

**UTS**  
**UNIVERSITY**  
**OF TECHNOLOGY**  
**S Y D N E Y**

UNIVERSITY OF TECHNOLOGY SYDNEY

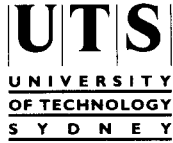
SCHOOL OF ARCHITECTURE

GEORGE MUIR LIBRARY  
GEORGE MUIR LIBRARY

FACULTY OF ARCHITECTURE & BUILDING



1 9 9 0



# Faculty of Architecture and Building

GEORGE MUIR LIBRARY

**1990  
Handbook**



## UNIVERSITY OF TECHNOLOGY, SYDNEY

The University of Technology, Sydney, was established as the New South Wales of Technology in 1965 and became a university in 1988. It amalgamated with Kuring-gai College of Advanced Education and the Institute of Technical, Adult and Teacher Education on 1 January 1990. Over 15,000 students study in over 70 courses at UTS. At postgraduate level the University offers Graduate Diplomas, Masters by coursework, Masters by thesis courses and Doctoral programmes.

All courses are vocationally oriented and the close relationship between a student's academic study and the realities of the work situation is stressed. Particular attention is paid to the needs of part-time students and the structure of their study programmes. In a number of courses, special programmes involving "sandwich" attendance enable the student to alternate between periods of full-time study and full-time professional experience.

The University occupies five campuses close to the business district of Sydney. The main campus is at Broadway, with others at North Shore, Haymarket, Balmain and Kuring-gai.

The Faculty of Architecture and Building is located at Broadway.

### Full-time, Part-time and Sandwich Courses

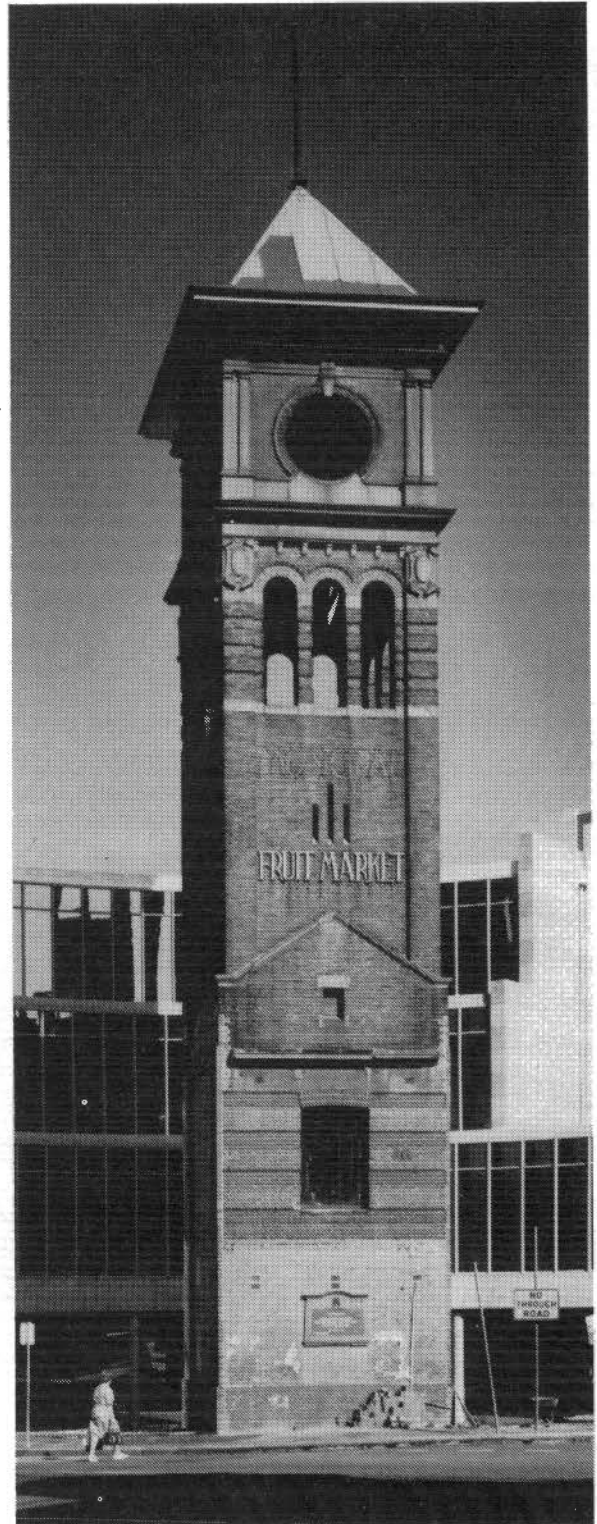
Most courses offered by UTS can be undertaken with part-time attendance. A number of courses are also offered with full-time and sandwich attendance (see table of courses). Students are usually allowed to transfer from one attendance pattern to another at the end of a stage. This is subject to the Head of School's approval and class space availability. The University does not offer external or correspondence courses.

It should be noted that admission to courses on a sandwich attendance pattern basis does not require students to be employed at the time of enrolment.

### Further Information

The University publishes a Calendar which may be purchased from the Co-operative Bookshop, or consulted at the University Library or UTS Information Service.

The 1990 Calendar is published in two volumes and should be read in conjunction with this and other UTS Faculty Handbooks. Volume 1 contains other course information, lists of officers and staff, general information and regulations. Volume 2 covers the Kuring-gai campus only.





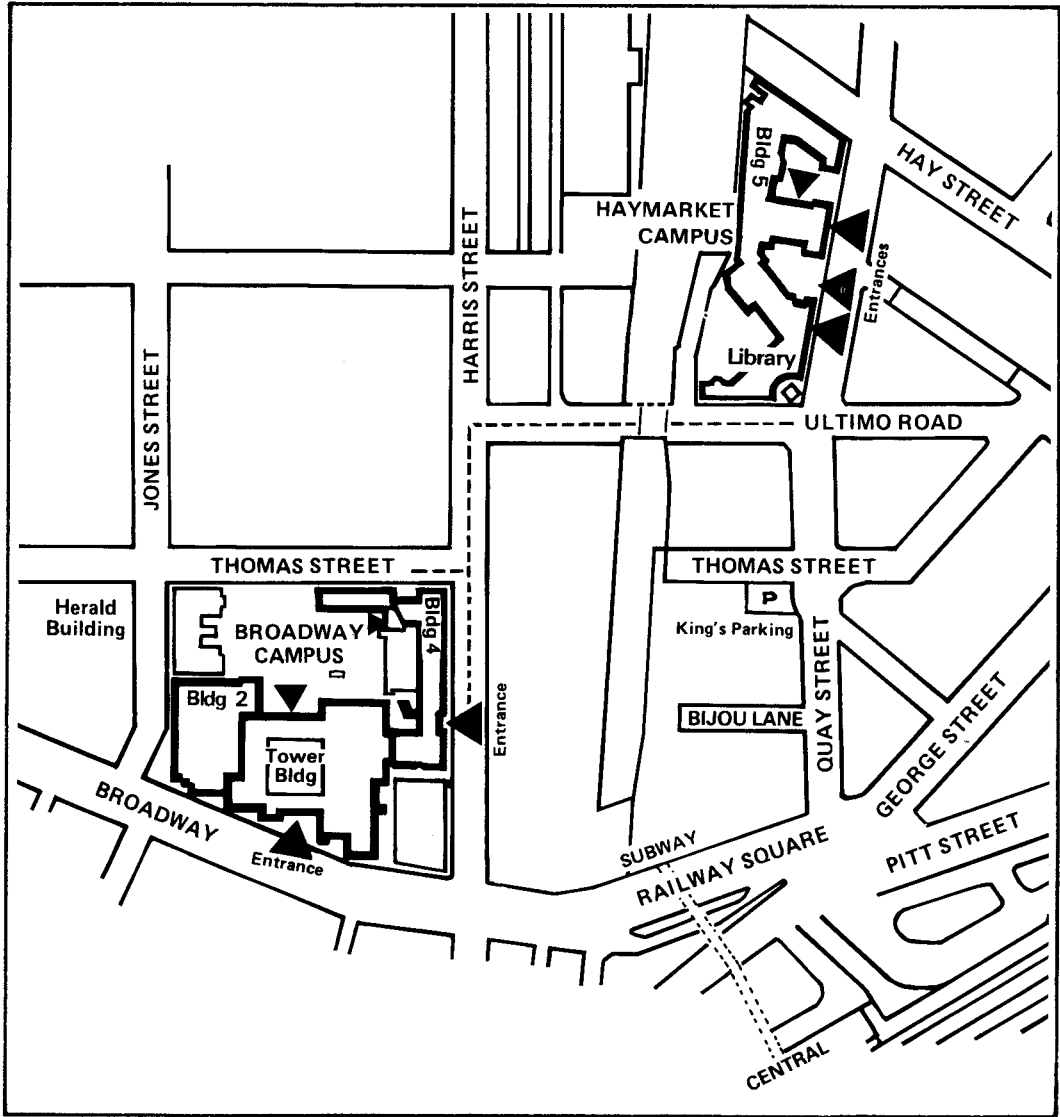
## **MISSION**

The special mission of the University of Technology, Sydney is to provide higher education to equip graduates for professional practice. The UTS approach has been to relate academic study to practical needs and to offer courses through a variety of attendance patterns to encourage the combination of work and study. This style of cooperative education is appealing to students and highly regarded by professional associations.

UTS offers not only a degree but a profession, the option to combine work and study, the opportunity for working men and women to improve their qualifications, and a university education with a difference.

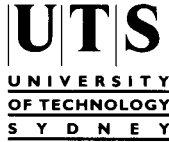
## **EQUAL OPPORTUNITY**

It is the policy of the University of Technology, Sydney to provide equal opportunity for all persons regardless of race, sex, marital status, physical disability, racial vilification or homosexuality.



FACULTY OF ARCHITECTURE AND BUILDING  
Office: Level 7, Building 2

BROADWAY CAMPUS  
15-73 Broadway  
Broadway  
Telephone: (02) 20930  
PO Box 123  
Broadway NSW 2007



