University which comprise Basser College, Phillip Goldstein Hall, Post-Graduate Hall, and a new college, the Philip Baxter College which will accept students

for the first time in 1966. The College complex houses 500 men and women students, as well as staff members. Tutors in residence provide tutorial assistance in a wide range of subjects.

Board and residence fees, which are payable on a term basis, amount to $18.50 (£9/5/-) per week. Intending students should apply in writing to the Master, Box 24, Post Office, Kensington, N.S.W., from whom further information is available.

STUDENT EMPLOYMENT SERVICE

The Student Employment Service offers assistance in finding suitable full-time, casual or vacation employment during university training. It will also advise on Cadetships and permanent career employment. The service is located in the Main Building, Kensington, and is open 9 a.m.-5 p.m. daily. Telephone 663-0351.

STUDENT HEALTH SERVICE

A free health service under the direction of a qualified medical practitioner is available to all students during office hours. The service is primarily diagnostic and not intended to replace the students' private doctor or the community health services available. Appointments may be arranged by personal contact or by telephoning 663-0351 ext. 2679.

STUDENT COUNSELLING AND RESEARCH UNIT

The Student Counselling and Research Unit is located at Kensington and is normally open from 9 a.m. to 9 p.m. daily. Students wishing to avail themselves of this advisory service should arrange an appointment by 'phoning 663-0351 ext. 2600-2605.

SPORTS ASSOCIATION

In December, 1952, the University Council approved the establishment of the Sports Association as the organization to control and sponsor sporting activities within the University.

Some 20 clubs provide a wide variety of sporting activities. Membership is compulsory for all registered students, the annual subscription being $2 (£1).

UNIVERSITY REGIMENT

The University Regiment is organized basically as an infantry battalion. Enrolment is voluntary and recruits sign on for a period of two years, during which 14-day camps are held in January-February. Enquiries should be directed to the Adjutant or Regimental Sergeant-Major, Regimental Headquarters, Day Avenue, Kensington.

SYDNEY UNIVERSITY SQUADRON

The Sydney University Squadron, a Citizen Air Force Unit of the R.A.A.F. is established for voluntary enlistment of one hundred undergraduates of the University of New South Wales and the University of Sydney. Annual training is organized to fit in with Faculty activities and consists of lectures on Air Force organization, law and administration, and appropriate technical and specialist subjects applicable to the medical, technical, radio, works and administrative flights. Enquiries should be addressed to the Commanding Officer, Sydney University Squadron Headquarters, cnr. City and Darlington Roads, Darlington. Tel. 51-4664.

SCHOLARSHIPS, BURSARIES AND CADETSHIPS

A wide range of scholarships and cadetships will be offered to students commencing University courses in 1966.

Except where otherwise specified, applications on the forms obtainable from the Admissions Office ('phone: 663-0351, ext. 2485) must be lodged with the Registrar, the University of New South Wales, P.O. Box 1, Kensington, within seven days of the publication of the results of the N.S.W. Leaving Certificate Examination.

UNIVERSITY SCHOLARSHIPS

The University annually awards up to fifteen scholarships tenable in degree courses to students who have matriculated at the Leaving Certificate Examination; ten scholarships to students who have completed certificate courses (Department of Technical Education); ten scholarships to students who have completed Trade Courses (Department of Technical Education); and ten scholarships to part-time students who have taken the Qualifying and Matriculation course of the Department of Technical Education. The scholarships are tenable in any Faculty and exempt the holder from payment of course fees during the currency of the scholarship. Scholarships will be awarded in order of merit on Leaving Certificate Examination results. They may be held only by persons who do not hold another award. Applications must be lodged after publication of Leaving Certificate Examination results and after the announcement of the award of Commonwealth Scholarships, but not later than 31st January.

COMMONWEALTH SCHOLARSHIPS

Students enrolling in first degree courses at the University are eligible. Benefits include payment of all tuition fees and other compulsory fees, and living allowances (these latter being subject to a means test). The closing date for applications is 30th September in the year immediately preceding that for which the scholarship is desired. Full particulars and application forms may be obtained from the Officer-in-Charge, University Branch Office, Department of Education, University Grounds, University of Sydney (Telephone: 68-2911).

BURSARIES AWARDED BY THE BURSARY ENDOWMENT BOARD

A number of Bursaries tenable at the University are awarded to candidates of merit at the Leaving Certificate Examination whose family income falls within certain limits prescribed by the Bursary Endowment Board.

Applications should be made to the Secretary, Bursary Endowment Board, C/- Department of Education, Bridge Street, Sydney.

COMMONWEALTH SERVICE CADETSHIPS

The Commonwealth Service offers each year a number of cadetships in a wide variety of fields. British subjects, with Australian citizenship, under the age of twenty-eight years, are eligible to apply. These cadetships enable selected students to complete their courses full-time and receive a salary while doing so according to the scale below:

	Male	*Female*
Under 18 years	$1,242 (£621)	$1,144 (£572)
At 18 years	$1,472 (£736)	$1,288 (£644)
At 19 years	$1,698 (£849)	$1,440 (£720)
At 20 years	$1,954 (£977)	$1,604 (£802)
At 21 years	$2,142 (£1,071)	$1,740 (£870)
At 22 years	$2,266 (£1,133)	$1,864 (£932)
At 23 years	$2,390 (£1,195)	$1,988 (£994)
With increments to	$2,762 (£1,381)	$2,360 (£1,180)

Fees are refunded to the cadet on a proportionate basis according to his salary.

Applicants must have passed the Leaving Certificate or equivalent examination with passes in English, Mathematics and Physics, and they will be required to enter into a bond undertaking to remain in the Commonwealth Public Service for a period of up to five years after graduation. Either full-time or part-time courses may be undertaken if available.

Cadetships are available from time to time in the fields of engineering, biochemistry, science and architecture.

Details of vacancies at any one time may be obtained from the University's Student Employment Officer or the Inquiry Officer, Commonwealth Public Service Inspector's Office, Commonwealth Centre, Chifley Square, Sydney. Telephone 28-5701.

W. J. McIVER SCHOLARSHIP

The W. J. McIver Scholarship is open to students who qualify at the annual examinations for admission to the Fifth Year Honours course in Architecture. The scholarship provides a living allowance of at least $200 (£100) p.a. payable in term instalments.

Applications must be made on the approved form and lodged with the Registrar not later than 15th January each year.

UNDERGRADUATE PRIZES

Architecture Degree Course

The Joseph Auto-Hot ...	£300	0	0	Best student, Final Year.
Marley Reliance Industries Pty. Ltd.	£25	0	0	Best student, Year I.
Dunlop Rubber Aust. Ltd. ...	£26	5	0	Best student, Year III.
Board of Architects of N.S.W.	£20	0	0	School Prize Fund — subject selected by Head of School.
James Hardie & Co. Pty. Ltd.	£50	0	0	General excellence in the architectural subjects of the course.
*W. A. Nelson	£30	0	0	Best specific studio project in Year IV.†
*Frank W. Peplow	£12	0	0	Best student in ecclesiastic architecture.
*Royal Australian Institute of Architects, N.S.W. Chapter	£25	0	0	Excellence in Design and allied subjects in final 2 years of course.

Building Degree Course

James Hardie & Co. Pty. Ltd.	£20	0	0	Best student, Year I.
*Master Builders' Association of N.S.W.	£100	0	0	To be allocated at the discretion of the Head of the School.
*William King McLean ...	£2	2	0	Best student in Building Construction and Structures in first 3 years of course.

General

Chamber of Manufactures of N.S.W.	£5	0	0	To be awarded at the discretion of the Head of the School.

*Open to students of the corresponding Diploma course.
†Bi-annual prize, first awarded in 1965, upon a project executed during 1964.

POST-GRADUATE AWARDS

Commonwealth Post-graduate Scholarships

The Department of Education, N.S.W., is prepared to consider as special cases students holding Commonwealth University Scholarships who wish to continue their studies for a further year in a full-time post-graduate diploma course.

Byera Hadley Travelling Scholarship

The Byera Hadley Travelling Scholarship is open to graduates in Architecture of the University of New South Wales and Associates of the Sydney Technical College. Candidates must be British subjects.

The scholarship is to assist the holder to proceed overseas and remain abroad for not less than one year and not more than three years. Value $1,200 (£600).

Byera Hadley Travel Grant

The Byera Hadley Travel Grant is open to graduates in Architecture of the University of Sydney or the University of New South Wales and Associates of the Sydney Technical College. All candidates must be British subjects. The grant is to assist the holder to travel and undertake a course of study. Value $600 (£300).

Board of Architects of New South Wales Travelling Scholarships

The Board of Architects of New South Wales offers two scholarships annually to holders of an Architecture degree from the University of Sydney or the University of New South Wales, or the diploma in Architecture of the Sydney Technical College, or to architects registered in the State of New South Wales. All candidates must be British subjects.

The scholarships are to assist the holders to proceed overseas and remain abroad for not less than twelve months and not more than three years. Value of each scholarship, $600 (£300).

Closing dates for applications and further details are available upon request from the Head of the School.

Sir Manuel Hornibrook Travel Grant

The Sir Manuel Hornibrook Travel Grant is open to Licentiate or Student members of the Australian Institute of Builders, from whom the Council of the Institute may invite applications in each alternate year.

The object of the Travel Grant is to advance the study and practice of building by competition for the award, and by subsequent travel overseas or interstate. The Travel Grant shall be of such value as the Council may from time to time determine. Details are obtainable from the Australian Institute of Builders, N.S.W. Chapter.

Civic Design Scholarships

The Lend Lease Homes Pty. Ltd. scholarship, the Morrow and Gordon Scholarship, and the Peddle, Thorp and Walker Scholarship, each valued at $300 (£150) per annum, are available to assist suitable candidates attending the post-graduate course in Civic Design.

UNDERGRADUATE COURSES

Undergraduate courses in both Architecture and Building are designed to provide a thorough training in the basic sciences upon which modern building technology depends. These studies lead to scientific and practical analysis of materials and methods used in building design and construction. Special studies are made of acoustics and lighting, and advanced training is provided in structures and in the services and equipment which are vital to the operation of the present-day building.