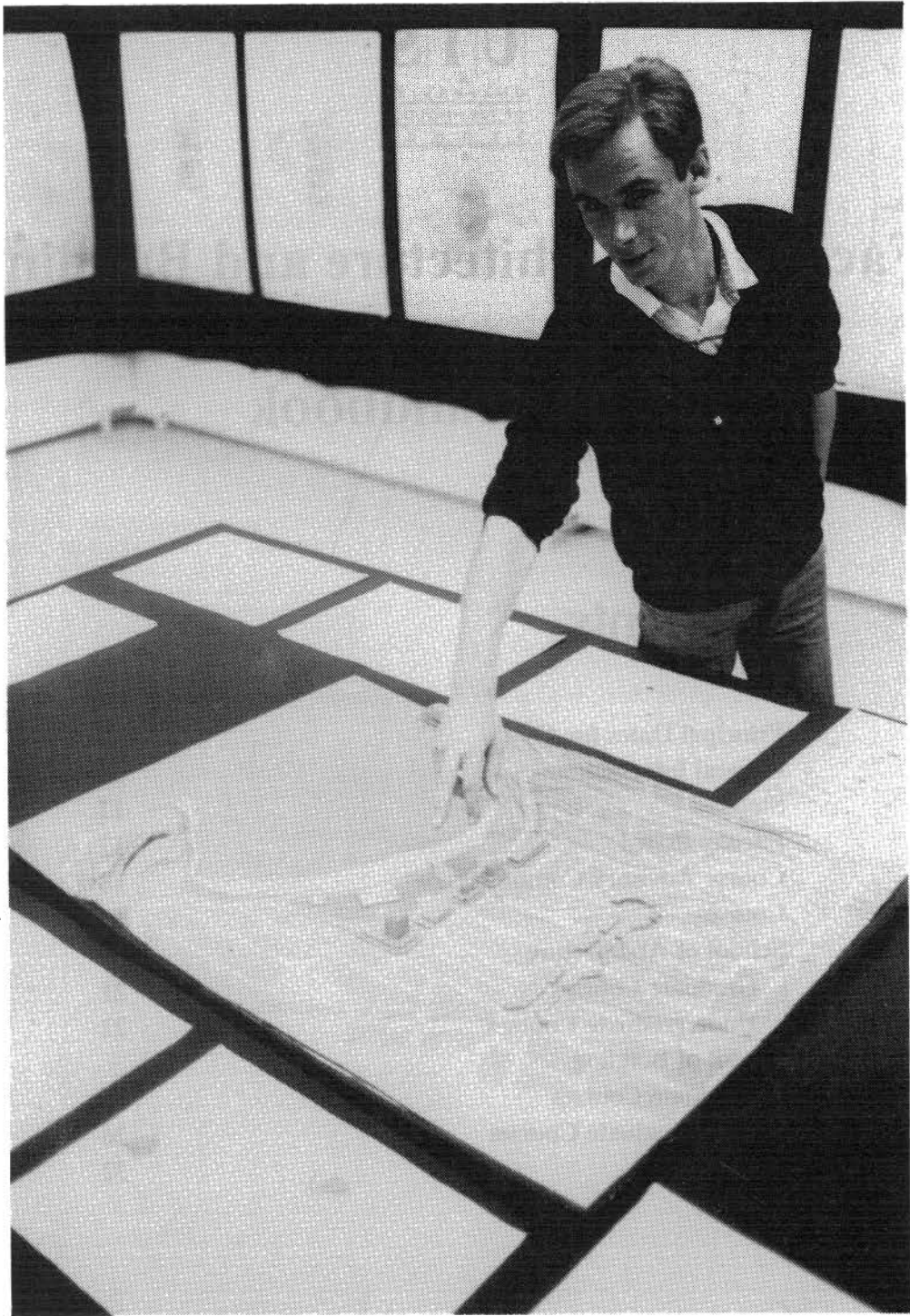
# Faculty of Architecture and Building

## 1990 Handbook

### Contents

Principal Dates for 1990	10
General Information	14
Staff	17
Faculty Board	17
Course Advisory Committees	18
Courses	19
School of Architecture	
Graduate Courses	21
Undergraduate Courses	22
School of Building	
Graduate Courses	25
Undergraduate Courses	26
Synopsis	32





# INFORMATION DAY

---

Visit UTS on Monday 28 May, 1990  
from 2.00pm - 7.00pm at the  
Broadway Campus 15-73 Broadway.  
Phone (02) 20930.

Select from an exciting new range of degree courses in

- Adult Education
- Architecture
- Biological and Biomedical Sciences
- Building
- Business
- Communication
- Computing
- Design
- Education
- Engineering
- Law
- Leisure Studies
- Library and Information Science
- Mathematics
- Nursing
- Physical Sciences
- and Accredited Short Courses

## PRINCIPAL DATES FOR 1990

All courses at the University follow the semester pattern of attendance. The academic year is divided into two semesters, each containing twenty weeks.

### January

- 3 Teaching commences for College of Law co-operative course C190
- 15 Teaching commences for College of Law full-time course C901
- 29 Academic year commences
- 29-30 Enrolment of continuing students (not Kuring-gai)
- 31 Enrolment of new students (not Kuring-gai)

### February

- 1-2 Enrolment of new students (not Kuring-gai)
- 5-9 Enrolment of continuing students (not Kuring-gai)
- 10 Orientation Open Day
- 12 Classes commence for continuing students (not Kuring-gai), new Faculty of Business (Broadway) students and new School of Nursing (Gore Hill) students
- 12 Classes for all Faculty of Adult Education students commence
- 12-15 Enrolment of new and continuing students (Kuring-gai)
- 12-16 Orientation Week
- 13 Teaching ceases for College of Law co-operative course C190
- 13-15 Special Examinations (Kuring-gai)
- 19 Classes commence for other new students (all campuses) and for continuing Kuring-gai students
- 19 Teaching commences for College of Law co-operative course C289

### March

- 2 Last day to add subjects (Kuring-gai)
- 9 Last day to add subjects (except Kuring-gai)
- 9 Last day to apply for advanced standing (ie subject exemption)
- 9 Last day to apply for transfer of course
- 9 Last day to pay HECS Up front charges
- 16 Last day for continuing students to withdraw without penalty from a course or a semester-unit (Kuring-gai)
- 16 Teaching ceases for College of Law co-operative course C289
- 19 Tutorial week commences (except Kuring-gai)
- 19 Classes suspended week (Kuring-gai except LTCS)
- 19 Field Experience week (School of Leisure, Tourism and Community Studies)
- 19 Project and Directed Activity week commences (Faculty of Adult Education)
- 30 Last day to change HECS Payments Option
- 31 Autumn HECS census date

### April

- 2 Teaching commences for College of Law co-operative course C189
- 6 Last day for withdraw without academic penalty from a course or subject (except Kuring-gai)
- 6 Last day to approve leave of absence
- 9 Recess week for College of Law full-time course C901
- 13 Good Friday
- 13-20 Easter break (Faculty of Adult Education)
- 16 Easter Monday
- 17 Practicum (School of Teacher Education)
- 23 Practicum (School of Teacher Education, School of Library and Information Studies)
- 23 Field Experience week (School of Leisure, Tourism and Community Studies)
- 23 Classes suspended week (Other Kuring-gai Schools)
- 25 Anzac Day
- 26 Graduation Ceremonies commence
- 27 Last day for first-year Kuring-gai students to withdraw without academic penalty from a course or semester-unit

- 30 Tutorial week commences (not Kuring-gai)
- 30 Practicum (School of Teacher Education, School of Library and Information Studies)
- 30 Field Experience week (School of Leisure, Tourism and Community Studies)
- 30 Classes suspended week (other Kuring-gai Schools)

**May**

- 1 Teaching ceases for College of Law co-operative course C189
- 7 Practicum (School of Teacher Education)
- 7 Project and Directed Activity week commences (Faculty of Adult Education)
- 25 Closing date for applications for Spring semester
- 28 Information Evening

**June**

- 4 Formal examinations commence for School of Nursing (Gore Hill)
- 4 Project and Directed Activity week commences (Faculty of Adult Education)
- 11 Queen's Birthday holiday
- 12 Formal examination period commences
- 18 Formal examinations commence for Architecture and Building, Engineering, and Kuring-gai
- 22 Teaching ceases for College of Law full-time course C901
- 22 Last day of teaching semester (Faculty of Adult Education)
- 25 Semester recess commences (Faculty of Adult Education)
- 29 End of formal examination period
- 29 End of Autumn Semester

**July**

- 2 Semester recess commences
- 2 Teaching commences for College of Law co-operative course C290
- 9 Teaching commences for College of Law full-time course C902
- 17-18 Special Examinations (Kuring-gai)
- 18 Project and Directed Activity week (Faculty of Adult Education)
- 18-20 Mid-year enrolment of students
- 23 Spring Semester commences
- 23 Classes commence for all Kuring-gai students and for continuing students on other campuses
- 25 Classes for all Faculty of Adult Education students commence
- 30 Classes commence for new students (except Kuring-gai)

**August**

- 3 Last day to add semester-units (Kuring-gai only)
- 9 Last day to apply for advanced standing (ie subject exemption)
- 9 Last day to apply for transfer of course
- 9 Last day to pay HECS Up front charges
- 9 Last day to add subjects (except Kuring-gai)
- 10 Teaching ceases for College of Law co-operative course C290
- 17 Last day to add subjects (except Kuring-gai)
- 17 Last day to withdraw from a course or semester-unit without penalty (Kuring-gai, except first-year students)
- 20 Teaching commences for College of Law co-operative course C190
- 27 Tutorial week commences (except Kuring-gai)
- 27 Practicum (School of Teacher Education, School of Library and Information Studies)
- 27 Field Experience week (School of Leisure, Tourism and Community Studies)
- 27 Project and Directed Activity week commences (Faculty of Adult Education)
- 27 Classes suspended week (other Kuring-gai Schools)
- 30 Last day to change HECS Payment Option
- 31 Spring HECS census date

## 12 ARCHITECTURE AND BUILDING

### September

- 3 Practicum (School of Teacher Education, School of Library and Information Studies)
- 3 Field Experience week (School of Leisure, Tourism and Community Studies)
- 3 Classes suspended week (other Kuring-gai Schools)
- 10 Practicum (School of Teacher Education)
- 14 Last day to approve leave of absence
- 14 Last day for withdrawal without academic penalty from a course or subject (except Kuring-gai)
- 14 Teaching ceases for College of Law co-operative course C190
- 17 Practicum (School of Teacher Education)
- 24 Non-teaching fortnight commences (Faculty of Adult Education)
- 26 Teaching commences for College of Law co-operative course C289
- 28 Applications close for admission in 1991

### October

- 1 Labour Day holiday
- 1 Field Experience week (School of Leisure, Tourism and Community Studies)
- 1 Classes suspended week (other Kuring-gai Schools)
- 1 Recess week for College of Law full-time course C902
- 9 Tutorial week commences (except Kuring-gai)
- 24 Teaching ceases for College of Law co-operative course C289

### November

- 12 Formal examinations commence for School of Nursing (Gore Hill)
- 12 Project and Directed Activity week commences (Faculty of Adult Education)
- 19 Formal examination period commences
- 26 Examinations commence for Architecture and Building, and Engineering
- 30 End of formal examination period (Kuring-gai only)
- 30 Last day of teaching semester (Faculty of Adult Education)

### December

- 7 End of formal examination period (except Kuring-gai)
- 14 Teaching ceases for College of Law full-time course C902
- 24 End of academic year

Nursing Practical Experience for Kuring-gai students is ongoing throughout each semester. Details are in the *Clinical Experience Handbook* issued by the School of Nursing.

### Kuring-gai Campus Practical Legal Training Courses.

#### First Half-Year Full-Time 901

January 15 - June 22

Recess: April 9 - April 16 (incl)

#### Co-Operative First Half-Year: Course C190

Session I: January 3 - February 13, 1990

Session II: August 20 - September 14, 1990

Session III: April 2 - April 30, 1991

Weekend Seminar - May 5 and 6, 1990

#### Second Half-Year Full-Time 902

July 9 - December 14

Recess: October 1 - October 5 (incl)

#### Co-Operative Second Half-Year: Course C290

Session I: July 2 - August 10, 1990

Session II: February 25 - March 22, 1991

Session III: October 8 - November 4, 1991

Weekend Seminar - November 10 and 11, 1990

**1990 Academic Year**

Autumn Semester  
January 29 - June 29

Spring Semester  
July 23 - December 24

**1990 Public Holidays**

Australia Day	January 26
Easter	April 13 - April 16
Anzac Day	April 25
Queen's Birthday	June 11
Labour Day	October 1

**1990 TAFE and Public School Holidays**

April 13 - April 22  
July 2 - July 15  
September 24 - October 5  
December 17 - January 28

## GENERAL INFORMATION

The Faculty Office is located in Building 2, Level 7, at Broadway.

The **UTS Information Service** is located in the foyer of the Tower Building at Broadway. It provides information and assistance to the public with all aspects of application for UTS courses. As the student centre it is the principal point of contact between students and the central administration. Through this centre students can obtain assistance with the broadest range of enquiries.

The **Student Health and Counselling Services** are located on the Broadway and Kuring-gai campuses, telephone 218 9145 (Broadway) or 413 8342 (Kuring-gai), and provide the following specialised services.

*Student Counselling:* The aim of this service is to assist students to perform to the best of their ability. Problems of a personal nature, study difficulties, selection of courses or anything else that is likely to affect a student's progress, may be discussed in confidence with the student counsellors.

*Health Service:* A free health service is provided for students of the University. A medical practitioner and a nursing sister staff the service and all consultations are considered strictly confidential.