The undergraduate degree course in Town Planning is intended to train the "general practitioner" in town and regional planning. In addition to the planning-oriented specialists such as architect-planners and engineer-planners, planning as practised today requires persons skilled in the co-ordination of the economic, physical and social aspects of development programmes.

In the Architecture course students are encouraged to develop their creative abilities. Initial appreciation of visual design and colour is followed by advanced work in architectural design, civic architecture and town planning. Studies in the Building course place emphasis on subjects dealing with law, management, accounting and finance, but in all cases the content of courses has been designed to maintain a balance between creative and artistic talents on the one hand and practical ability and sound commonsense on the other. In short, the courses are aimed at the production of graduates whose overall knowledge is balanced in such a way that they may accept positions of responsibility immediately their training is complete, or pursue a specialized field with a realistic appreciation of its implications in the range of total architecture.

Throughout their training students of all courses share many common subjects and work in close association with one another upon their various assignments. It has been found that this close association of architect, builder and planner during their formative years leads to an understanding of each other's problems which is invaluable in the subsequent practice of their individual but closely related disciplines.

Professional Recognition

The degree of Bachelor of Architecture of the University of New South Wales is fully recognized by the Royal Australian Institute of Architects, the Royal Institute of British Architects, and by the New South Wales Board of Architects for legal registration as an architect in New South Wales. The degree of Bachelor of Building qualifies for membership of the Australian Institute of Builders.

Students are encouraged to join these institutions as student members and thus take part in corporate activities such as meetings, annual conventions and conferences.

In addition to recognition by professional bodies, these degrees are recognized for partial exemptions in many post-graduate courses throughout Australia and Great Britain, and a significant proportion of graduates leave Australia upon completion of their training to pursue specialized courses overseas.

DEGREE COURSE IN ARCHITECTURE—B. ARCH.

The course for a pass degree in Architecture may be programmed for a five-, six-, seven-, or eight-year timetable, dependent upon the amount of full-time training undertaken by the candidate. Subjects have been grouped to form eight study units, several of which may be taken in pairs by full-time attendance, or singly by part-time attendance. Units must be undertaken in numerical sequence or, in the case of full-time training, in the following combinations:

Study Units	Attendance Pattern
Unit No. 1 Unit No. 2	1 year full-time
Unit No. 3 Unit No. 4	1 year full-time *or* 2 years part-time
Unit No. 5 Unit No. 6	1 year full-time *or* 2 years part-time
Unit No. 7	1 year part-time
Unit No. 8	1 year full-time

Under special circumstances the Dean may permit a student to take the first year programme over two part-time stages. Where

the University is satisfied that the completion of the final year by full-time attendance would constitute a hardship, the student may be permitted to complete the final year in two part-time stages.

The minimum period for graduation (except for students entering with advanced standing) will be five years.

ARCHITECTURE DEGREE COURSE

Bachelor of Architecture

	FIRST YEAR	FULL-TIME PROGRAMME (30 weeks' course) Lec. — Prac.	PART-TIME PROGRAMME *Stage* 1 Study Unit 1 (30 weeks' course) Lec. — Prac.	PART-TIME PROGRAMME *Stage* 2 Study Unit 2 (30 weeks' course) Lec. — Prac.
1.011	Physics	2 — 1	2 — 1	0 — 0
10.051	Mathematics	2 — 0	2 — 0	0 — 0
11.111	Design I	1 — 0	1 — 0	0 — 0
11.121	History of Architecture I	1 — 0	1 — 0	0 — 0
11.131	Drawing I	0 — 9		
11.131/1	Drawing IA		0 — 5	0 — 0
11.131/2	Drawing IB		0 — 0	0 — 3
11.211	Construction I	1 — 3	0 — 0	1 — 2
11.221	Structures I	1 — 1	0 — 0	1 — 1
11.231	Building Science I	1 — 1	0 — 0	1 — 1
11.611	Building Trades I	0 — 3	0 — 0	0 — 3
		9 — 18	6 — 6	3 —10

	SECOND YEAR	FULL-TIME PROGRAMME (30 weeks' course) Lec. Prac.	PART-TIME PROGRAMME *Stage* 3 Study Unit 3 (30 weeks' course) Lec. Prac.	PART-TIME PROGRAMME *Stage* 4 Study Unit 4 (30 weeks' course) Lec. Prac.
8.211	Building Science IIB	0 — 2	0 — 0	0 — 2
11.112	Design II	1 — 6		
11.112/1	Design IIA		1 — 2	0 — 0
11.112/2	Design IIB		0 — 0	0 — 3
11.122	History of Architecture II	1 — 0	1 — 0	0 — 0
11.132	Drawing II	0 — 6		
11.132/1	Drawing IIA		0 — 3	0 — 0
11.132/2	Drawing IIB		0 — 0	0 — 3
11.212	Construction II	1 — 5	0 — 0	0 — 0
11.212/1	Construction IIA	0 — 0	½ — 1	0 — 0
11.212/2	Construction IIB	0 — 0	0 — 0	½ — 1
11.222	Structures II.....	1 — 1		
11.222/1	Structures IIA		½ — 1	0 — 0
11.222/2	Structures IIB		0 — 0	½ — 1
11.232	Building Science IIA	1 — 0	1 — 0	0 — 0
50.011H 57.011H	English or An Introduction to Modern Drama	2 — 0		
50.011H/1	English		1 — 0	
50.011H/2	English			1 — 0
		7 —20	5 — 7	2 —10

	THIRD YEAR	Full-Time Programme (30 weeks' course) Lec. Prac.	Part-Time Programme *Stage* 5 Study Unit 5 (30 weeks' course) Lec. Prac.	Part-Time Programme *Stage* 6 Study Unit 6 (30 weeks' course) Lec. Prac.
8.411	Surveying	0 — 1	0 — 1	0 — 0
11.113	Design III	1 —12		
11.113/1	Design IIIA		1 — 3	0 — 0
11.113/2	Design IIIB		0 — 0	0 — 3
11.123	History of Architecture III	1 — 0	0 — 0	1 — 0
11.213	Construction III	1 — 5	0 — 0	1 — 2
11.223	Structures III	1 — 1	1 — 1	0 — 0
11.233	Building Science III	1 — 0	1 — 0	0 — 0
11.241	Building Services A	1 — 0	0 — 0	1 — 0
	Two 30 hour General Studies Electives	2 — 0	1 — 0	1 — 0
		8 —19	4 — 5	4 — 5

	FOURTH YEAR	Study Unit 7 (30 weeks' part-time course) Lec. Prac.
11.011H	History of Fine Arts	1 — 0
11.114	Design IV	0 — 3
11.124	History of Architecture IV	1 — 0
11.224	Structures IV	2 — 0
11.234	Building Science IV	1 — 0
11.242	Building Services B	1 — 0
		6 — 3

Revised Final Year

In 1966 a revised final year course will be introduced. All students enrolled in Year 1 or Stage 1 from 1966 onwards must enrol in the revised final year.

In addition to the changes in the academic content, students should note that under the new regulations the final year is normally available only on a full-time basis, and that Honours are awarded on performance throughout the course.

The revised final year will be available to all students completing their degree in 1967 and thereafter.

Details concerning the old course in the final year, and Honours arrangements are available in the 1965 Calendar.

FIFTH YEAR

(30 weeks' full-time course)

		Lec.	Prac.
11.116	Design V	0	—15
11.142	Thesis	–	— –
11.311	Specifications	1	— 0
11.322	Professional Practice	2	— 0
11.411	Town Planning	1	— 1
11.723	Estimating	1	— 0
11.141	Architectural Research		
or			
11.215	Construction V		
or			
11.225	Structures V		
or		1	— 1
11.235	Building Science V		
or			
11.412	Town Planning		
or			
11.930	Landscape Design		
		6	—17

Final year students will take the four-day *en-loge* formal final examination in Design V.

DEGREE COURSE IN BUILDING—B. BUILD.

The course in Building is designed to provide a basic training for business management and for executive careers in the building industry. It aims to develop in the student a sound conception of the related requirements and functions of the building-owner, the architect, the structural and mechanical engineers, the materials manufacturer and the builder in the processes of planning, detailing, and erecting buildings. This has relevance to a wide variety of opportunities now offered for careers in the management and supervision of building enterprises, building materials production, and many other activities in building technology, administration, and research—both in private and public employment.

The course, which was first offered in 1960, leads to the degree of Bachelor of Building (B.Build.). Students may attend full-time or part-time and subjects of the course are arranged in a manner which facilitates transfer from full-time to part-time study or vice versa.

For part-time study, the course is divided into seven stages and the student takes the subjects of a stage in each year of his study. In full-time study, the subjects of a pair of stages are taken in any one year up to three full-time years (six stages). The fourth year (or seventh stage) is available only by part-time attendance. It is recommended that students attend at least one year full-time in the course. In this case, the course will take one full-time year and five part-time years, a total of six years. Similarly, by attending in two full-time years, the course will take a total of five years. In this way, the student may programme the course for four, five, six or seven years.

When attending part-time, students will be required to be in approved employment related to the course. It will be assumed that employers of part-time students agree to day-release for one half-day or one day per week, and subjects will be timetabled for these day hours as well as for the evening hours.

It will be noted that the first year (first and second stages) of the Building degree course is common with the Architecture degree course and that certain subjects in later years (such as Construction, Structures, Building Science, Building Services, etc.) are taken by both Architecture and Building students.

The course is divided into three sections:

(a) Basic academic studies which provide a background of

mathematics, physics, history, philosophy, one of the social sciences, and English.

(b) Technical subjects which provide a thorough training in the practical matters of building construction and building trade practices, assembly techniques, materials and equipment.

(c) Administrative subjects which are related to building enterprises and administration such as finance, company law, job organization, site methods, quantity surveying, estimating, accounting, costing analysis, business principles, etc.

The Building degree course also provides University training for quantity surveyors and the elective subject Quantity Surveying B is available in the fourth year (or stage 7) for students who wish to make quantity surveying their career. It is expected that students who intend to practise building will choose the alternative subject, Law for Builders II. It is possible to acquire qualifications for both vocations by completing the two elective subjects.

The award of B.Build. will qualify for membership of the Australian Institute of Builders, or, alternatively, for membership of the Institute of Quantity Surveyors, Australia, or both.

BUILDING DEGREE COURSE

Bachelor of Building

	FIRST YEAR	FULL-TIME PROGRAMME (30 weeks' course) Lec. Prac.	PART-TIME PROGRAMME *Stage* 1 (30 weeks' course) Lec. Prac.	*Stage* 2 (30 weeks' course) Lec. Prac.
1.011	Physics	2 — 1	2 — 1	0 — 0
10.051	Mathematics	2 — 0	2 — 0	0 — 0
11.111	Design I	1 — 0	1 — 0	0 — 0
11.121	History of Architecture I	1 — 0	1 — 0	0 — 0
11.131	Drawing I	0 — 9		
11.131/1	Drawing IA		0 — 5	0 — 0
11.131/2	Drawing IB		0 — 0	0 — 3
11.211	Construction I	1 — 3	0 — 0	1 — 2
11.221	Structures I	1 — 1	0 — 0	1 — 1
11.231	Building Science I	1 — 1	0 — 0	1 — 1
11.611	Building Trades I	0 — 3	0 — 0	0 — 3
		9 —18	6 — 6	3 —10

	SECOND YEAR	Full-Time Programme (30 weeks' course) Lec. Prac.	Part-Time Programme *Stage* 3 (30 weeks' course) Lec. Prac.	Part-Time Programme *Stage* 4 (30 weeks' course) Lec. Prac.
8.211	Building Science IIB	0 — 2	0 — 0	0 — 2
8.242S	Soil Mechanics for Building	1 — ½	1 — ½	0 — 0
8.411	Surveying	1 — 0	1 — 0	0 — 0
11.212	Construction II	1 — 5		
11.212/1	Construction IIA		½— 1	0 — 0
11.212/2	Construction IIB		0 — 0	½— 1
11.222	Structures II	1 — 1		
11.222/1	Structures IIA		½— 1	0 — 0
11.222/2	Structures IIB		0 — 0	½— 1
11.232	Building Science IIA	1 — 0	1 — 0	0 — 0
11.612	Building Trades II	0 — 6	0 — 3	0 — 3
11.711	Quantity Surveying A ...	1 — 1	0 — 0	1 — 1
11.741	Building Acts and Regulations	½— 0	0 — 0	½— 0
14.001	Accounting and Costing for Builders	2 — 1	2 — 1	0 — 0
50.011H 57.011H	English or Introduction to Modern Drama	2 — 0	1 — 0	1 — 0
		10½—16½	7 — 6½	3½— 8

	THIRD YEAR	Full-Time Programme (30 weeks' course) Lec. Prac.	Part-Time Programme *Stage* 5 (30 weeks' course) Lec. Prac.	Part-Time Programme *Stage* 6 (30 weeks' course) Lec. Prac.
11.213/1	Construction IIIA	1 — 9		
11.213/2	Construction IIIB		½— 3	0 — 0
11.213/3	Construction IIIC		0 — 0	½— 3
11.223	Structures III	1 — 1	1 — 1	0 — 0
11.233	Building Science III	1 — 0	1 — 0	0 — 0
11.731	Building Management ...	2 — 0		
11.731/1	Building Management A		1 — 0	0 — 0
11.731/2	Building Management B		0 — 0	1 — 0
11.721	Estimating A	1 — 1	0 — 0	1 — 1
11.241	Building Services A	1 — 0	0 — 0	1 — 0
14.051	Law for Builders I	2 — 0	0 — 0	2 — 0
14.021	Business Finance	2 — 0	2 — 0	0 — 0
11.311	Specifications	1 — 0	1 — 0	0 — 0
	Two 30 hour General Studies Electives	2 — 0	1 — 0	1 — 0
		14 —11	7½— 4	6½— 4

FOURTH YEAR or STAGE 7

(30 weeks' part-time course)

		Lec. Prac.
11.011H	History of Fine Arts *or* Humanities *or* Social Science Elective not already taken	1 — 0
11.224	Structures IV	2 — 0
11.234	Building Science IV	1 — 0
11.242	Building Services B	1 — 0
11.411	Town Planning	⅔— ⅔
11.722	Estimating B	1 — 1
	and either	
11.712	Quantity Surveying B	2 — 0
	or	
14.052	Law for Builders II	1 — 0
		7⅔ or 8⅔— 1⅔

DEGREE COURSE IN TOWN PLANNING—B.T.P.

As town planning is concerned with determining the best use of land and creating a better human environment, students will be trained in aesthetic and civic design principles as well as in land-use studies. A particular feature of the course will be emphasis on the study of new techniques in planning strategies, decision-making, programming, budgeting and implementing of development plans; in urban research and in the interaction of land uses and transportation.

The graduate will be equipped to play an important part in the creative and administrative work of national, regional and local planning authorities. The establishment of the State Planning Authority of New South Wales in 1963 has provided many opportunities for the employment of general practitioners in planning because of its co-ordinating and supervising functions.

The course, which leads to the award of the degree of Bachelor of Town Planning (B.T.P.), is of five years' duration. The first and second years are full-time, the third and fourth years part-time and the fifth year full-time. For the two part-time years 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.

It will be noted that the first year of the Town Planning course is common with the first year (full-time) of the Architecture and Building degree courses.

The awarding of Honours and other matters relating to the course programme will be in accordance with existing Faculty regulations.

TOWN PLANNING DEGREE COURSE

Bachelor of Town Planning

FIRST YEAR

(30 weeks' full-time)

		Hours per week Lec.	Prac.
1.011	Physics	2	1
10.051	Mathematics	2	0
11.111	Design I	1	0
11.121	History of Architecture I	1	0
11.131	Drawing I	0	9
11.211	Construction I	1	3
11.221	Structures I	1	1
11.231	Building Science I	1	1
11.611	Building Trades I	0	3
		9	18

SECOND YEAR

(30 weeks' full-time)

		Hours per week Lec.	Prac.
11.132	Drawing II	0	6
11.431	Town Planning Theory and Practice I	1	3
11.441	Design II for Town Planners	1	6
11.451	History of Town Planning	1	0
11.461	Civic Engineering	1	3
25.531S	Geology	2	1
50.011H 57.011H	English *or* An Introduction to Modern Drama	2	0
		8	19

THIRD YEAR

(30 weeks' part-time)

		Hours per week Lec.	Prac.
8.431	Surveying and Cartography	1	1
11.432	Town Planning Theory and Practice II	1	3
11.471	Planning Law and Administration	2	0
	Two 30 hour General Studies Electives	2	0
		6	4

FOURTH YEAR

(30 weeks' part-time)

		Hours per week Lec.	Prac.
11.433	Town Planning Theory and Practice III	1	3
53.321	Urban Sociology	1	0
54.211	Central and Local Government	1	0
	Urban Geography	1	0
	An Advanced Humanities Elective	2	0
		6	3

FIFTH YEAR

(30 weeks' full-time)

		Hours per week Lec.	Prac.
11.434	Town Planning Theory and Practice IV	1	15
11.442	Civic and Landscape Design	1	3
11.481	Land Valuation and Economics	2	0
19.511	Transportation Engineering	1	0
19.521	Statistical Methods and Data Processing	1	0
11.491	Thesis	-	-
		6	18

CONVERSION COURSE IN ARCHITECTURE

Holders of the A.S.T.C. Diploma of the Department of Technical Education in Architecture may proceed to an appropriate degree by means of a conversion course. The syllabuses of these courses are arranged so that diplomates are given credit for their diploma studies and may satisfy the degree requirements with the minimum of repetition and overlap.

Each application will be considered on its merits, but the minimum requirements to satisfy for a degree in architecture after completing a diploma course are:

			Hours per week
1.		Conversion Humanities	4
2.	11.142	Thesis*	24 (Term 1)
3.	Any two of the following:		
	1.001	Physics	3
	25.531	Geology for Engineers	3
	8.211	Building Science IIB (Materials for Architects)	2
	10.051	Mathematics	2 (Terms 2 & 3)
	11.231	Building Science I	2

EXTENSION COURSES

The School of Architecture and Building from time to time conducts extension courses in specialist fields of study related to architecture and building. 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.

*In special circumstances a student may apply to complete this subject by part-time study over three terms. The holder of a diploma with Credit or Honours may apply to be exempted from this subject, provided that—

(a) at the completion of his Conversion course he will have had two years' standing as a diplomate;

(b) he gained a Credit or Distinction for the research or design thesis in the diploma course;

(c) he provides evidence to the Faculty that in his professional career he has pursued some aspect of study in Architectural Science and Research which, together with the diploma thesis, is regarded as equivalent to the subject of 11.142 Thesis.

DIPLOMA COURSES

In 1951 the University undertook to provide instruction on behalf of the Department of Technical Education and a large number of diploma courses were conducted. Under an agreement reached with the Department in 1959 most of these courses have been withdrawn, but the School of Architecture and Building still conducts diploma courses in Building and Quantity Surveying. Details of these two courses may be obtained upon application to the Head of the School.

POST-GRADUATE STUDY

HIGHER DEGREES

Following the award of a first degree in Architecture or Building of the University of New South Wales or other approved university, graduates may apply to register for the degrees of Master of Architecture or Master of Building. Facilities are also available for research towards the degree of Doctor of Philosophy. For details concerning this degree consult the Calendar or write to the Dean.

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

(1) Every candidate for the degree shall be required to carry out a programme of advanced study, to take such examinations, and to perform such other work as may be prescribed by the Professorial Board. The programme shall include the preparation and submission of a thesis embodying the results of an original investigation or design relative to architecture or building. 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 six complete terms from the date from which the registration becomes effective, save that in the case of a full-time 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 Professorial Board, be reduced by not more than three terms.

(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 the 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, 1912-1950, the University may issue the thesis in whole or in part in photostat or micro-film or other copying medium.