*Student Welfare Service:* A Welfare Officer co-ordinates several distinct areas of student welfare including Accommodation, Student loans, Austudy applications; advocacy role (if needed) with academic and administrative problems. All interviews are confidential and suggestions for services required by students are welcome.

*Students with Physical Disability:* The Special Needs Co-ordinator is able to assist students with an increasing range of services. These include parking arrangements; amanuensis (note taker); hearing enhancement equipment; tape recorders; examination concessions (time and print size of paper). A seminar is held early in semester informing students with special needs of UTS policy.

*A Learning Skills Counsellor* is available to assist students with their study methods, particularly those students returning to study after some years absence.

The *International Students Counsellor* assists those students coming to UTS from overseas, with any difficulty they may have in successfully pursuing their course.

**English classes:** The University offers a variety of English classes particularly for overseas students. Interested students should contact the Student Services Unit in the first instance for further details.

**Child Care:** The Magic Pudding Child Care Centre provides full-time and part-time care for children of both students and staff. Care is available for children aged up to five years. Monday to Friday (8.00am - 10.00pm). Fees are calculated on a sliding scale based on family income. For further information please call 218 9507 or drop into the Centre at Broadway campus.

**Financial Assistance** is available to Australian residents under the AUSTUDY Assistance Scheme. The Australian Government provides means-tested living and other allowances to full-time and sandwich students undertaking approved tertiary and postsecondary courses. Further information is available from: The Director, Department of Employment, Education and Training, Plaza Building, 59 Goulburn Street, Sydney, NSW 2000. Telephone: (02) 218 8800. Information booklets and application forms are also available from the Student Welfare Officer in the Student Services Unit at the University.

**Fees and the Higher Education Contribution Scheme (HECS):** Compulsory fees are payable to the University Union and Students' Association. The 1990 fees are \$155 for new students and \$137 for continuing students.

The Higher Education Contribution Scheme (HECS), introduced by the Commonwealth Government, collects a contribution from higher education students towards the cost of their education. Students (with the exception of some categories) are required to make a contribution of 20 per cent of their course costs. In 1990 this is about \$1882 for a full-time course load. The contributions will only be required if and when the person has the capacity to pay.

Under HECS, an annual course charge of \$1882 will apply for each year of equivalent full-time study undertaken. Relative charges will apply according to the actual proportion of equivalent full-time load being undertaken. If a student undertakes 75 per cent of a full-time load then she or he will be charged about \$1,412 (75 per cent of \$1,882). The charge increases annually in line with tertiary education costs.

Student compulsory fees and HECS "upfront" charges are due and payable by a date determined by the Registrar and Secretary.

**The Students' Association (SA)** represents all students at the University. The Students' Council is the governing body of the SA. Elected by students, it is accountable to the student body. Each Faculty and the School of Design is represented on the Council along with a number of general members elected by all students.

The full-time paid President of the SA is directly elected by students. An Executive Committee assists the President in carrying out the directions of the Students' Council and the day to day management of the Association. The Vice-President is employed full-time to represent student education interests.

In general the SA plays a representative and advocacy role on behalf of students. It liaises closely with the University Union and the Student Services Unit. Additionally, it negotiates with, and/or lobbies government and non-government organisations on education and welfare issues in the interests of the students.

The Students' Association maintains close links with student bodies in other tertiary institutions and has a political role to play in maintaining educational standards

and conditions for students both within the University and the tertiary sector as a whole.

The main office of the SA is located at the Broadway Campus on Level 3A of the Tower Building (telephone 218 9064). Opening hours - 9am to 6pm.

#### **Equal Opportunity Co-ordinator**

The Equal Opportunity Co-ordinator is available to assist any students who feel they have been discriminated against in their study. Whether the problem is sexual harassment or other unfair treatment because of race, sex, marital status, physical disability, racial vilification, homosexuality - you will be assured of a confidential hearing. You can contact her on 20930.

The **University Union** acts as the University's community centre and provides a focus for the social, cultural and recreational activities of the whole of the University community. All students are members of, and pay fees, to the Union: all University staff, whose fees are paid by way of an annual lump sum grant from the University to the Union, are also members: all graduates are eligible for life membership of the Union.

The Union fulfills its objectives by providing food services, licensed bars, lounge, meeting and function rooms, stationery shops, newsagency, sporting facilities (including squash courts, gymnasium, weights rooms and basketball/volleyball court), sports programmes and activities programmes which include dances, concerts, lunchtime speakers and entertainment, films and creative leisure courses. The Union also provides considerable financial and other assistance to affiliated clubs and societies. Miscellaneous services include free accident insurance, free legal advice, free diaries and other publications, lockers, telephones and TVs.

The Union also established the University's Careers and Appointments Service, which provides a graduate placement service, casual employment and careers counselling.

The Union is controlled by a board of 15 persons, including eight students. Elections are usually held in September of each year and all interested students are encouraged to stand for a position on the board.

For further information, contact the Union Office on Level 6 of the Tower Building, phone 218 9403.

The **University Library** offers information from libraries on the Haymarket Campus, North Shore and Kuring-gai Campuses. The Faculty of Design has an Information Resource Centre (Library) at the Balmain campus. A wide variety of materials is available. Tours are given by library staff at the beginning of each semester as well as comprehensive sessions on the literature of various subjects.

The **Computing Services Division** provides a variety of facilities and services for undergraduate students. The main installation is on Level 9 of the Tower Building at

Broadway with additional locations at Broadway and at the other campuses.

**Scholarships:** From time to time a number of companies, institutions and government authorities offer scholarships, cadetships, or employment to students about to commence courses at the University. Details are usually advertised in the press in the latter part of the year or early January. The UTS Information Service maintains a noticeboard devoted to such press clippings in the foyer of the Tower Building.

**Prizes** are awarded annually to students at UTS for excellence in study. These are made available through the generosity of private individuals and public organisations.

#### **FURTHER INFORMATION**

The information given above is a summary only. Further and more detailed information on each of the aspects covered may be obtained from the UTS Information Service or Faculty and School offices at the University.

An Information Evening or Open Day is normally held mid-year and prospective students are encouraged to attend and discuss their proposed courses and careers with members of academic staff. Information concerning the day may be obtained from the UTS Information Service.





**STAFF**

*Professor of Building and Dean of Architecture and Building*  
V. Ireland, BE (NSW), BA, MEngSc, PhD (Syd), ASTC,  
FAIB, MIEAust

*Secretary to the Dean*  
M. Makris

*Administrative Officer*  
Vacant

*Senior Technical Officer*  
G. Moor

*Technical Officers*  
A. Pearson  
J. Phillips

*Visual Aids Officer*  
J. Pickering

*Word Processor Operator/Clerk*  
M. Ancheta

*Student Liaison Officer*  
C.M. Johnson

**School of Architecture**

*Associate Professor and Head of School*  
W. Barnett, DipArch (Dunelm), MPhil (Soton), FRSA,  
FRIBA

*Secretary to the Head of School*  
L.R. Stoneman

*Professor of Architecture*  
N.D. Quarry, BArch (Melb), MArch (Rice), LFRAIA

*Senior Lecturers*  
A. Boddy, BArch (Melb), ARAIA  
M.D. Chapman, ASTC, LFRAIA, ARIBA, FIArBA  
B.S. Jobson, BArch, MBldgSc (Syd), MIEAust

*Lecturers*  
H. Dietrich, BSc (Sheff), CertEd, MSc (Sussex)  
S. Harfield, BArch (Adel)  
K.J. Madden, BArch (NUI), DipPP (Dub), MRJAI, ARAIA  
P.G. Towson, MEngSc (NSW), PhD (Syd), ASTC, MIEAust  
G.A. Youett, ArchDip (Cov), FRAIA, ARIBA

*Visiting Professor*  
G. Murcutt, ASTC

**School of Building Studies**

*Associate Professor and Head of School*  
D.J. Lenard, MAppSc (NSWIT), FAIQS, MAIB

*Secretary to Head of School*  
B. Bachoe

**Post-Graduate & Continuing Education**

*Associate Professor and Director*  
H.A. MacLennan, BBuild, MSc (Build), GradDip H and  
NP (NSW), MAIB

*Visiting Professor*  
A.M. Stretton, BE (Tas), MA (Oxford), MIEAust

**Department of Building**

*Senior Lecturer and Head of Department*  
B.R. Longfoot, BE, MEngSc (NSW), ASTC, MIEAust,  
MAIB

*Senior Lecturer*

P.L. Healy, BE (Dublin), DIC, MSc (Lond), MBA (NSW),  
MIEAust

*Lecturers*

K. Heathcote, BE (Hons), GradDipEd (Tech) ITATE,  
MEngSc, MCom (NSW), MIEAust  
A. Kassimates, BArch (Melb), DipMechEng, DipElecEng,  
DipCivlEng, ASMB, ABTC, MIEAust  
D.P. Miller, BAppSc (NSWIT), DipEd, MBldgSc (Syd)  
D.B. Morgan, BE (NSW), DipEd (SCAE), MIEAust, LGE,  
MTPC, MAIB

*Research Assistant*

C. Willey, BAppSc (NSWIT)

**Department of Land Economics***Associate Professor and Head of Department*

V. Barrett, BA (Flor), MA (Mex), PhD (Texas A & M)

*Senior Lecturer*

P. Waxman, BA, DipEd (SUNY), DipEc (Stockholm), MBA  
(Wash)

*Lecturers*

D. Hornby, BA (UNE), DipEd (STC), FAIV, FSLE  
A. Karantonis, BEc (UNE), MComm (NSW), FSLE  
G.R. Small, BSurv, MComm (NSW), JP, MIS

**Department of Quantity Surveying***Senior Lecturer and Head of Department*

C.F. Roberts, LLB (NSW), ASTC, AAIQS, Barrister of the  
Supreme Court of NSW

*Senior Lecturer*

C.A. Langston, BAppSc, MAppSc (NSWIT), AAIQS

*Lecturer*

P. Smith, BAppSc (NSWIT)

**FACULTY BOARD****Ex-Officio Members**

Dean of the Faculty

V. Ireland (Chair)

Heads of School

W. Barnett

D.J. Lenard

Professors, Associate Professors, Principal Lecturers and

Heads of Department

N.D. Quarry

B.R. Longfoot

V.B. Barrett

H.A. MacLennan

C.F. Roberts

**Nominated Members**

P. Finneran, Registrar and Secretary's Representative  
Vacant, School of Humanities and Social Sciences

K.L. Lai, School of Civil Engineering

T.J. Fisher, School of Business & Public Administration

J. Sweeten, University Library

I. Moses, CLT

**Faculty Staff Members**

A. Boddy	K. Heathcote	D. Miller
M.D. Chapman	B. Jobson	D.B. Morgan
S. Harfield	A. Karantonis	K.R. Mottram
P. Healy	C.A. Langston	G.R. Small
D. Hornby	K.J. Madden	G.A. Youett

**Student Members**

Architecture  
D. Castrissios G. Humphreys  
A. Stafford  
A. McDonald

**COURSE ADVISORY COMMITTEES****ARCHITECTURE****Ex-Officio Members**

Dean, Faculty of Architecture and Building  
V. Ireland (Chair)  
Head, School of Architecture  
W. Barnett  
Head, School of Building Studies  
D. Lenard  
Professor of Architecture  
N.D. Quarry  
Registrar and Secretary's Representative  
Vacant

**Other Members**

M. Davies, Architect in Private Practice  
R. Dyke, Architect in Private Practice  
D. Gazzard, Architect in Private Practice  
W. Koll, Senior Architect, Public Works Department  
M. Willett, Architect in Private Practice

**Nominees of the Following Organisations**

Association of Consulting Architects, NSW,  
R. McWilliam  
Board of Architectural Education, RAIA  
(NSW Chapter), R.S. Sheldon  
Board of Architects of New South Wales, R.P. Fuller

**BUILDING****Ex-Officio Members**

Dean, Faculty of Architecture and Building  
V. Ireland (Chair)  
Head, School of Architecture  
W. Barnett  
Head, School of Building Studies  
D.J. Lenard  
Registrar and Secretary's Representative  
Vacant