POST-GRADUATE COURSES

In addition to the facilities available for the pursuit of higher degrees, the School offers the following formal post-graduate courses:

(1) A one-year full-time course in Civic Design.

(2) A two-year part-time course in Landscape Design.

Admission

Applicants for admission to these courses shall be graduates in Architecture of the University of New South Wales or the holders of such other qualifications as may be approved by Faculty.

Nature of Award

Successful completion of the prescribed course of study will lead to the award of a post-graduate diploma.

GRADUATE DIPLOMA IN CIVIC DESIGN (Dip.C.D.)

This course is designed to provide for post-graduate study in the civic design aspects of community planning. These studies will relate to the grouping of buildings in residential neighbourhoods, district centres and the central business district. The course will be of one year full-time duration, leading to the award of the Graduate Diploma in Civic Design. It will be the second of a series of graduate diploma courses which the School of Architecture and Building intends to offer on an annual basis, with the aim of creating opportunities for full-time specialist study in specific areas of architecture, building and town planning. A feature of these courses is the appointment of an expert or visiting professor in the particular field to guide the study.

Visiting Professor

Yoshinobu Ashihara, M.Arch. (Harvard), Ph.D. (Tokyo), Professor and Dean of Architecture in the Musashino University of Fine Arts, Tokyo, will be the Visiting Professor for the period of the Third Term, 1966.

Professor Ashihara was formerly Professor of Architecture in the Hosei University. He has been Director of the Japan Architects'

Association and the Architectural Institute of Japan. In 1960 he travelled extensively in Europe and the United States of America on a Rockefeller Travel Grant and in the same year received the award of the Architectural Institute of Japan. He has represented Japan at I.U.A. Conferences in London and Mexico.

In 1960 Yoshinobu Ashihara and Associates won second prize in the competition for the design of the Kyoto International Congress Hall. Professor Ashihara has been commissioned by the Japanese Government to design the Japanese Pavilion for the 1967 World Exposition in Montreal, Canada. He is author of the book *Exterior Space in Architecture.*

Course Structure—30 weeks' full-time course

		Hours per week		
		Term 1	Term 2	Term 3
		Lec. Prac.	Lec. Prac.	Lec. Prac.
11.920G	Theory of Neighbourhood Planning	1 — 0	1 — 0	2 — 0
11.921G	Practice of Neighbourhood Planning	1 —12	1 —12	2 —16
11.922G	Communications and Public Utilities	2 — 0	2 — 0	2 — 0
11.923G	Land and Housing Economics	2 — 2	2 — 2	0 — 0
11.924G	Urban Sociology	1 — 1	1 — 1	0 — 0
		7 —15	7 —15	6 —16

GRADUATE DIPLOMA IN LANDSCAPE DESIGN (Dip.L.D.)

This course, the first of its kind to be offered in Australia, 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.

Course Structure—two years' part-time study

	Year I	Term 1 Lec. Prac.	Term 2 Lec. Prac.	Term 3 Lec. Prac.	Hours
11.910G	History of Landscape Design	1 — 0	1 — 0	0 — 0	21
25.531	Geology for Engineers*	1 — 2	1 — 2	1 — 2	90
11.911	Botany and Ecology*	1 — 2	1 — 2	1 — 2	90
11.912G	Landscape Engineering	0 — 0	0 — 0	2 — 0	18
		3 — 4	3 — 4	4 — 4	219

	Year II	Term 1 Lec. Prac.	Term 2 Lec. Prac.	Term 3 Lec. Prac.	Hours
11.913G	Theory and Practice of Landscape	1 — 0	1 — 0	1 — 0	30
11.914	Forestry and Horticulture*	2 — 1	2 — 1	2 — 1	90
11.915G	Landscape Design	0 — 3	0 — 3	0 — 3	90
		3 — 4	3 — 4	3 — 4	210

Enquiries

Initial enquiries regarding post-graduate courses should be addressed to:

The Dean,
School of Architecture and Building,
University of New South Wales,
P.O. Box 1,
Kensington,
New South Wales, Australia.

*Practical work in Geology, Botany and Forestry will include a number of Saturday excursions.

DESCRIPTION OF SUBJECTS

The following brief synopses are intended to outline the scope of individual subjects within the Architecture and Building undergraduate courses. A list of recommended text and reference books succeeds each subject.

11.011 History of Fine Arts

Twenty hours will be devoted to this section providing an outline of the development of nineteenth and twentieth century painting and sculpture. This course aims to outline the movements concerned in the development of modern art from the stylistic background of the European tradition to contemporary works. It is hoped to develop in the student a critical insight which will lead to greater enjoyment of works of art.

Ten hours will be devoted to a brief historical review of the development of some phases of painting and sculpture during the Ancient, Medieval and Renaissance epochs. The influence of religious, economic and social factors on the more important works of the periods concerned will be discussed.

TEXT BOOK

Lake and Maillard. *Dictionary of Modern Painting.*

REFERENCE BOOKS

Newton. *European Painting and Sculpture.*

Gardner. *Art Through the Ages.* 1935.

Bazin. *A Concise History of Art.*

Rewald. *The History of Impressionism.*

Rewald. *Post Impressionism, from Van Gogh to Gauguin.*

Brion. *Art Since 1945.*

Seuphor. *A Dictionary of Abstract Painting.*

Read. *The Meaning of Art.*

Ragnar. *Modern Painting.* Skira.

Vasari. *Lives of Painters, Sculptors and Architects.*

Richter. *The Sculpture and Sculptors of the Greeks.*

Berenson. *Italian Painting of the Renaissance.*

Burchhardt. *The Civilisation of the Renaissance in Italy.*

Venturi. *A Short History of Italian Art. Painting and Sculpture of Michelangelo.*
Phaidon. *Byzantine Painting.* Skira.

Alsopp. *General History of Architecture.* Pitman.

Hamlin. *History of Architecture.* Longmans Green.

Statham. *History of Architecture.* 3rd ed., Batsford, 1950.

Pevsner. *Outline of European Architecture.* Penguin.

Fletcher. *History of Architecture on the Comparative Method.* Batsford.

Summerson. *Architecture in Britain, 1530-1930.*

Hitchcock. *Architecture, 19th and 20th Centuries.*

DESIGN

This range of subjects is the core of the syllabus and embodies and applies all the subject matter of the other lectures and studies in the Architecture course. Design includes planning, construction, specialized building techniques, engineering services and equipment, specification, estimating and building job supervision and control.

The whole design course consists of a series of lectures and practical problems in the studio and at home in part-time periods, generally accenting fundamental aesthetic and technical points but with problems interspersed expressly to stimulate imaginative thinking. Throughout the design course, frequent quick esquisse problems are given ranging from the practical to the abstract.

In all problems structure and construction are considered an essential part of design. In many cases special or unusual points in design are required to be substantiated by drawn details of construction. The extent to which competence in structures, construction and other specialist subjects is expected in design at any stage is dependent on the depth reached in these subjects at that stage. Specific problems are set throughout the course to ensure thorough integration in design at the appropriate level of the important related subjects. As often as possible the problems are set on actual sites and involve consideration of environment.

All work is marked by a jury, with class criticism and discussion.

11.111 Design I

A course of illustrated lectures through the year to introduce the student to the field of design, and its importance in man's environment, especially in all his building.

In early lectures, the design elements are discussed and the principles of composition studied mainly as applied to two-dimensional composition. The later and greater part of the first year lecture course is given over to appreciation of visual things from the broad down to detail. The purpose here is twofold: firstly, to observe the application of the above principles, and secondly to provide, as far as possible, a background of visual experience to aid in the students' development in design in general, and in architectural design in particular.

The visual subjects covered range from natural landscape, through large engineering works, cities, towns and buildings in the landscape; the city; the town; buildings, etc., down to common equipment and hardware. The practical application of the principles in two-dimensional composition is handled in Drawing I.

11.112 Design II

Lectures on principles of architectural composition. An introduction to various theories of art and hence to the development of one theory with the purpose of raising the problems involved in all theories. This is followed by a study of various types of architectural designing in the light of the points raised.

Studio exercises are given in the principles of architectural design starting with three-dimensional non-functional compositions progressing to three-dimensional problems with a simple function and finally to small simple architectural problems.

11.112/1 and 11.112/2 Design II, Parts A and B

The subject 11.112 Design II is taken by part-time students over two years.

11.113 Design III

Lectures on the broad factors influencing architectural design: people, climate, topography, materials, economics, social system, etc. Atmosphere and character. Expression of function, structure and materials. Relationship in massing and details. The importance in architecture of space as well as mass. Design and equipment of external spaces; elementary landscape study. The design of building groups; elementary town design. Architectural problems in "detailing". Planning and approach to an architectural problem.

Throughout the year the majority of problems are set to free the imagination and to emphasize the primacy in architecture of the overall concept in the realms of purpose, structures, form and character. In these exercises no precision is expected in planning, structure or construction, though the broad planning and structural concepts are expected to be sound.

Two or three problems are given specifically to bring together architectural design and the technical and practical subjects studied separately. Real sites are generally adopted. The essential relationship between building, site and environment is emphasized from the beginning.

At least twelve short esquisse problems are given throughout the year on stimulating and varied topics. The development of presentation techniques acquired in previous years is encouraged, especially in the conceptual and esquisse design work.

11.113/1 and 11.113/2 Design III, Parts A and B

The subject 11.113 Design III is taken by part-time students over two years.

11.114 Design IV

Studio assignments on the design of buildings progressively becoming more intricate in planning and taken to a somewhat further stage of completeness in overall design, detailed planning and a consideration of structure, construction and materials.

Imaginative approach to all problems is sought. By the end of the year structures are expected to be reasonable in concept, and construction and materials may be required to be clarified in large-scale details. One or two of the problems include experience in the design of interiors, furniture and fittings.

Where possible problems are set for actual sites.

Two or three times a year a seminar, debate or lecture is held on a theoretical or philosophical topic.

11.116 Design V

In the first part of the year problems are undertaken in advanced planning, involving considerable traffic, both vehicular and pedestrian, planning for typical industrial processes, commercial buildings, housing work, etc. Associated questions of economics, structure, mechanical equipment and services are studied. Some of the later problems are given to introduce urban design and some serious study on the design of environment.

Throughout this year the aim is the correlation of all major aspects of the design of buildings, that is practical planning, structure, construction, economy and the provision of fine human environment.

REFERENCE BOOKS (*Design I to Design V*)

Brockman. *Good and Bad Taste.*

Read. *The Meaning of Art.*

Rathbone. *Introduction to Functional Design.*

Graves. *Colour Fundamentals.*

Evans. *An Introduction to Colour.*

Kepes. *The Language of Vision.*

Woodworth. *Psychology.*

Science News No. 22.

Scott. *Design Fundamentals.*

Moholy-Nagy. *Vision in Motion.*

Giedion. *Space, Time and Architecture.*

Towndrow. *Architecture in the Balance.*

Zevi. *Towards an Organic Architecture.*

Newtown. *An Approach to Design.*

Gill. *Beauty Looks After Herself.*

Teague. *Design This Day.*

Raskin. *Architecturally Speaking.*

Russell. *The Things We See.* (Series—Furniture.)

Hollowood. *The Things We See.* (Series—Pottery and Glassware.)

Gibberd. *Town Design.*

Sharp. *Oxford Replanned.*

Brown and Sherrard. *Town and Country Planning.*

Forshaw and Abercrombie. *County of London Plan.*

Rasmussen. *Towns and Buildings.*

HISTORY OF ARCHITECTURE

This is one of the basic subjects leading to Architectural Design. Students of architecture should obtain some knowledge of past systems of building, use of materials, and the principles of design for purpose and beauty. The subject is treated in a general manner, but certain buildings and other works of construction are examined analytically, the approach being critical rather than archaeological. Research assignments or examinations are required in each term of each year.

11.121 History of Architecture I

A general outline survey of construction and architecture from the earliest times to the present day, related to chronological periods, countries and styles —from ancient Egyptian up to modern contemporary architecture.

11.122 History of Architecture II

Beginning with the Graeco-Roman classic period the pagan precedents of Christian architecture are examined, then the following periods or styles in convenient order: Early Christian, Byzantine, Romanesque and Gothic. The major points for analysis are the abstract beauty of Greek architecture; the building methods and monumental works of the Romans and the rise and evolution of Christian ecclesiastical buildings from Early Christian to Gothic. Analytical consideration will be given to walls, columns, piers, arches, vaults, domes, buttresses, towers, spires, the medieval "unit-bay" system of design, decoration, monasteries, castles, manors and other dwellings.

11.123 History of Architecture III

The architecture of Europe from the Renaissance to the present day. Beginning with the revival of antique art in Italy, the course of the Renaissance is traced through Europe to England. The period of revivals, medievalism, and the eclectics. The impact of the Industrial Revolution and the emergence of the engineer. New materials and techniques—iron, steel, concrete, glass. The development of town planning.

11.124 History of Architecture IV

The history of architecture in Australia, particularly the evolutionary development of regional architectural expression.

The search for a new architecture in Germany, France and America in the last quarter of the nineteenth century and its fulfilment in the twentieth century. Particular emphasis is placed on developments during the period following the Second World War to the present time.

TEXT BOOKS

1. Fletcher. *A History of Architecture.* Batsford.
   or Statham. *A History of Architecture.* Batsford.
   or Allsop. *A General History of Architecture.*
2. Pevsner. *An Outline of European Architecture.* Pelican.

REFERENCE BOOKS

1. General.

   Gloag. *Architecture.*

   Wells. *A Short History of the World.* Pelican.

   Mumford. *The City in History.* Secker and Warburg.

   Pehnt. *Encyclopaedia of Modern Architecture.*

   Zevi. *Architecture as Space.* Horizon.

   Giedion. *Space Time and Architecture.* Harvard.

   Jordan. *European Architecture in Colour.* Thames & Hudson.

   Yarwood. *The Architecture of England.*

   Lavedan. *French Architecture.* Pelican.

   Briggs. *The Architect in History.* Clarendon Press.

   Oldham, J. and R. *Western Heritage.*

   Gardner. *Outline of English Architecture.* Scribner's.

   Encyclopaedia Britannica: Architectural Articles.

2. Ancient Architecture.

   Breasted. *Ancient Times.* Gunn.

   Stevenson Smith. *Art and Architecture of Ancient Egypt.* Pelican History of Art.

   Edwards. *The Pyramids of Egypt.* Pelican.

   Woolley. *Ur of the Chaldees.* Pelican.

   Piggott (edited by). *The Dawn of Civilisation.* Thames & Hudson.

3. Classic Greek and Roman.

   Kitto. *The Greeks.* Pelican.

   Barrow. *The Romans.* Pelican.

   Robertson. *A Handbook of Greek and Roman Architecture.* Cambridge.

4. Early Christian to Medieval.

   Power. *Medieval People.* Pelican.

   Rice. *Byzantine Art.* Pelican.

   Busch and Lohse (edited by). *Romanesque Europe.* Batsford.

   Busch and Lohse (edited by). *Gothic Europe.* Batsford.

5. Renaissance to Industrial Revolution.

   Burckhardt. *The Civilisation of the Renaissance in Italy.* Phaidon.

Anderson and Stratton. *Architecture of the Renaissance in Italy.* Batsford.

Wittkower. *Art and Architecture in Italy: 1600-1750.* Pelican History of Art.

Wittkower. *Architectural Principles in the Age of Humanism.* Tiranti.

Scott. *The Architecture of Humanism.* Doubleday.

Plumb. *England in the Eighteenth Century.* Pelican.

Richardson. *Georgian Architecture.* Art and Technics.

Allsopp. *A History of Renaissance Architecture.* Pitman.

Busch and Lohse (edited by). *Renaissance Europe.* Batsford.

6. 19th and 20th Centuries.

Hitchcock. *Architecture, 19th and 20th Centuries.* Pelican History of Art.

Pevsner. *Pioneers of Modern Design.* Pelican.

Richards. *An Introduction to Modern Architecture.* Pelican.

Joedicke. *A History of Modern Architecture.* Architectural Press.

Banham. *Guide to Modern Architecture.* Architectural Press.

Banham. *Theory and Design in the First Machine Age.* Architectural Press.

Kidder-Smith. *The New Architecture of Europe.* Pelican.

Turner. *English Architecture in the 19th Century.*

7. Australian Architecture.

Barnard. *Australian Outline.* Ure Smith.

Boyd. *The Walls Around Us.* Cheshire.

Boyd. *Australia's Home.* Melbourne U.P.

Herman. *The Early Australian Architects and Their Work.* Angus and Robertson.

Dupain *et al. Georgian Architecture in Australia.*

Herman. *The Blackets.* Angus and Robertson.

Bunning. *Homes in the Sun.* Nesbit.

Casey, Maie *et al. Early Melbourne Architecture.* Oxford.

Sharland. *Stones of a Century.* Oldham, Beddome & Meredith.

Robertson. *Victorian Heritage.* Georgian House.

Robertson. *Sydney Lace.* Georgian House.

Royal Australian Institute of Architects, Queensland Chapter. *Buildings of Queensland.* (R.A.I.A.).

Smith. *John Lee Archer.* Tasmanian Historical Research Association.

Birrell. *Walter Burley Griffin.*

11.131 Drawing I

The subject encompasses all types of drawing used in the practice of architecture. Practical work in various media is intended to develop perception and

observation and skill in delineation. For purposes of teaching and studio arrangements the subject matter is dealt with under three main categories:

Freehand: The range of work covers elementary freehand drawing and includes quick sketching, outdoor sketching, memory drawing and free perspective drawing.

Descriptive Geometry: This subject provides an introduction to general draughtsmanship and consists of lecture-demonstrations, followed by drawing, in the following: exercises in line drawing and plane geometry; lettering; orthographic, isometric, oblique, axonometric projection; theory of perspective, exteriors, interiors, inclined planes; shadows cast by geometrical features and simple architectural subjects on vertical and horizontal planes; shadows in perspective; solid geometry; development of intersections and surfaces; roof developments and layout; graphic symbols.

Architectural: This range of work introduces the student to the conventional forms of architectural drawing: scale drawing, architectural sketching, presentation, rendering, sciagraphy, etc.

The student will have the discipline of drawing and rendering precisely architectural forms that are themselves precise, e.g., one or more of the Orders of Architecture. He will be taught the different drawing techniques of the esquisse, the more formal sketch design, correct presentation, working drawing conventions and indications, detailed drawing, and architectural perspective, techniques and effects in presentation. There will be some elementary exercises in general design.

11.131/1 and 11.131/2 Drawing I, Parts A and B

The subject 11.131 is taken by part-time students over two years.

Drawing IA comprises Freehand Drawing and Descriptive Geometry; Drawing IB comprises Architectural Drawing.

11.132 Drawing II

A continuation and extension at a higher level of the methods, media and techniques begun in Drawing I in Freehand and Architectural Drawing, concentrating on architectural sketch presentation.

TEXT BOOKS FOR DRAWING I AND II

Biggs. *The Craft of Lettering.*

Lee and Reekie. *Descriptive Geometry for Architects and Builders.*

Hollis. *Perspective Drawing.*

Reekie. *Draughtsmanship.*

Practical Geometry. Dept. of Labour and National Service.

REFERENCE BOOKS FOR DRAWING I AND II

Reekie. *Draughtsmanship.*

Faulkner, Ziegfield and Hill. *Art To-day.*

Pare, Loving and Hill. *Descriptive Geometry.*

Holmes. *Applied Perspective.*

Nichols and Keep. *Geometry of Construction.*

Abbott. *Descriptive Geometry and Engineering Graphics.*

Bostock. *Roman Lettering for Students.*

Rathbone. *Introduction to Functional Drawing.*

Kepes. *The Language of Vision.*

Graves and Maitland. *The Art of Colour and Design.*

Evans. *An Introduction to Colour.*

Scott. *The Studio Book of Alphabets.*

Halse. *Architectural Rendering.*

Teague. *Design this Day.*

Atkin, Corbelletti and Fiore. *Pencil Techniques in Modern Design.*

Myorscough-Walker. *The Perspectivist.*

Edwards and Farey. *Architectural Drawing and Perspective.*

Ramsden. *Sculpture, Theme and Variation.*

Moholy-Nagy. *Vision in Motion.*

Valentiner. *Origins of Modern Sculpture.*

11.132/1 and 11.132/2 Drawing II, Parts A and B

The subject 11.132 is taken by part-time students over two years.