**Other Members**

K. Jubelin, Building Services Corporation  
J. Palmer, T.A. Taylor & Son  
W. Parker, Safin Pty Ltd  
W.A.C. Service, Leighton Contractors Pty Ltd  
J. Sloman, Civil and Civic Pty Ltd  
P. White, Concrete Constructions Pty Ltd

**Nominees of the Following Organisations**

Australian Institute of Building, R. A. Swane

Department of Architectural Science, University of Sydney, B. Forwood  
Department of Local Government, R. Loveridge  
Master Builders Association of NSW, A. Stewart  
School of Building, University of NSW, G. Levido  
Nominee of Quantity Surveying Course Advisory Committee

**LAND ECONOMICS AND URBAN ESTATE MANAGEMENT****Ex-Officio Members**

Dean, Faculty of Architecture and Building  
V. Ireland  
Head, School of Building Studies  
D.J. Lenard  
Head, Department of Land Economics  
V. Barrett  
Course Leader, Urban Estate Management  
H.A. MacLennan

**Other Members**

J. Banek, Lend Lease Development  
F. Charnock, Jones Lang Wootton  
R. Mellor, School of Business and Administrative Studies, TAFE  
W. Scicluna, GIO  
J. Ritch, AMP Society  
C. Weir, Baillieu Knight Frank  
P.J. Wilson, School of Business and Public Administration, UTS

**Nominees of the Following Organisations**

Australian Institute of Quantity Surveyors, G. O'Neill  
Australian Institute of Valuers (NSW Chapter), G. Jones  
Building Owners and Managers Association of Australia (NSW Chapter), R. Powys  
Council of Auctioneers and Agents, J. Edwards  
Department of Environment and Planning, R. Meyer  
Real Estate Institute of NSW, R.W. Weight  
Real Estate Valuers' Registration Board, F. Egan  
Society of Land Economists Ltd, P.F. Barrington  
Stock and Station Agents Association of NSW,  
Vacant  
University of Western Sydney, A. Millington  
Valuer General's Department, P. Cunningham

**QUANTITY SURVEYING****Ex-Officio Members**

Dean, Faculty of Architecture and Building  
V. Ireland (Chair)  
Head, School of Building Studies  
D.J. Lenard  
Head, Department of Quantity Surveying  
C.F. Roberts  
Director, Postgraduate and Continuing Education,  
H.A. MacLennan  
Registrar and Secretary's Representative  
Vacant

**Other Members**

G. Brookes, Leighton Contractors Pty Ltd  
J. Burgess, Burgess & Partners Pty Ltd

S. Cox, Travis Partners Pty Ltd  
 E.B. Davies, Bayley Davies Associates Pty Ltd  
 J.F. Mooney, Cost Management Services  
 V. Shaw, Rider Hunt & Partners  
 D. R. Summers, Harding, Widnell & Trollope  
 P. Woollard, Concrete Constructions (NSW) Pty Ltd

#### **Nominees of the Following Organisations**

Department of Administrative Services,  
 Construction Group, B. Hayes  
 Public Works Department, H. Parlane  
 School of Building, University of NSW, G. Runeson

## **COURSES**

The Faculty of Architecture and Building comprises two Schools, offering courses as follows:

#### *School of Architecture*

Master of Architecture (by thesis)  
 Master of the Built Environment  
 Bachelor of Architecture

#### *School of Building Studies*

Master of Applied Science (by thesis)  
 Master of Project Management  
 Graduate Diploma in Urban Estate Management  
 Bachelor of Applied Science (Building Course)  
 Bachelor of Applied Science (Quantity Surveying Course)  
 Bachelor of Applied Science (Land Economics Course)  
 Full particulars of these courses and their requirements are given in the sections relating to the respective Schools.

#### **PhD Programme**

PhD programmes are offered in Architecture and Building as well as other areas of study.

#### **Rules Governing Progression Undergraduate Courses**

The following Faculty rules apply to students in both Schools:

1. These rules shall be read in conjunction with the University's By-law and Rules.
2. The appropriate Examination Review Committee, in making its decisions, shall take into consideration the students performance in all subjects and may concede a pass in an individual subject.
3. On the recommendation of the appropriate Examination Review Committee, Faculty Board may in exceptional circumstances exempt a student from provision of the rules relating to progression.
4. The term year/stage in these Rules is defined as the programme for a year shown in the current edition of the Calendar.

**In addition, the following rules apply to students of:**

#### **The School of Architecture**

A. A student who fails one or more subjects in any year/stage will normally be required to repeat and pass those subjects failed before progressing to the next year/stage.

**B. Notwithstanding Rule A, a student in any year/stage may be permitted at the discretion of the Examination Review Committee:**

- (a) to undertake one or more subjects from the following year/stage; or
- (b) in exceptional cases where the Examination Review Committee is satisfied as to the resultant workload in relation to the students capacity and commitments, to carry the subject or subjects, and repeat them concurrently with the subjects in the next year/stage.

#### **The School of Building Studies**

- (a) A student may not enrol in subjects spanning more than two consecutive years of the course.
- (b) A student may carry subjects totalling not more than 3 hours per week from the previous year while doing a full programme from the next year.
- (c) A full-time student who is required to repeat subjects totalling more than 3 hours per week may enrol in subjects from the next year which would bring the students total programme to not more than 18 hours per week.
- (d) A part-time student who is required to repeat subjects totalling more than 3 hours per week, may enrol in subjects of the next year which would bring the students total programme to not more than 11 hours per week.
- (e) In exceptional circumstances, course programmes at variance with the above rules may be approved by the Head of School.

#### **Examinations and Assessment**

Final grading for progression is determined by combining the total marks for class work and for final examinations, if any. Class assignments and quizzes are therefore of great importance.

Final examinations are held at the end of the year, but some examinations may also be held at the end of the Autumn Semester.

In the School of Building Studies many subjects are examined under the University's official examination system and students must check the official examination lists for information on subject, time and place so that an examination is not missed.

Arrangements for informal examinations, conducted in class, will be announced by the lecturer in each case. It is the students responsibility to be present.

#### **Conduct of the Examination Review Committee**

The Faculty Board has determined that the following rules govern the operation of Examination Review Committees for each Course:

1. The Examination Review Committee is a sub-committee of Faculty Board with delegated power to make decisions on behalf of the Board.
2. The membership of the Examination Review Committee for each Course shall be the full-time

academic staff of the School offering the Course; the Dean shall be a member ex-officio.

3. The Examination Review Committee may modify the assessment of any examiner, subject to Rules 4 to 7 below.
4. A conceded pass in a subject may be awarded if the following are satisfied:
  - (a) The subject mark is in the range 45% to 49%.
  - (b) The students Weighted Average Mark for the stage or year is 55% or greater.
  - (c) Not more than one Conceded Pass is granted for the group of subjects considered for that assessment period.
5. Rule 4 may be varied in exceptional circumstances.
6. Extenuating personal circumstances should not be taken into account in the examiners assessments, but any such circumstances and recommendations may be brought to the attention of the Examination Committee.
7. (a) The Architecture Examination Committee delegates its powers to the Portfolio Review Committee in respect of subject Design, and shall make available to the Portfolio Review Committee any extenuating evidence which it has relating to a students performance.  
The Portfolio Review Committee shall indicate to the Examination Committee, in the case of a student who is judged to have failed, whether:
  - (i) failure is such that the student should not be permitted to progress;
  - (ii) failure is such that the student should only be permitted to progress if results in the remainder of the course in that semester average 65% or more;
  - (iii) failure is marginal, and Design shall not be specially treated in determining progression.
- (b) The decisions of the Portfolio Review Committee shall not be subject to review by the Examination Committee, except that the latter body shall be empowered to award a conceded pass in circumstances (ii) and (iii) above.
8. Results should not be withheld unless the issue is expected to be determined within a week (e.g. by the submission of further or revised work) of the commencement of the following semester. Otherwise a failure should be recorded.
9. The Dean or Heads of School may amend the decisions of the Examination Review Committee in the case of obvious clerical or arithmetic errors.
10. Except as to (9), no alterations may be made to the subject assessments of the Examination Review Committee other than by the use of the official Review Procedure.
11. The Head of School may amend the progression of a student as determined by the Examination Committee in the light of subject reassessments.
12. All alterations made under (9) to be reported to the Faculty Board.

### **Architecture Design Review**

The subject Design is assessed by a Design Review Panel which inspects the years work of each student and the marks awarded by his/her tutors and then arrives at a final grading by consensus. The Panel is drawn from within the Faculty and may include eminent outside academics or practitioners; it includes student representation from the year being examined.

It is the Faculty's view that this is the fairest method that can be devised for assessing a subject in which absolute standards are difficult to define. It ensures that injustice is not done to an individual because of personality clash, and that consistent standards can be applied. Because of these safeguards, and because of the impossibility of reconvening the panel and setting up the work of the class a second time, its assessments are not subject to review or appeal. However, the panel may award a mark which indicates to the Examination Committee of the Faculty Board that a conceded pass may be granted in the light of a student's results in other subjects.

### **Rules for Award of Honours in Degree Courses, and Graded Awards in Graduate Diploma Courses**

The award of Honours in the degree courses of the Faculty, and graded awards in the Graduate Diploma in Urban Estate Management, are recommended by Faculty Board on the basis of the following criteria. The application of these rules is not totally automatic and Faculty Board modifies them in cases where it is felt that they do not give a true representation of an individual students calibre, particularly in those cases which are very close to the dividing line between categories (on either side).

#### *BACHELOR OF ARCHITECTURE*

On the basis of WAM averaged over the last two years of the course.

75% and over	Degree with 1st Class Honours
65% to 75%	Degree with 2nd Class Honours
50% to 65%	Degree

#### *BACHELOR OF APPLIED SCIENCE (BUILDING, QUANTITY SURVEYING AND LAND ECONOMICS COURSES)*

On the basis of WAM averaged over the whole six years of the part-time course, but with a double loading on the subjects of the final three years of the part-time course and equivalent subjects in the full-time course.

75% and over	Degree with 1st Class Honours
65% to 75%	Degree with 2nd Class Honours
50% to 65%	Degree

#### *GRADUATE DIPLOMA IN URBAN ESTATE MANAGEMENT*

On the basis of WAM averaged over the whole four semesters.

75% and over	Graduate Diploma (with distinction)
65% to 75%	Graduate Diploma (with credit)
50% to 65%	Graduate Diploma

### **University Medal**

A student in any of the Degree courses who displays exceptional merit may be recommended for the award of the University Medal in addition to graduating with First Class Honours.

### **Checking of Enrolment Details**

It is the student's responsibility to check that his/her enrolment is correctly shown on the listings which will be exhibited on the notice boards during the first few weeks of each semester, and to notify his/her Head of School of any errors.

### **Responsibility for Attendance, Assignment and Examination Work**

It is the student's responsibility to attend lectures and carry out all assignment and examination work in every subject in which he/she is enrolled.

On rare occasions students repeating a subject may make special arrangements with the lecturer-in-charge regarding exemption from attendance at lectures for part of a course and/or credit for work previously completed. Any such arrangement must be documented, and it is the student's responsibility to obtain, in writing, clear evidence of the details of the arrangement from the lecturer-in-charge.

### **Assignments**

Assignments are to be handed in on or before the date and time specified in the program. Late assignments will not be accepted unless accompanied by a medical certificate or the like. It is a student's responsibility to make sure that the receipt of his/her assignment is noted by the lecturer.

In the Architecture course, lecturers may, at their discretion, accept late assignments (and exact appropriate penalties), but only if students make arrangements in advance.

Submissions which cannot be handed directly to the lecturer concerned are to be left in the assignment box on Level 7 of Building 2 and are to be clearly marked for whom they are intended.