Drawing IIA comprises Freehand Drawing and Drawing IIB comprises Architectural Drawing.

11.141 Architectural Research

Architectural research is concerned with the study of buildings of architectural merit and of historic significance.

Working in a group the student is called upon to do field investigations and prepare measured drawings. Concurrently with historical research the students prepare submissions which are intended to be lodged with the Mitchell Library.

Each student is also required to conduct an investigation, write a report, present an address to his fellow students and to take part in general discussion.

11.142 Thesis

During this period, the student is encouraged to study some specialized aspect of architectural planning and research, such as the latest developments in structural design or the engineering services of buildings, or specialized planning and equipment of buildings, such as hospitals, schools, etc. Some of this advanced study may be relative to the projects being carried out under the heading of architectural design or town planning. Alternatively the student may, with the approval of the Professor, pursue some avenue in scholarship, such as the literature of architecture, aesthetics or history, or the problems of

architectural administration, professional practice, etc. This work will be embodied in a thesis to be submitted by the student within one of the following fields: (a) Architectural Design, (b) Building Science, (c) Administration. Each student has a supervisor to advise on reading, lines of investigation, etc.

CONSTRUCTION

Construction is the study of the material elements and procedures which are involved in the erection of buildings.

From a consideration of the systems of construction in common use in domestic buildings the student progresses to the study of framed, multi-storeyed and shell buildings.

Visits to factories and buildings under construction are arranged throughout the course.

11.211 Construction I

Lectures: Building materials, elements of construction, components of buildings and their functions in simple domestic constructions. Building sites and trade practices.

Practical: Drawn details and contract drawings of work treated in lectures. Methods of transmitting requirements by detail and specification clauses.

TEXT BOOKS

C.E.B.S. Notes in the Science of Building I. Latest issue.

Local Government Ordinance No. 71. Sydney Corporation Act By-Laws 51-58 incl.

Mitchell. *Building Construction Elementary Course.*

Sharp. *Australian Methods of Building Construction.*

S.A.A. Code. A.S. No. C.A.25—1955. *Architecture and Building Drawing Practice.*

REFERENCE BOOKS

McKay. *Building Construction.* Vols. I-IV.

Mackey. *Gregory's Modern Building Practice in Australia.*

Nangle. *Australian Building Practice.*

De Mare. *New Ways of Building.*

H.M.S.O., D.S.I.R. *Principles of Modern Building.* Vol. 1.

Nield. *Walls and Wall Facing.*

Shute. *Modern Building Materials.*

Gay and Parker. *Materials and Methods of Building Construction.*

Field and Stillman. *Design and Practice of Joinery.*

11.212 Construction II

Lectures: Requirements of buildings of two-storeyed load-bearing construction, domestic and industrial, in masonry and structural timber. Basement construction, elementary construction in structural steel and concrete.

Practical: Construction details illustrating selected work in lectures. Design of construction elements with specifications. Details of selected work designed in Structures II.

11.212/1 Construction IIA; 11.212/2 Construction IIB

These courses together are similar to 11.212 Construction II but taken over two years on alternate weeks. Construction IIA is the first year section. Construction IIB is the second year section. The examination in Construction II is taken at the end of the second year.

REFERENCE BOOKS

Parker. *Materials and Methods of Architectural Construction.*

Mitchell. *Building Construction* (Advanced). Pts. I and II.

Taylor, Thompson and Smulski. *Concrete Plain and Reinforced.* Vol. I.

Kidder-Parker. *Architects and Builders Handbook.*

Ramsey and Sleeper. *Architectural Graphic Standards.*

Design, Control and Characteristics of Concrete. Cement and Concrete Association of Australia.

Davies and Petty. *Building Elements.*

Eastwick-Field and Stillman. *Design and Practice of Joinery.*

H.M.S.O., D.S.I.R. *Principles of Modern Building.* Vol. 2.

together with Text and Reference Books listed for 11.211 Construction I.

11.213 Construction III

Lectures: Requirements of buildings of single and multi-storey framed construction in steel and concrete. Application of building regulations and cost control factors. Construction erection and supervision methods.

Practical: Problems involving investigation, design and detail of constructions treated in lectures. Details of selected work designed in Structures III.

11.213/1 Construction IIIA

In addition to 11.213 Construction III, additional studies are included as follows:

(a) Building Techniques and Materials—Investigations and analysis of various construction methods and materials. Survey of building projects, and selected field trips. Research, readings and reports in seminars on architectural uses of new materials and structural systems, industrial prefabrication of component parts of buildings.

(b) Specialist Services—Instruction in the specialist services of the various sub-contractors normally engaged in the execution of building construction projects.

(c) Building Analysis Project—Individual projects are directed toward a study of the functional, structural and equipment relationships for various types of building. Approved projects for analysis are selected by the student and are based on construction in progress, or proposed buildings. Special emphasis is placed on the integration of structural, mechanical and electrical systems with each other and with the architectural scheme.

REFERENCE BOOKS

Crane. *Architectural Construction.*

Dunham. *Foundations of Structures.*

Huntington. *Building Construction.*

Australian Standard Engineering Drawing Practice, A.S. No. CZ.1.

Merritt. *Building Construction Handbook.*

Voss. *Fireproof Construction.*

Eastwick-Field and Stillman. *Design and Practice of Joinery.*

Hunt. *The Contemporary Curtain Wall.*

Information on the Use of Built-up Bituminous Flat Roofs. Commonwealth Department of Works.

Brinton Carson. *General Excavation Methods.*

Architectural Engineering. Editors of *Architectural Record.*

Oppenheimer. *Erecting Structural Steel.*

Peurifoy. *Construction Planning, Equipment and Methods.*

S.A.A. Code. *Australian Standard C.A.2—Amendment No. 1.*

together with Reference Books for 11.212 Construction II.

11.213/2 Construction IIIB; 11.213/3 Construction IIIC

Together are similar to 11.213/1 Construction IIIA but taken by Building students over two years.

11.215 Construction V

A course of lectures supplemented by seminars and discussion. Topics include: prefabrication, industrialized building, modular studies, maintenance and performance, testing methods and assessment; the installation, provision for, maintenance, and the effects on the building of mechanical plant; evaluation of products and origination of systems.

STRUCTURES

Structures I to IV are taken by all students. Structures V is taken by those students who elect to do so.

The first four years cover the major portion of the field of structures as it affects the architect and the builder.

Supplementing the theoretical work there will be exercises in structural design and testing work in the Structures Laboratory.

11.221 Structures I

Elements of structural design, equilibrium, graphical and analytical analysis of forces in pin-jointed structures. Simple beams, moments and shear. Simple riveted and welded joints.

TEXT BOOK

Morgan and Williams. *Structural Mechanics.*

REFERENCE BOOKS

Hirschhorn. *Materials of Structures I.*

Timoshenko and Young. *Engineering Mechanics, Pt. I, Statics.* 4th Edition.

Olsen. *Strength of Materials.*

Singer. *Strength of Materials.*

11.222 Structures II

Beam theory, moments and shear analysis, properties of sections, deflection and bending moment, factor of safety. Column theory, slenderness ratio, bending and direct stress. Properties of structural timber, permissible stresses and design. Design of simple footings and gravity retaining walls. Composite beams and columns.

11.222/1 Structures IIA; 11.222/2 Structures IIB

These courses together are similar to 11.222 Structures II but taken over two years. The examination in 11.222 Structures II is taken at the end of the second year.

TEXT BOOKS

Cassie and Napper. *Structure in Building.*

Morgan and Williams. *Structural Mechanics.*

REFERENCE BOOKS

B.H.P. Manual of Iron and Steel Products.

S.A.A. Interim Codes 350, 351, and 352.

Handbook of Structural Timber Design Technical Paper No. 32.

Parker. *Simplified Mechanics and Strength of Materials.*

Parker. *Simplified Design of Structural Timber.*

Stewart. *Practical Design of Simple Steel Structures.* Vol. I.

Singer. *Strength of Materials.*

Salvadore and Heller. *Structure in Architecture.*

11.223 Structures III

Revision of statics: Forces and structures in space and plane. Statical determinacy. Methods for the solution of space structures. Steel structures: design of beams, columns and joints. Reinforced concrete structures: design of beams and slabs. Continuity: the three-moment equation. Reinforced concrete columns, footings, retaining walls and tanks. Structural design: steel frame industrial buildings; single space frames; reinforced concrete frames and floor systems.

TEXT BOOK

Grinter. *Elementary Structural Analysis and Design.* S.A.A. Interim Codes 350, 351, 352, C.A.2/'58.

REFERENCE BOOKS

Faber and Mead. *Reinforced Concrete.*

Stewart. *Practical Design of Simple Steel Structures.* Vols. I and II.

Husband and Harby. *Structural Engineering.*

Sutherland and Reece. *Introduction to Reinforced Concrete Design.*

B.H.P. Manual of Iron and Steel Sections.

Handbook for Welded Structural Steelwork. The Institute of Welding, London.

Morgan. *Elementary Reinforced Concrete Design.*

Lucy. *Practical Design of Structural Members.*

Gaylord and Gaylord. *Design of Steel Structures.*

Norris and Wilbur. *Elementary Structural Analysis.*

Robb. *Steel Frame Design Examples.*

Steel Designers' Manual.

Parker. *Simplified Design of Reinforced Concrete.*

Parker. *Simplified Design of Structural Steel.*

Parker. *Simplified Engineering for Architects and Builders.*

Hoadley. *Essentials of Structural Design.*

11.224 Structures IV

Design of rigid frames and portals by moment distribution, continuity in frames.

Flat slab and flat plate design applications. Comparison of different design methods. Prestressing in structures. Structural considerations of special type buildings integrated with Construction IV. Problems in foundations and soil mechanics.

TEXT BOOK

Davis. *Structural Concrete.*

REFERENCE BOOKS

Charlton. *Model Analysis of Structures.*

Gray *et al. Steel Designers' Manual.*

Cassie. *Structural Analysis.*

Lin. *Prestressed Concrete.*

Salvadori. *Structure in Architecture.*

Pearson, Kloot and Boyd. *Timber Engineering Design Handbook.*

Chugg. *Glulam.*

Davies. *Structural Concrete.*

Hendry. *Elements of Experimental Stress Analysis.*

11.225 Structures V

Introduction to the plastic theory of steel structures; ultimate strength design of reinforced concrete; principles of design of shell roofs, folded plates and suspended structures.

The study of a selected structure or a constructional system by the student, incorporating the preparation of a study report and construction of a scale model to demonstrate structural design principles.

The selection of a further study by the student as a topic by him for lecturette and class discussion.

BUILDING SCIENCE

This subject deals with the application of the methods and findings of science as applied to the problems of the building industry in two principal fields:

(1) Materials. The properties, uses, testing and selection of materials.

(2) Services. The analysis of human requirements and methods for their satisfaction in such fields as heating, ventilation, lighting and acoustics.

At the commencement, emphasis is placed on broad general principles, whilst at later stages certain aspects are studied in more detail and at greater depth.

11.231 Building Science I

Introduction: the scope of Building Science. The scientific method. Units of measurement. Functional requirements of a building: shelter, strength and stability, exclusion of water, durability and weathering, heat and sound insulation, fire resistance.

Porosity and its effects. Chemical action. Testing of materials.

Properties and uses of stone, brick, lime and cement, aggregates, timber and the common metals.

TEXT BOOK

Principles of Modern Building, Vol. I. Her Majesty's Stationery Office.

REFERENCE BOOKS

Geeson. *Building Science*, Vols. I and II.

Handisyde. *Building Materials.*

Shute. *Modern Building Materials.*

Withey and Washa. *Materials of Construction.*

Knight, B. H. and R. G. *Builders' Materials.*

11.232 Building Science IIA

Revision of energy units. Electromagnetic radiation. Light and colour, ultra-violet and infra-red radiation.

Climatology, thermal properties of buildings, heat transmission and insulation. Hygrometry and condensation. Solar radiation and sun control. Principles of heating, cooling and ventilating.

Further study of materials; glass, bitumens, rubber, plastics.

Building Science IIB

This subject is taught in the School of Civil Engineering as 8.211 Materials for Architects.

TEXT BOOKS

Phillips. *Sunshine and Shade in Australia.*

Drysdale. *Designing Houses for Australian Climates.* C.E.B.S. Bulletin No. 6.

REFERENCE BOOKS

Billington. *Thermal Properties of Buildings.*

Bedford. *Basic Principles of Ventilation and Heating.*

American Society of Heating and Ventilating Engineers. Handbook.

Fry and Drew. *Tropical Architecture in the Humid Zone.*

Aronin. *Climate and Architecture.*

11.233 Building Science III

Lighting. The eye and vision, analysis of visual tasks.

Photometry and units. Light sources and light control.

Calculation of illumination and flux, and design of lighting installations. Natural lighting.

Acoustics, basic concepts and units. The ear and hearing. Transmission of air-borne and structure-borne sound. Absorption and acoustic materials. Geometrical acoustics, shape of auditoria, echoes. Reverberation and its control.

Application to various building types.

TEXT BOOKS

Interior Lighting Design. British Lighting Council.

Paix. *Design of Buildings for Daylighting.* C.E.B.S. Bulletin No. 7.
Lawrence. *Acoustics in Building.*

REFERENCE BOOKS

Natural Lighting of Buildings. *Daylight Design.*
Diagrams. Industrial Data Sheets No. L.2.
Simplified Daylight Tables. National Building Studies. H.M.S.O.
Walsh. *Text-Book of Illuminating Engineering.*
Stevens. *Principles of Lighting.*
Moon and Spencer. *Lighting Design.*
Illuminating Engineering Society. Handbook.
The Artificial Lighting of Buildings. Standards Association of Australia.
Cullum. *Practical Application of Acoustic Principles.*
Knudsen and Harris. *Acoustical Design in Architecture.*
Constable. *The Principles and Practice of Sound Insulation.*
Ingerslev. *Acoustics in Modern Building Practice.*
Parkin and Humphreys. *Acoustics Noise and Buildings.*

11.234 Building Science IV

Building research and research publications. Selected topics of more advanced nature on recent work, by outside specialists where appropriate.

REFERENCE BOOKS

Couzens and Yarsley. *Plastics in the Service of Man.*
Plastics in Building. Building Research Institute, Washington, D.C.
Technical Data on Plastics. Manufacturing Chemists' Association, Inc., Washington, D.C.
Dietz. *Engineering Laminates.*
McTaggert and Chambers. *Plastic and Building.*

11.235 Building Science V

This subject is an elective, its purpose being to permit a student to study some aspect of building science at greater depth. Lectures on selected topics are supplemented by seminars and group discussions.

Each student selects some topic in Lighting, Acoustics or other approved field for further study. He presents a small paper on the subject which is discussed by the other students and staff.

Where appropriate, laboratory and field investigations are incorporated in the study.

11.241 Building Services A

Principles and practice as controlled by regulation for domestic and commercial building services including drainage, sanitary plumbing, water supply and reticulation, fire services, gas services, hot water service heaters and tanks. Efficiency of units and relative costs are considered.

TEXT BOOK

Randerson. *Australian Sanitary Engineering Practice.*

REFERENCE BOOKS

(i) *Sanitary Plumbing and Water Supply.* (ii) *Gasfitting.* (iii) *Drainage.* Department of Labour and National Service.

11.242 Building Services B

Design principles and practical requirements of the following services and their application to buildings are studied to provide the architect with sufficient information for sensible selection and inclusion in building projects: heating, ventilating, air-conditioning, electrical services, call systems, fire protection, lifts, steam.

REFERENCE BOOKS

Whitely. *A Guide to Building Services for Australian Architects.* U.N.S.W. Union.

Randerson. *Australian Sanitary Engineering Practice.*

Westinghouse Lighting Handbook.

American Society of Heating and Ventilating Engineering Code.

Faber. *Heating and Ventilating.* Spon.

McGuiness and Stein. *Mechanical and Electrical Equipment for Building.*

11.311 Specifications

This subject extends over three terms with lectures in first and second terms, and a specification assignment in the third term.

Details of lecture subjects are as follows: Definitions; historical notes; purpose; legal significance; relationship to building contract; types; uses; aids; sources of information; language; format; reproduction; binding; methods of preparation; schedules; abstracts; "Master" and "Standard" specifications; comparative Australian, British and American examples; supplementary general conditions of "Preamble"; specifications of individual "Trades"; specifications for demolitions; alterations, additions and new works, individual and group.

REFERENCE BOOKS

Edwards. *Specifications.*

Eggleston. *The Practising Architect.*

Whiting and York. *Specifications.*

11.322 Professional Practice

Subjects dealt with include: law of contracts; relationship of contracting parties and the architect; types of contracts; code of ethics; scale of professional charges; engagement and acceptance of instructions; statutory controls (Acts, Ordinances, Regulations, By-laws, etc.); problems of practice; responsibilities of an architect; office administration; financial aspects (accounts, statements, variations, certificates); supervision. Correspondence; relationship with specialist consultants; reports (property, dilapidations and project); copyright; insurances; litigation; study of articles of agreement. Lectures are given by visiting specialists and cover three main fields: (a) Finance—types, sources and methods of finance; the economics and preparation of financial statements on projected schemes, capital costs, maintenance costs, outgoings, revenue. (b) Law—contract, building and industrial laws and regulations. (c) Management—office and personnel management, accounting methods, record systems, job supervision and control, banking procedure.

REFERENCE BOOKS

Eggleston. *The Practising Architect.*

Rimmer. *The Law Relating to Architects.*

Turner. *Architectural Practice and Procedure.*

Cresswell. *Honeywood File. Honeywood Settlement.*

Hudson. *The Law of Building and Engineering Contracts.*

R.A.I.A. *Year Book.*

Willis and George. *The Architect in Practice.*

11.411 Town Planning

The course consisting of one term of lectures and one term of studio work provides an outline of the aims of town and country planning and its relationship to the techniques of architecture, civil engineering, geography, sociology, land economics and land surveying. The course touches on the history, theory and practice of town and country planning and includes considerations of traffic and transportation, elements of civic design, the planning of residential areas and principles of regional planning.

11.412 Town Planning

Emphasis is placed upon the architectural aspects of town planning with particular reference to requirements in community planning, government housing, residential and estate development.

The subject material of 11.411 Town Planning is extended to emphasize the architectural aspects with particular reference to requirements in community planning, government housing, residential and estate development.

TEXT BOOK

Brown and Sherrard. *Town and Country Planning.*

REFERENCE BOOKS

Abercrombie. *Town and Country Planning.*

Gibberd. *Town Design.*

Hiorns. *Town Building in History.*

Howard. *Garden Cities of Tomorrow.*

Mumford. *The Culture of Cities.*

Tripp. *Town Planning and Road Traffic.*

Winston. *Sydney's Great Experiment.*

11.431 Town Planning Theory and Practice I

Fundamental human needs. Improving the quality of human life in urban areas. Improving the physical environment. The planning process: objectives, civic survey, plan preparation and implementation. The nature and purpose of zoning. The elements of a residential neighbourhood.

Studio and field exercises in civic survey, environmental studies, and the layout of residential areas.

11.432 Town Planning Theory and Practice II

The town—its elements and structure. Town geometry. The metropolis—its characteristics and problems of expansion. Theories of urban growth and structure. The central area, district and regional shopping centres. Metropolitan communications and major open spaces. The satellite city. Housing. Urban renewal.