### **Withdrawal from Subjects**

Under University rules a student is entitled to withdraw from any or all subjects in which he/she is enrolled without penalty (i.e. the subject concerned is deleted from his/her programme and abandon or fail is not recorded) at any time up to and including the eighth week of a semester. Heads of School in this Faculty normally grant approval for students to withdraw without penalty up to the end of Autumn Semester (and very occasionally beyond).

Students having problems with the course caused by personal or work related pressures are advised that this option is available, and that the matter should, in the first instance, be discussed with the relevant Head of School.

### **Queries and Counselling**

Heads of School and subject co-ordinators are course counsellors; queries of a general nature should be addressed

to them. However, matters concerning a single subject should be raised in the first instance with the lecturer in that subject.

### **Prizes and Awards**

A number of prizes and awards are available to students in the Faculty (see relevant section in chapter titled Bequests, Prizes and Scholarships).

## **SCHOOL OF ARCHITECTURE**

### **GRADUATE COURSES**

#### **Masters Degree by Thesis**

The School offers a limited number of places each year for suitably qualified students to read for the degree of MASTER OF ARCHITECTURE by Thesis.

#### **4. MASTER OF THE BUILT ENVIRONMENT (MBEnv)**

##### **The Course in a Nutshell**

This 3-year part-time post-graduate course, taught by coursework is unique, in two ways. First, in its comprehensiveness, in that it deals with design and management issues involved in the re-generation of buildings and their setting, from the macro to the micro levels of planning. Secondly, in the multi-disciplinary nature of the specialist teaching, and the involvement of the students from differing professional backgrounds, working in groups on complex case studies.

##### **Aims and Objectives**

The aim of the course is to enable students to lead and participate in the process of refurbishment and regeneration of existing buildings and groups of buildings. To this end graduates of the course will be competent in the following areas:

- (a) As designers and facilitators within inter-disciplinary groups engaged in the regeneration of urban projects at both micro and macro levels of planning.
- (b) In showing an understanding of the roles and practices of all specialist consultants and contractors, and their integration in the design and its criticality in the project process, especially in working on obsolete, and/or, historic buildings.
- (c) Able to present sound design arguments which are cognizant that the economic, social, financial, legal, aesthetic, technical and environmental issues have been taken and properly assessed and evaluated in any study.

##### **Structure**

The course is structured so that the needs of society in this area are specifically addressed. This is done by an integration of subjects, across disciplines, to avoid the pursuit of unilateral studies, which would militate against the aim of the course, which is to deal with issues comprehensively.

These subjects are grouped under three main heads and integration and progression in subjects, under these heads and their critical relationship to Design and Technology, is stressed throughout the course.

It is in this central band of Design and Technology that the subjects of urban architecture, building technology, urban renewal and the regeneration process, are set. Alongside and linking into these subjects are the complementary fields of study such as law, management, sociology and urban economics.

The range of subjects introduced in the first two semesters by case work and theoretical studies, provide the foundation from which to examine the whole gamut of issues raised in the comprehensive study of urban renewal and regeneration, which recurs throughout the next three semesters.

The culmination of the course, undertaken during the final semester, is the group presentation of a 'design option'. This represents the synthesis of the study progression in the course, and will taken the form of a rigorously argued case for the future use of a building or group of buildings. The study will include reports and drawings, sufficient to describe the work clearly and to show all aspects of its viability, including its financing and programmed implementation. It is intended to publish the result of these studies.

#### Admission Requirements

A degree in one of the disciplines related to the built environment; eg

- Architecture
- Building
- Quantity Surveying
- Engineering
- Planning
- Surveying

or other equivalent.

Only students with a minimum of three years experience since graduation will be admitted.

Admission of mature age students, or other special category students will be considered on their individual merit, however they must be equivalent in competence to those admissions with degrees.

#### Course Outline

##### *Semester One*

- 1 (A) Urban Architecture (Introduction)
- 2 Legal Procedures 1
- 3 Building Technology 1
- 4 Property Economics 1
- 5 Urban Sociology

##### *Semester Two*

- 6 Building Technology 2
  - 7 Property Finance
  - 8 Property Economics 2
  - 9 Legal Procedures 2
- 1 (B) Urban Architecture

##### *Semester Three*

- 10 Urban Regeneration Process 1
- 11 Design Management and Procedures 1
- 12 Project Context and Constraints 1
- 13 Opportunities and Needs
- 14 Multi-Disciplinary Aspects 1

##### *Semester Four*

- 15 Urban Regeneration Process 2
- 16 Design Management 2
- 17 Project Context and Constraints 2
- 18 Project Appraisal

##### *Semester Five*

- 19 Urban Regeneration Process 3
- 20 Marketing
- 21 Approvals Management
- 22 Design Project - Research Methodology

##### *Semester Six*

- 23 Design Project Submission

## UNDERGRADUATE COURSES

The School of Architecture offers a six year course of co-operative education leading to the award of BACHELOR OF ARCHITECTURE which can be conferred with first or second class honours (see previous pages this section on rules for awards).

The normal attendance pattern in this course is part-time. Students usually attend twelve hours of formal class work per week during one full day and two evenings. Students also carry out substantial assignment work. At the same time students gain practical experience in a professional or industrial organisation.

For this purpose they are required to enrol each semester in the professional/industrial experience subject relevant to their course, and to supply details of the experience gained. This requirement of the course can often be satisfied by a total of four years concurrent approved experience, although as it is based upon a programme of tasks at various levels the total elapsed time will vary according to the type of experience gained.

## Bachelor of Architecture

### PART-TIME ATTENDANCE PATTERN

#### YEAR 1

<i>Academic Requirements</i>	<i>Hours/Week</i>
11012 Design 1	.....4
11011 Construction 1	.....2
11013 Materials and Systems	.....2
11017 Services 1	.....1
11014 Contextual Studies 1A	.....1
11015 Contextual Studies 1B	.....1
11016 Contextual Studies 1C	.....1
<i>Practical Experience Requirements</i>	
13900 Architectural Experience	.....3

## YEAR 2

*Academic Requirements*

11022 Design 2	.....4
11021 Construction 2	.....3
11023 Structural Analysis 1	.....1
11027 Services 2	.....1
11024 Contextual Studies 2A	.....1
11025 Contextual Studies 2B	.....1
11026 Contextual Studies 2C	.....1

*Practical Experience Requirements*

13900 Architectural Experience	.....3
--------------------------------	--------

## YEAR 3

*Academic Requirements*

11032 Design 3	.....4
11031 Construction 3	.....2
11033 Structural Analysis 2	.....1
11037 Services 3	.....3
11035 Contextual Studies 3B	.....1
11036 Contextual Studies 3C	.....1

*Practical Experience Requirements*

13900 Architectural Experience	.....3
--------------------------------	--------

## YEAR 4

*Academic Requirements*

11042 Design 4	.....4
11043 Structural Design	.....2
11047 Services 4	.....1
11045 Contextual Studies 4B	.....1
11046 Contextual Studies 4C	.....1
11048 Architectural Practice 1A	.....1
11049 Architectural Practice 1B	.....2

*Practical Experience Requirements*

13900 Architectural Experience	.....3
--------------------------------	--------

## YEAR 5

*Academic Requirements*

11052 Design 5 or	.....4
11071 Elective Project	.....2
11055 Contextual Studies 5B	.....2
11056 Contextual Studies 5C	.....1
11058 Architectural Practice 2A	.....1
11059 Architectural Practice 2B	.....1

*Practical Experience Requirements*

13900 Architectural Experience	.....3
--------------------------------	--------

## YEAR 6

*Academic Requirements*

11062 Design 6 or	.....4
11071 Elective Project	.....3
11066 Elective Studies	.....2
11068 Architectural Practice 3A	.....1
11069 Architectural Practice 3B	.....1

*Practical Experience Requirements*

13900 Architectural Experience	.....3
--------------------------------	--------

### Credit Point Scheme for Architectural Experience 13900

An integral component of the Architecture course is practical work experience which is acquired concurrently with academic study. Approved work experience is a pre-

condition of the award of the degree. Generally it takes approximately four years for a student to accumulate sufficient credit point as detailed below.

All students are required to enrol in the subject 13900 Architectural Experience and gain credit points for their experience. A student must gain a total of 60 credit points in order to satisfy the practical experience requirements for graduation. A student must also gain the following minimum number of points at various stages in the course in order to be eligible for progression.

Entry to Year 3	- 15 credit points
Entry to Year 5	- 35 credit points
Entry to Year 6	- 50 credit points

Students are required to record their practical experience in the log book of the Architects Accreditation Council of Australia, and these log books and work experience sheets must be submitted each year by all students. Students who do not submit log books by the dates set down on the school notice board will have a failure recorded in the subject.

Students who have gained 60 credit points or more and have had this verified by the Head of School are not required to submit log books.

Log books may be obtained from the Faculty Office.

Students who have been granted advanced academic standing may also be eligible for an allowance of credit points in respect of approved practical experience acquired prior to enrolment in the course.

Table 1 provides details of the method of awarding credit points.

### Professional Membership Royal Australian Institute of Architects

Students enrolled in the Architecture Course are eligible to become student members of the Royal Australian Institute of Architects, and are encouraged to do so. Application details may be obtained from the Secretary, NSW Chapter, RAI A, "Tusculum", 3 Manning Street, Potts Point 2011 (Telephone 356 2955). The annual student membership subscription is approximately 35. Student members receive the Institute's journal *Architecture Australia*.

Student participation is actively sought by the Institute, particularly as members of the various Committees and Working Groups. The RAI A notice board at the Broadway Campus on Level 7, displays programmes of RAI A activities and the monthly bulletins. Further information may be obtained from M.D. Chapman.

Student membership may be retained by graduates for a period of twelve months.

The requirements for Associate membership include:

- A degree in a recognised course of study, i.e. BArch (UTS).
- A minimum of two years approved practical



experience at least one of which must be obtained after completing the course leading to the degree.

In the later years of their course students should check the categories of practical experience required for registration as an Architect. If registration is to be sought twelve months after graduation, students should seek practical experience involving a reasonably high level of responsibility. (Refer to Registration Requirements.)

### Registration Requirements

Architects are required to be registered under the provisions of the Architects Act, administered by the Board of Architects of New South Wales. The essential requirements for registration include:

1. A degree in a recognised course of study, i.e. BArch (UTS).

2. A minimum of two years approved practical experience, at least one of which must be obtained after completing the course leading to the degree.
3. Approved practical experience is required in a number of categories, and some experience is required at a professional level.
4. Details of practical experience are to be recorded in an approved log book (i.e. AACA log book) with entries at maximum intervals of three months.
5. A pass in an examination in Architectural Practice, such as the AACA Examination conducted by the Board of Architects of NSW on behalf of the Architects Accreditation Council of Australia. A prerequisite to the examination is the completion of the periods of practical experience.

Further information is available from the Registrar, Board of Architects of NSW, "Tusculum", 3 Manning Street, Potts Point, Phone 356 4900.

(INSERT TABLE 1 HERE)

**Table 1**

### SUBJECT NO. 13900 ARCHITECTURAL EXPERIENCE

Credit Points Applicable to Employment and Experience

Employment Category	Duration (D) whole weeks	Weighting Factor (W)	Sub-Total (DxW)	Maximum Credit Points Allowed
1. Not Architectural		0.1		9
2. Architectural Employee (refer to log book for details of level)				
Level A		0.2		24
Level B		0.3		24
Level C		0.4		Unlimited
Level D		0.5		Unlimited
Level E		0.6		Unlimited
3. Self Employed with Architect Advisor				
Level B or C		0.2		30
Level D		0.3		30
Level E or F		0.5		30
4. Self Employed in Architectural Capacity without Architect Advisor		0.3		24

## SCHOOL OF BUILDING STUDIES

### GRADUATE COURSES

#### Masters Degree by Thesis

The School offers a limited number of places each year for suitably qualified students to read for the degree of MASTER OF APPLIED SCIENCE by Thesis, in any of its disciplines.

#### Master of Project Management

##### AIMS AND OBJECTIVES

Project Management has emerged as a powerful method for administering complex tasks. It has been used to manage most of the large building and construction projects in this country. It is increasingly used in other industries and technologies to facilitate efficient and effective completion of complex tasks. As projects have become more complex and costly the need for greater efficiency in terms of cost, time and quality performance has become evident. Good management practices are generally enhanced by a sound appropriate educational background. The purpose of the proposed course is to provide such a background.

The aims of this course in Project Management are to produce project managers who shall be:

- (a) competent to lead a group of specialist professionals engaged in the overall management planning and control of projects, particularly in building or civil engineering, but not excluding other industries or technologies;
- (b) able to demonstrate an understanding of project management principles and practices in the management of the design and construction process and project delivery;
- (c) able to demonstrate an understanding of the roles and practices of specialist consultants and contractors used in the design and construction of projects and how these can be effectively integrated;
- (d) able to communicate effectively, and lead and motivate individuals and project teams;
- (e) able to make decisions on the basis of either complete or incomplete information, and to formulate policies and/or solutions to complex problems;
- (f) able to satisfy economic, social, financial, legal, environmental and building constraints;
- (g) able to estimate the social costs and benefits of development and the community acceptance of this.

##### TEACHING/LEARNING STRATEGIES TO BE EMPLOYED

The three-year, part-time programme, unique to Australia, has been designed with its ten week-unit attendance sessions so that senior executives and industry leaders can attend the course with minimal disruption to their working lives.

The programme is stimulating and demanding and has been designed for students who already have a degree and at least five years experience.

The course consists of three parts. The first part contains the core subjects of generic project management, that is, project management which is independent of industry or technology. This will be presented by way of course work and assignments occupying the whole of the first three semesters.

The second part comprises significant blocks of the core subjects treated in greater detail, and on an industry-specific basis, with the building/construction industry as the primary exemplar industry. This will also be presented by way of coursework and assignments, and will occupy the fourth and fifth semesters. The sixth semester is set aside for the completion of a major project. In summary, the course structure resembles a project, the project process, its context and the management thereof.

##### COURSE OUTLINE

	<i>Hours/Semester</i>
<b>SEMESTER 1</b>	
17101 Project Process 1	.....24
17102 Project Management Science 1	.....24
17103 Project Context 1	.....16
17104 Specialist Studies 1	.....16
<b>SEMESTER 2</b>	
17201 Project Process 2	.....24
17202 Project Management Science 2	.....24
17203 Project Context 2	.....16
17204 Specialist Studies 2	.....16
<b>SEMESTER 3</b>	
17301 Project Process 3	.....24
17302 Project Management Science 3	.....24
17303 Project Context 3	.....16
17304 Specialist Studies 3	.....16
<b>SEMESTER 4</b>	
17401 Building and Construction Project Process	.....30
17402 Building and Construction Project Management Practice 1	.....14
17403 Building and Construction Project Context	.....14
17404 Building and Construction Specialist Studies 1	.....12
17601 Major Report (Research Methodology)	.....10
<b>SEMESTER 5</b>	
17502 Building and Construction Project Management Practice 2	.....25
17504 Building and Construction Specialist Studies 2	.....25
17505 Building and Construction Specialist Studies 3	.....20
17601 Major Report (Research Methodology)	.....10
<b>SEMESTER 6</b>	
17602 Major Report	.....80

##### NOTE:

1. Only subjects are shown.
2. The course involves progression from general studies in year one to Building and Construction specifics in year three.

3. All subjects are compulsory.
4. It will normally be necessary to complete each year before next year can be attempted.

### Graduate Diploma in Urban Estate Management

The course is offered on a part-time basis only.

The purpose of Urban Estate Management is to preserve or enhance the value of the resources of the urban estate, for the benefit of the community.

In general, the objectives of the course are:

- (i) to provide knowledge of social, economic, managerial, legal and physical systems which collectively contribute to the success or failure of the development and management of the Urban Estate.
- (ii) to initiate proposals for the development of property and, as part of the process, to:
  - satisfy economic, finance, legal and planning constraints;
  - establish an appropriate management structure (including joint ventures) to allow the development to be completed as efficiently as possible;
  - monitor the development process ensuring that consultants, and contractors satisfy the needs of the client organisation;
  - estimate the social costs and benefits of development and community acceptance of this.
- (iii) to manage a group of properties or a property portfolio in order to:
  - provide and maintain an adequate return to the owner/investor.
  - satisfy the needs of the tenants.
  - protect and maintain the urban environment.
- (iv) to develop and advise on appropriate investment strategies in isolation or as part of an overall investment portfolio.
- (v) to participate as a member of an organisations management team or as the leader of such a team, and develop corporate policy.
- (vi) to develop an appreciation of a professional ethic which emphasises responsibility and responsiveness to community needs.
- (vii) to operate as a specialist or a generalist with regard to the above.
- (viii) to operate at middle to senior level in an organisation.

#### COURSE PROGRAMME

SEMESTER 1*		<i>Hours/Week</i>
12518	Legal Procedures 1	.....2
12524	Property Development Management 1	.....2
12515	Property Economics 1	.....2
12511	Building Technology	.....2
SEMESTER 2		
12527	Property Finance	...1½
12516	Urban Sociology	.....2
12528	Legal Procedures 2	...1½

12525	Property Economics 2	.....2
12549	Organisational Policy and Management	.....1

#### SEMESTER 3

12538	Legal Procedures 3	...1½
12526	Urban Planning 1	.....2
12535	Property Economics 3	.....2
12517	Property Management	...1½

#### SEMESTER 4

12543	Property Development Management 2	.....2
12536	Urban Planning 2	...1½
12542	Marketing	...1½
12545	Property Economics 4	.....2
12550	Project**	.....4

\* Students may be exempted from two of the four Semester One subjects depending on experience and qualifications.

\*\* UEM Project may be substituted for any two of the above semester 3 and 4 subjects.

#### UNDERGRADUATE COURSES

The School of Building Studies offers three courses of co-operative education leading to Bachelor of Applied Science degrees relating to the built environment: the Building course; the Quantity Surveying course; and the Land Economics course.

#### PART-TIME ATTENDANCE PATTERN

Students attending part time normally take nine or eleven hours per week of formal class work which requires one afternoon or one whole day and two evenings of attendance per week plus substantial assignment work. At the same time, students gain practical experience in a professional or industrial organisation.

For this purpose they are required to enrol each semester in the professional/industrial experience subject relevant to their course, and to supply details of the experience gained. A total of three years concurrent approved experience will normally satisfy this requirement of the course.

#### FULL-TIME & PART-TIME ATTENDANCE PATTERN

Students may complete the courses by attending two years full time and two years part time. Full-time students normally attend classes for 26 hours per week. Included in this is a four-hour period of practical studies designed to provide some familiarity with industry. In addition, students are required to gain practical experience in a professional or industrial organisation.

Approved work experience amounting to three years for part-time students and one to one and a half years for full-time students will normally satisfy the course requirements.

#### Bachelor of Applied Science Building Course

The Building graduate is concerned with management of the feasibility, design and construction of building projects. Extensive technological skills go hand in hand with the

capacity to manage people, machines and products in order to carry out this task as effectively as possible.

The programmes are offered on two attendance patterns: part time, or full time and part time.

### Construction Management Concentration

#### Two years full time plus two years part time

##### YEAR 1 FULL TIME

<i>Academic Requirements</i>	<i>Hours/Week</i>
16101 Construction 1F	...4½
16201 Drawing & Surveying	...2
16541 Quantities 1	...1½
16401 Management 1	...1
16211 Computations	...3
16701 Materials 1	...2
16711 Building Science	...1
16601 Contextual Studies 1	...2
16301 Services 1	...3
16901 Structures 1	...2
16121 Practical Studies 1	...4

##### YEAR 2 FULL TIME

<i>Academic Requirements</i>	
16102 Construction 2F	...4
16611 Building Design	...2
16602 Contextual Studies 2	...2
16531 Estimating 1	...2
16402 Management 2	...2
16702 Materials 2	...2
16902 Structures 2	...3
16542 Quantities 2	...2
16801 Legal Studies 1	...2
16403 Management 3	...1
16122 Practical Studies 2	...4

##### YEAR 3 PART TIME

<i>Academic Requirements</i>	
16802 Legal Studies 2	...2
16404 Management 4	...2
16405 Management 5	...2
16903 Structures 3	...2
16511 Economic Management 1	...3
<i>Practical Experience Requirements</i>	
16100 Building Experience	...3

##### YEAR 4 PART TIME

<i>Academic Requirements</i>	
16406 Management 6	...2
16532 Estimating 2	...2
16512 Economic Management 2	...2
16131 Professional Practice	...1
16221 Project	...4
<i>Practical Experience Requirements</i>	
16100 Building Experience	...3

### Construction Management Concentration

#### Six years part time

##### YEAR 1

<i>Academic Requirements</i>	<i>Hours/Week</i>
16111 Construction 1P	...2½

16201 Drawing & Surveying	.....2
16541 Quantities 1	...1½
16401 Management 1	.....1
16701 Materials 1	.....2
16711 Building Science	.....1
<i>Practical Experience Requirements</i>	
16100 Building Experience	.....3

##### YEAR 2

<i>Academic Requirements</i>	
16112 Construction 2P	.....2
16901 Structures 1	.....2
16211 Computations	.....3
16542 Quantities 2	.....2
16301 Services 1	.....3
<i>Practical Experience Requirements</i>	
16100 Building Experience	.....3

##### YEAR 3

<i>Academic Requirements</i>	
16113 Construction 3P	.....2
16601 Contextual Studies 1	.....2
16402 Management 2	.....2
16902 Structures 2	.....3
16611 Building Design	.....2
<i>Practical Experience Requirements</i>	
16100 Building Experience	.....3

##### YEAR 4

<i>Academic Requirements</i>	
16114 Construction 4P	.....2
16531 Estimating 1	.....2
16702 Materials 2	.....2
16602 Contextual Studies 2	.....2
16801 Legal Studies 1	.....2
16403 Management 3	.....1
<i>Practical Experience Requirements</i>	
16100 Building Experience	.....3

##### YEAR 5

<i>Academic Requirements</i>	
16802 Legal Studies 2	.....2
16404 Management 4	.....2
16405 Management 5	.....2
16903 Structures 3	.....2
16511 Economic Management 1	.....3
<i>Practical Experience Requirements</i>	
16100 Building Experience	.....3

##### YEAR 6

<i>Academic Requirements</i>	
16406 Management 6	.....2
16532 Estimating 2	.....2
16512 Economic Management 2	.....2
16131 Professional Practice	.....1
16221 Project	.....4
<i>Practical Experience Requirements</i>	
16100 Building Experience	.....3

**Building Services Concentration****Two years full time plus two years part time****YEAR 1 FULL TIME****YEAR 2 FULL TIME***Academic Requirements*

	<i>Hours/ Week</i>
16302 Services 2	.....2
16303 Services 3	.....3
16304 Services 4	.....3
16611 Building Design	.....2
16602 Contextual Studies 2	.....2
16531 Estimating 1	.....2
16402 Management 2	.....2
16922 Structures 2S	.....2
16542 Quantities 2	.....2
16801 Legal Studies 1	.....2
16122 Practical Studies 2	.....4

**YEAR 3 PART TIME***Academic Requirements*

16305 Services 5	...1½
16311 Fire Technology	...2½
16802 Legal Studies 2	.....2
16404 Management 4	.....2
16511 Economic Management 1	.....3

*Practical Experience Requirements*

16100 Building Experience	.....3
---------------------------	--------

**YEAR 4 PART TIME***Academic Requirements*

16306 Services 6	.....2
16406 Management 6	.....2
16532 Estimating 2	.....2
16131 Professional Practice	.....1
16221 Project	.....4

*Practical Experience Requirements*

16100 Building Experience	.....3
---------------------------	--------

**Building Services Concentration****Six years part time****YEAR 1****YEAR 2***Academic Requirements*

	<i>Hours/ Week</i>
16112 Construction 2P	.....2
16901 Structures 1	.....2
16211 Computations	.....3
16542 Quantities 2	.....2
16301 Services 1	.....3

*Practical Experience Requirements*

16100 Building Experience	.....3
---------------------------	--------

**YEAR 3***Academic Requirements*

16302 Services 2	.....2
16303 Services 3	.....3
16601 Contextual Studies 1	.....2
16402 Management 2	.....2
16922 Structures 2S	.....2

*Practical Experience Requirements*

16100 Building Experience	.....3
---------------------------	--------

**YEAR 4***Academic Requirements*

16304 Services 4	.....3
16531 Estimating 1	.....2
16611 Building Design	.....2
16801 Legal Studies 1	.....2
16602 Contextual Studies 2	.....2

*Practical Experience Requirements*

16100 Building Experience	.....3
---------------------------	--------

**YEAR 5***Academic Requirements*

16305 Services 5	...1½
16311 Fire Technology	...2½
16802 Legal Studies 2	.....2
16404 Management 4	.....2
16511 Economic Management 1	.....3

*Practical Experience Requirements*

16100 Building Experience	.....3
---------------------------	--------

**YEAR 6***Academic Requirements*

16306 Services 6	.....2
16406 Management 6	.....2
16532 Estimating 2	.....2
16131 Professional Practice	.....1
16221 Project	.....4

*Practical Experience Requirements*

16100 Building Experience	.....3
---------------------------	--------

**Bachelor of Applied Science  
Quantity Surveying Course**

The Quantity Surveyor is concerned with the measurement and definition of proposed building work for contractual and payment purposes and, with an increasing role as building economist, is involved in the financial side of feasibility studies and with the planning and control of the cost of projects.