Studio and field exercises in the preparation of (a) a development plan for a "new town" and (b) a redevelopment scheme for an obsolete urban area.

11.433 Town Planning Theory and Practice III

The concepts of national and regional planning. Village planning. Patterns of urban and rural land uses. Industrial development and decentralization. Responsibilities of Commonwealth, State and Local Governments for planning policies. Regional development committees. Citizen participation in planning. National Capital cities.

Studio and field exercises in the preparation of a regional planning scheme for (a) a rural area and (b) a metropolis.

11.434 Town Planning Theory and Practice IV

Introduction to location theory and spatial interaction models. Existing and emerging techniques in the collection, projection and analysis of planning data. Decision-making, problems of prediction and choice. Planning strategies. Operational models. Programming.

Preparation of policies, programmes and budgets for detailed physical development or redevelopment plans including the design of operational models.

11.441 Design II for Town Planners

The lectures are those given in the subject of 11.112 Design II but the studio exercises are specially adapted for planning purposes, and to emphasize environmental design problems.

11.442 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.

11.451 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 significance of the Barlow, Scott and Uthwatt Reports. The British New Towns. The evolution of Australian town planning. Contemporary cities.

11.461 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.

11.471 Planning Law and Administration

The purpose of town planning legislation and its evolution in the United Kingdom. The N.S.W. Local Government Act, 1919 (and relevant Ordinances), in particular Parts XI, XII and XIIA; residential district proclamations, subdivision 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.

11.481 Land Valuation and Economics

General principles of urban and rural land valuation. Unimproved and improved capital values. Valuation of leasehold and freehold land. Subdivisional value of land. Valuation of buildings. Relevant Acts and Regulations. N.S.W. Land and Valuation Court proceedings and decisions. National income and its distribution, employment, housing, economics of location. Compensation and betterment. Cost-benefit analysis of planning. Financial planning and budgeting. Investment criteria.

11.491 Thesis

An individual study of an approved subject.

11.611 Building Trades I

The general purpose of this subject is to familiarise the student with the materials, tools and terms used by the building craftsman and the inter-working of building trades.

Specialist trade teachers give short lectures and demonstrations in the techniques of bricklaying, carpentry and joinery, plastering, plumbing, drainage and painting.

Each student is required to do some practical work which will include: preparation and mixing of materials; setting out work; laying bricks; jointing and bonding; construction of simple timber frames and methods of "building in"; plain cement rendering to wall surface and "running" plaster moulds; identification of fittings used by the drainer and plumber; practical drainpipe laying; soldering and riveting metal joints; fixing lead flashings; colour mixing; brushwork techniques for applying paint to different surfaces.

11.612 Building Trades II

More advanced work on the trades introduced in Year 1 with emphasis on techniques of workmanship and workshop procedure and practice. Demonstrations, with student participation, of methods of welding and electrical services and fittings. Visits to buildings in course of construction to enable students to observe essential relationships of trades, methods of handling materials and fabrication sequence, provision for "follow on" trades.

11.711 Quantity Surveying A

Instruction in the method of obtaining from plans and specifications and otherwise the quantities of material and labour necessary in the construction of a building and other structures. The use of scales, figures, dimensions, plans, sections, elevations and details in relation to quantities. Techniques used in taking off and billing of quantities.

TEXT BOOK

Jack and Lamont. *Builders' Quantities.*

11.712 Quantity Surveying B

Traditional methods of quantity surveying: Scottish and London methods. Conventional format of bills: provisional and operational bills. Schedule of contracts; variations; progress reports. Professional practice in quantity surveying.

Assignment: Preparation of bill of quantities for a large building project.

11.721 Estimating A

Methods used for estimating; standard mode of measurement; profit; establishment and other on-cost charges; awards, insurance, taxes, etc.; scale of fees and charges by local and other authorities.

The subject matter for each trade or operation includes: current material prices; schedule of labour units. Memoranda in respect to: weights, mixing proportions and yields of materials, waste allowances, working costs and depreciation of plant, scaffolding, etc.; examples of "building up" the elements of a unit cost for pricing a bill of quantities; topical problems in estimating costs of building works.

Measuring and methods of adjusting variations; grouping of unit items to obtain a bulked cost rate for different structural parts of buildings; comparison of costs for alternative methods of construction related to structural parts of buildings; preparation of preliminary estimates from sketch plans.

11.722 Estimating B

Suitability and capacity of on-site plant; organization as basis for estimating; inspections and reports on actual building sites; examples of "working up" unit cost rates for the various trades and operations on large building projects; pricing selected bills of quantities in respect of domestic, industrial and commercial buildings; recording and adjusting costs of variations to contracts. More advanced work than that given in Estimating A in respect of comparative costs or alternative methods of construction and detailing.

11.723 Estimating

(A course for Architecture students. The syllabus is based on that of 11.721 Estimating A.)

TEXT BOOK

Thackray. *Estimating.*

REFERENCE BOOKS

Foster. *Construction Estimates from Takeoff to Bid.*

Dallavia. *Estimating General Construction Costs.*

11.731 Building Management

Instruction in the basic practice of a builder's organization. The subject matter includes:

(a) Elements of job supervision, emphasizing the importance of technical supervision in respect to details of construction, fabrication sequence, workmanship standards, general trade practice and teamwork for efficient building construction.

(b) Building job organization, dealing with the fundamentals of on-site building organization, economic use of materials and methods of

fabrication. The main essentials include on-site planning, problems of labour, materials handling, also construction planning and scheduling.

(c) Building plant and equipment, providing a survey of various power tools, machinery and mechanical handling gear used in connection with building and construction costs.

(d) Business management, which is designed to provide a study in the executive management and basic professional practices of a builder's organization.

REFERENCE BOOKS

Coombs. *Construction Accounting and Financial Management.*

Binder Hamlyn and Co. *British Construction Equipment.*

11.741 Building Acts and Regulations

Investigations of the Acts, Regulations, By-laws, Codes, etc., which govern and control the design and erection of all classes of building in New South Wales. The lectures deal with:

(a) The method by which the New South Wales Parliament confers powers on various government departments to prepare and police regulations and by-laws, thus controlling building within their jurisdiction;

(b) A general interpretation and knowledge of the contents of the relevant Acts and Regulations.

11.910G History of Landscape Design

Early cultures and their impact upon the primitive landscape through farming, transport and settlement patterns. Religious and social influences as reflected in the design of parks and gardens throughout history. Architectural expression and aesthetic beliefs. The Industrial Revolution and its effect upon the humanized landscape.

REFERENCE BOOKS

Gothein. *A History of Garden Art.* 2 Vols.

Clifford. *A History of Garden Design.*

Stroud. *Capability Brown.*

Stroud. *Humphrey Repton.*

Wilbur. *Persian Gardens and Garden Pavilions.*

Wright. *The Story of Gardening.*

11.911 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.

11.912G Landscape Engineering

(a) Classification of soils, shear, compaction, consolidation and permeability. Stability of walls, embankments, cuttings and earth dams. Common causes of failure and remedial measures.

(b) Elementary hydrostatics and hydraulics. Bernoulli's Theorem, flow through orifices, over notches, in channels and pipes. Pumps and reticulating equipment.

REFERENCE BOOKS

King and Cresswell. *Soil Mechanics Related to Building.*

Soil Mechanics for Road Engineers. H.M.S.O., London.

Lewitt. *Hydraulics.*

Walshaw and Jobson. *Mechanics of Fluids.*

Rouse. *Elementary Mechanics of Fluids.*

Steel. *Water Supply and Sewerage.*

Lensley, Kohler and Paulhus. *Hydrology for Engineers.*

Brown and Bryant. *Engineering Science.* Vols. 1, 2 and 3.

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.

REFERENCE BOOKS

Crowe. *The Landscape of Power.*

Crowe. *The Landscape of Roads.*

Crowe. *Tomorrow's Landscape.*

Eckbo. *The Art of Home Landscaping.*

Lynch. *Site Planning.*

Simonds. *Landscape Architecture.*

Snow. *The Highway and the Landscape.*

Colvin. *Land and Landscape.*

11.914 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.

REFERENCE BOOKS

Lord. *Shrubs and Trees for Australian Gardens.*

Beadle, Evans and Carolin. *Handbook of the Vascular Plants of the Sydney District and Blue Mountains.*

Dallimore and Jackson. *A Handbook of Coniferae.*

Anderson. *Trees of N.S.W.*

Hellyer. *The Gardener's Golden Treasury.*

Dawson. *Practical Lawncraft.*

Rees. *Lawns, Greens and Playing Fields.*

11.915G Landscape Design

A series of design assignments involving the application of lecture material. It is anticipated that extra-mural work will be necessary in addition to the studio periods provided for this subject.

11.920G Theory of Neighbourhood Planning

Theoretical concepts of community planning. The work of Ebenezer Howard, Unwin and Parker, Clarence Perry, Stein and Wright, Frank Lloyd Wright and Le Corbusier. Civic design in the city region, central business district, district centre, neighbourhood unit and environmental areas.

11.921G Practice of Neighbourhood Planning

The design and layout of groups of buildings, streets and urban spaces. Principles and practice of landscape design. Community facilities including shopping and civic centres. Zoning regulations, civic design "envelopes", subdivision standards. Development control. Organization of neighbourhood design, layout and construction. Urban renewal.

11.922G Communications and Utility Services

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, etc. services.

11.923G 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. The housing problem. Economics of housing. Public housing as an essential social service. The future of public housing in Australia. Statistical methods and data processing.

11.924G Urban Sociology

The nature of Australian society; historic, geographic and economic factors relating to the Australian way of life. The nature of Australian settlement: metropolitan and suburban, and the country town. Social objectives in terms of social institutions such as family, education, religion, government etc. Social survey techniques.

11.930 Landscape Design

An extension of basic design training introducing the principles and philosophies of landscape design as a necessary component of our environment. Lectures include an introduction to ecology, plant morphology and plant selection, and are accompanied by group discussions. In the latter part of the year students must prepare a paper on the landscaping of a current architectural design problem, and take part in group research.

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