The Quantity Surveying Course is offered part time, or full time and part time.

**Two years full time plus two years part time****YEAR 1 FULL TIME***Academic Requirements*

	<i>Hours/ Week</i>
16101 Construction 1F	...4½
16501 Quantity Surveying 1	...2½
16161 Mathematics and Statistics	.....2
16162 Computing	.....3
16721 Materials Science	.....3
16502 Quantity Surveying 2	.....2
16301 Services 1	.....3
16121 Practical Studies 1	.....4

**YEAR 2 FULL TIME***Academic Requirements*

16102 Construction 2F	.....4
16621 Design Evaluation	.....3
16622 Environmental Planning	.....3
16531 Estimating 1	.....2
16503 Quantity Surveying 3	.....3
16521 Building Economics 1	.....3

16801	Legal Studies 1	.....2	16411	Contract Administration	.....3			
16122	Practical Studies 2	.....4	16511	Economic Management 1	.....3			
<b>YEAR 3 PART TIME</b>								
<i>Academic Requirements</i>								
16802	Legal Studies 2	.....2	16522	Building Economics 2	.....2			
16411	Contract Administration	.....3	16222	Quantity Surveying Project 1	.....2			
16511	Economic Management 1	.....3	<i>Practical Experience Requirements</i>					
16522	Building Economics 2	.....2	16500	Quantity Surveying Experience	.....3			
16222	Quantity Surveying Project 1	.....2	<b>YEAR 6</b>					
<i>Practical Experience Requirements</i>								
16500	Quantity Surveying Experience	.....3	<i>Academic Requirements</i>					
<b>YEAR 4 PART TIME</b>								
<i>Academic Requirements</i>								
16506	Quantity Surveying Practice	.....3	16506	Quantity Surveying Practice	.....3			
16532	Estimating 2	.....2	16532	Estimating 2	.....2			
16512	Economic Management 2	.....2	16512	Economic Management 2	.....2			
16523	Building Economics	.....3	16503	Building Economics 3	.....3			
16223	Quantity Surveying Project 2	.....2	16222	Quantity Surveying Project 1	.....2			
<i>Practical Experience Requirements</i>								
16500	Quantity Surveying Experience	.....3	16500	Quantity Surveying Experience	.....3			
<b>Six years part time</b>								
<b>YEAR 1</b>								
<i>Academic Requirements</i>								
16111	Construction 1P	.....2½	<i>Hours/Week</i>					
16501	Quantity Surveying 1	.....2½						
16161	Mathematics and Statistics	.....2						
16721	Materials Science	.....3	<i>Practical Experience Requirements</i>					
<i>Practical Experience Requirements</i>								
16500	Quantity Surveying Experience	.....3						
<b>YEAR 2</b>								
<i>Academic Requirements</i>								
16112	Construction 2P	.....2	<i>Hours/Week</i>					
16162	Computing	.....2						
16502	Quantity Surveying 2	.....3						
16301	Services 1	.....3	<i>Practical Experience Requirements</i>					
<i>Practical Experience Requirements</i>								
16500	Quantity Surveying Experience	.....3						
<b>YEAR 3</b>								
<i>Academic Requirements</i>								
16113	Construction 3P	.....2	<i>Hours/Week</i>					
16531	Estimating 1	.....2						
16621	Design Evaluation	.....3						
16503	Quantity Surveying 3	.....3	<i>Practical Experience Requirements</i>					
<i>Practical Experience Requirements</i>								
16500	Quantity Surveying Experience	.....3						
<b>YEAR 4</b>								
<i>Academic Requirements</i>								
16114	Construction 4P	.....2	<i>Hours/Week</i>					
16622	Environmental Planning	.....3						
16801	Legal Studies 1	.....2						
16521	Building Economics 1	.....3	<i>Practical Experience Requirements</i>					
<i>Practical Experience Requirements</i>								
16500	Quantity Surveying Experience	.....3						
<b>YEAR 5</b>								
<i>Academic Requirements</i>								
16802	Legal Studies 2	.....2	<i>Hours/Week</i>					

## Bachelor of Applied Science Land Economics Course

The objectives of the Land Economics Courses are:

- (i) to produce a broadly educated graduate prepared for a career in the management of change in the use of real property;
- (ii) to equip students with an understanding of the agencies, principles, and processes required in order that they can fill a professional role as valuer, real estate agent, property manager or a number of these;
- (iii) to develop the skills and techniques required to initiate, appraise and administer proposals for the protection, maintenance, and development of the physical environment;
- (iv) to develop an appreciation of a professional ethic which emphasises responsibility and responsiveness to community needs;
- (v) to provide knowledge of individual, social, political, economic, administrative, legal and physical systems which collectively contribute to the success or failure of the processes of the management of land use.

The courses satisfy the educational requirements for licensing as a real estate agent, registration as a valuer and practice as a property manager or project manager.

The Land Economics Course is offered part time, or full time and part time.

### Two years full time plus two years part time

	<i>Hours/Week</i>	
<b>YEAR 1</b>		
16551	Economics	.....3
16361	Real Estate Fundamentals	.....2
16451	Communications	.....1
16161	Mathematics and Statistics	.....2
16351	Introduction to Valuation	...1½
16552	Financial and Trust Accounting	.....3
16652	Environmental Design	.....2
16851	Introduction to Law	.....2
16162	Computing	.....2
<b>YEAR 2</b>		
16553	Real Estate Finance	.....2
16352	Valuation Methodology	.....2

16854	Real Estate Law and Conveyancing	.....2
16153	Building Technology	.....3
16152	Surveying	.....1
16354	Rural Valuation	.....2
16853	Planning and Environmental Law	.....2
16651	Urban Planning	...1½
16453	Development Management	...1½
16456	Property Management and Maintenance	.....3

#### YEAR 3 FULL TIME/PART TIME

16554	Urban Economics	.....2
16454	Investment and Portfolio Management	...1½
16355	Specialised Valuation Topics	.....2
16751	International Real Estate	...1½
16155	Facility Evaluation	.....2

#### YEAR 4 FULL TIME/PART TIME

16353	Advanced Valuation Methods	2
16961	Project	.....4
16452	Real Estate Organisation and Management Theory	...1½
16455	Professional Practice Review	.....2

#### Six years part time

The subjects are all one academic year in duration. Significant work experience, concurrent with the course, is required of all graduates.

#### YEAR 1

16551	Economics	.....3
16361	Real Estate Fundamentals	.....2
16451	Communications	.....1
16161	Mathematics and Statistics	.....2
16351	Introduction to Valuation	...1½

#### YEAR 2

16552	Financial and Trust Accounting	.....3
16352	Valuation Methodology	.....2
16851	Introduction to Law	.....2
16162	Computing	2

#### YEAR 3

16553	Real Estate Finance	.....2
16355	Specialised Valuation Topics	.....2
16854	Real Estate Law and Conveyancing	.....2
16153	Building Technology	.....3
16152	Surveying	.....1

#### YEAR 4

16354	Rural Valuation	.....2
16853	Planning and Environmental Law	.....2
16453	Development Management	...1½
16456	Property Management and Maintenance	.....3
16651	Urban Planning	...1½

#### YEAR 5

16554	Urban Economics	2
16454	Investment and Portfolio Management	...1½
16155	Facility Evaluation	.....2
16751	International Real Estate	...1½
16652	Environmental Design	.....2

#### YEAR 6

16153	Advanced Valuation Methods	.....2
16961	Project	.....4
16452	Real Estate Organisation and Management Theory	...1½
16455	Professional Practice Review	.....2

#### Professional Bodies

Students who intend to apply for membership of a professional body in due course are strongly advised to become student members of the body concerned whilst they are enrolled at the University.

Students should note that the Faculty's rules regarding approved Practical Experience as set out above apply to the award of its Degrees, and may not meet the practical experience requirements demanded by the professional bodies as a condition of membership, the details of which are printed below.

Students should bear in mind their future professional intentions when satisfying the practical experience requirements for their degree.

The requirements of the various bodies for admission to fully qualified membership are as follows:

#### Australian Institute of Valuers and Land Administrators (Inc)

Student Membership is actively sought by the Institute; students are encouraged to join the various Study Groups, details of which are available from the Registrar. On completion of the course, graduates may be admitted as full members with the post-nominals "GAIV" or "GAILA".

The requirements for Associate Membership include:

- a degree in a recognised course of study, ie, Bachelor of Applied Science (Land Economics) at the University of Technology, Sydney;
- a minimum of two years valuation experience prior to application.

Under the provisions of the Valuers Registration Act, Valuers are required to be registered. Full details can be obtained from the Valuers Registration Board.

#### Real Estate Institute of NSW (REI)

The REI is the main professional body for Real Estate agency practice. Student membership is available and encouraged.

Amongst other things, membership entitles the student to receive the REI Journal and participate in any of their Chapters, such as: Property Management, Commercial and Industrial and Valuation.

#### Australian Institute of Quantity Surveyors

Persons eligible for membership of the Australian Institute of Quantity Surveyors must satisfy the requirements set out in "Conditions of Membership of the Australian Institute of Quantity Surveyors", published by the AIQS (April 1988) and must be amended.

### **Australian Institute of Building**

#### **QUALIFICATIONS FOR ELECTION TO THE GRADE OF MEMBER OF A PERSON WHO IS NOT IN MEMBERSHIP.**

A person considered for election under this section shall:

- (a) have been awarded a degree or diploma fully recognised by the Council for corporate membership, or have passed the Corporate Membership Examinations of the Institute, or have passed equivalent examinations approved by Council.
- (b) (i) at the time of his application for election be following the profession of building; or
  - (ii) have followed the profession of building and, although at the time of his application for election he is not following the profession of building, it is in the interest of the Institute that he should be elected;
- (c) be not less than twenty-eight years of age except in the case of a graduate or a diplomate in building of a university or other academic institution recognised by Council for this purpose be not less than twenty-five years of age;
- (d) have been engaged for a total of at least three years in professional level activities in building (Note (ii) is relevant);
- (e) have achieved, in the opinion of the Council, an appropriate level of building knowledge and be prepared to discuss his knowledge and experience at a professional interview [Note (iii) is relevant]; and
- (f) be of good standing and be so regarded by the members of the Institute.

#### **NOTE:**

##### **(i) Professional level activities in building**

The Council considers that professional level activities in building involve responsible, independent, consistent exercise of discretion and judgement in such fields as the management of the building process (including the management of design, construction and maintenance of buildings), the development and management of property, the development of government and corporate policies in building, the administration of building legislation, the development of building systems and products, building research, building consultancy and the education of building professionals and building technicians.

##### **(ii) Interview**

A professional interview shall be held at such place and time as may be determined. The interview is not an examination, but is a means of confirming and supplementing the information contained on the Proposition for election to membership form, and of providing the Admission to Membership Committee with adequate, reliable and detailed information on the applicants experience and professional standing.

#### **QUALIFICATIONS FOR ELECTION TO THE GRADE OF GRADUATE OF A PERSON WHO IS NOT IN MEMBERSHIP.**

A person considered for election under this section shall:

- (a) *have been awarded a degree or diploma fully recognised by the Council for corporate membership; and*
- (b) be of good standing and be so regarded by members of the Institute.



## SYNOPSIS

### 11011 CONSTRUCTION 1

Two year hours

The nature of buildings as interlocking systems and subsystems. The production of buildings: traditional, rationalised, component and systems building. Authorities controlling building. Site investigation, survey instruments and methods.

An introduction to small-scale (domestic) building construction by detailed examination of function, forms, materials, methods, costs and detailing on an elemental basis.

### 11012 DESIGN 1

Four year hours

Introduction to design processes. Development of graphic communication skills and model making. Anthropometrics, site analyses, design exercises.

### 11013 MATERIALS & SYSTEMS

Two year hours

Identification, classification and testing of soils. Elements of materials science: relationship between structure and properties. Concepts of stress, strain, yield and fracture strengths for timber, steel, concrete, masonry, rubbers and plastics.

Functions of the structural system. Examination of structural forms, action and behaviour by load path analysis. Posts and beams, arches, planar and three-dimensional frames, load transfer and jointing methods.

### 11014 CONTEXTUAL STUDIES 1A

One year hour

An introduction to the study of the natural physical environment as it affects the human habitat.

### 11015 CONTEXTUAL STUDIES 1B

One year hour

An introduction to concepts, language, communication and criticism in architectural design.

### 11016 CONTEXTUAL STUDIES 1C

One year hour

Basic concepts of sociology: culture, institutions, social class, pressure groups as social contexts within which architecture is performed.

### 11017 SERVICES 1

One year hour

Elementary physical principles underlying the architectural context of heat, light and sound.

### 11021 CONSTRUCTION 2

Three year hours

*Prerequisites: 11011 Construction 1, 11013 Materials & Systems*

Extended examination of small-scale building construction, developing into a detailed examination of more complex forms: wall and roof framing for small buildings, external cladding systems, internal linings and finishes. Windows, doors, glass, glazing, cabinet work and hardware. Basement construction. Roofing systems.

### 11022 DESIGN 2

Four year hours

Development of design processes and languages. Relationship of human activities, construction systems and building ecologies.

### 11023 STRUCTURAL ANALYSIS 1

One year hour

Introduction to mathematics for structural design purposes: calculus, co-ordinate geometry, trigonometry. The concepts and conditions of static equilibrium, resolution of forces, bending moments, centroids. Algebra and its application to structural theory.

### 11024 CONTEXTUAL STUDIES 2A

One year hour

A study of human ecology related to the emergence and development of the city. Evolution of cultures and social practices and their relationship to settlement patterns.

### 11025 CONTEXTUAL STUDIES 2B

One year hour

Presentation of aspects of architectural history with reference to design concepts and theoretical models drawn from both historic and contemporary works.

### 11026 CONTEXTUAL STUDIES 2C

One year hour

Presentation of a series of topics, selected to develop an understanding and critical analysis of communications between individuals and social groups.

### 11027 SERVICES 2

One year hour

The provisions of thermal comfort by means of passive and active services, fundamentals of thermal comfort, effects of temperature, humidity, air velocity. Principles of air conditioning and ventilation, systems and equipment. Principles of passive design.

### 11031 CONSTRUCTION 3

Two year hours

*Prerequisite: 11013 Materials & Systems*

Load bearing masonry, multi-storey. Concrete materials and methods: normal and prestressed reinforced concrete construction and floor systems. Structural steel materials and methods: low and high rise frames, jointing and detailing. Patent structural/construction systems. Alternate systems: grids, nets, shells, domes, membranes and air supported structures.

Footings for large buildings, piles and pile caps. Internal subdivision of more complex buildings. Facade elements including precast concrete, in situ concrete, curtain walls.

Communication of design intent: documentation systems, dimensional co-ordination, specifications and scheduling. Administration of the building process: introduction to network diagrams and time scheduling, builders plant and site organisation, materials handling as a constraint on construction and design decisions.

### **11032 DESIGN 3**

Four year hours

Application of design theory to the resolution of planning relationships, structure, construction, services, environment and human needs to the design of buildings.

### **11033 STRUCTURAL ANALYSIS 2**

One year hour

*Prerequisite: 11023 Structural Analysis 1*

An examination of statically determinate structures; conditions of equilibrium, determination of reactions, shear and axial forces, bending moments; conditions for maximum moment. Review of centroids and extension to the second moment of area. Determination of deflection of beams by integration and use of formulae. Wind loads on buildings, theory of wind derived from fluid mechanics and application of the Wind Code to particular buildings.

### **11035 CONTEXTUAL STUDIES 3B**

One year hour

History of architecture in Europe and the Mediterranean, from Greek to Gothic.

### **11036 CONTEXTUAL STUDIES 3C**

One year hour

The dynamics of social change, especially with reference to changing patterns of urbanism.

### **11037 SERVICES 3**

Three year hours

Specialised design practices applied to lighting, acoustics, sound isolation, electrical and vertical transport systems. Hydraulics: water supply for domestic and commercial purposes, plumbing, soil and waste installations and sprinkler hydraulics.

### **11042 DESIGN 4**

Four year hours

Continuation of the objectives of Design 3 into more complex buildings.

### **11043 STRUCTURAL DESIGN**

Two year hours

*Prerequisites: 11033 Structural Analysis 2, 11031 Construction 3*

Structural design of beams, columns, trusses, frames and slabs in timber, steel and reinforced concrete as appropriate. System selection, member calculation and constructional method related to design project. Model analysis and testing.

### **11045 CONTEXTUAL STUDIES 4B**

One year hour

History of architecture from the Renaissance to the precursors of the Modern movement.

### **11046 CONTEXTUAL STUDIES 4C**

One year hour

Regional and urban planning issues in the social context, and an examination of planning decisions, their bases and implications. Urban sociology.

### **11047 SERVICES 4**

One year hour

Examination of the envelope of the building in detail with respect to thermal performance, daylight performance and urban planning considerations of daylight and sunshine/shade.

### **11048 ARCHITECTURAL PRACTICE 1A**

One year hour

Law and Management: (i) A background to statute and common law and the operative legal systems, together with the laws of torts, contracts and agency, in their implications to architectural practice; (ii) An introduction to management theory and the processes of forecasting, organising, planning, motivating, controlling, co-ordinating and communicating.

### **11049 ARCHITECTURAL PRACTICE 1B**

Two year hours

Estimating and Cost Control: (i) Methods available to architects in establishing estimates at the briefing, schematic, design development and documentation phases of a project. The detailed base of estimating small projects and cost variations; (ii) Parameters of cost planning and elemental analysis, their use in design and documentation stages and the development of final cost analysis.

### **11052 DESIGN 5**

Four year hours

Design exercises relating to large span buildings. Urban design exercises.

### **11055 CONTEXTUAL STUDIES 5B**

Two year hours

Introduction to concepts and the practice of urban design. History, planning processes, urban structure and form, residential, commercial and public building infrastructures.

### **11056 CONTEXTUAL STUDIES 5C**

Two year hours

A study of the Modern movement in architecture and its development into current considerations.

### **11058 ARCHITECTURAL PRACTICE 2A**

One year hour

Law and Ethics: Aspects of partnership, company law, taxation, insurances and the law of master and servant. Trade practice, the Architects Act and professional ethics.

**11059 ARCHITECTURAL PRACTICE 2B**

One year hour

Financial management of architectural practices and of architectural projects, including relevant operations research.

**11062 DESIGN 6**

Four year hours

Development and presentation of a design thesis embodying all aspects of the design process and the achievement of buildings within the physical and cultural environment.

**11066 ELECTIVE STUDIES**

Three year hours - Year six

This subject provides an opportunity for students to extend their activities into areas which may not normally be covered by the formal course structure and to exercise choice and realisation of personal objectives.

Subject to the approval of the Head of School, this subject may be taken in year 5 or 6 either separately or in parallel with Elective Project 11071.

**11068 ARCHITECTURAL PRACTICE 3A**

Two year hours

Building Contracts: seminars on the legal base of the provisions of building contracts. Comparisons between forms of contract in current usage and their administration, with case studies of practice situations.

**11069 ARCHITECTURAL PRACTICE 3B**

One year hour

Marketing: theory and practice related to architectural practice.

**11071 ELECTIVE PROJECT**

Two year hours - Years 5 and 6

An independent study, approved and supervised by staff, of an aspect of architecture. The study will consist of a written, graphic or audio-visual submission capable of being catalogued by the Information Resources Service. It must be completed by the end of the Autumn Semester in Year 6. The study will consider, separately, construction materials, methods or systems, structural components and systems, environmental services, or the integration of these into a comprehensive building design in relation to case studies of existing buildings, proposed buildings and/or design projects.

**12511 BUILDING TECHNOLOGY**

Two semester hours

This subject highlights some of the technological principles of the construction and operation of major buildings in order to introduce entrants, who have not come from an architectural, building, engineering or quantity surveying background, to these areas. The main systems are isolated and various forms for each discussed in the context of the development process and maintenance. Examples of typical building types are discussed.

**12515 PROPERTY ECONOMICS 1**

Two semester hours

An introduction to aspects of macro and microeconomics relevant to property development and property management.

**12516 URBAN SOCIOLOGY 1**

Two semester hours

Social theory: analysis of theories; individual theories examined; contributions of theories to understanding society. Social values in Australia: effects of values and socialisation on behaviour; norms. Poverty and social justice: history; interpretation of concept. Housing in Australia: desired attributes; government policies. Public participation in community development. Resident actions. Effects of planning on individuals.

**12517 PROPERTY MANAGEMENT**

One and one half semester hours

Appraisal of rent collection procedures and policies. Administration of tenancies and leases. Compensation. Taxation. Risk management. Investment portfolio analysis and management. Social responsibilities. Maintenance and building management. Acquisition and disposal. Budgeting and accounting requirements.

**12518 LEGAL PROCEDURES 1**

Two semester hours

This subject is a short course in property law, both real and personal, and although it begins with contracts and ends with the contract for sale of land it contains an intensive coverage of many of the major principles relating to property law in NSW.

**12524 PROPERTY DEVELOPMENT MANAGEMENT 1**

Two semester hours

Organisations as systems, buildings procurement, client needs determination, management of the development process, development of organisations.

**12525 PROPERTY ECONOMICS 2**

Two semester hours

An analysis of the needs of property owners, investigation and selection of appropriate investment strategies in accordance with predetermined objectives, investment, market analysis and appraisal, and a detailed investigation of capitalisation rates and rates of return in property investment decisions.

**12526 URBAN PLANNING 1**

Two semester hours

Physical and historical aspects of urban and regional planning: land use planning; urban design; drainage road and service design as it affects town planning; transportation; reuse of existing building stock.

**12527 PROPERTY FINANCE**

One and one half semester hours

Rent collection; administration, compensation, taxation, risk management, portfolio management, social responsibilities, building management, acquisition and disposal, and accounting principles.

### **12528 LEGAL PROCEDURES 2**

One and one half semester hours

Some time is devoted to landlord and tenant matters and also to common law relating to the ownership of real property in order to round out Legal Procedures 1. However, this subject deals mainly with legislative planning control and the operation of the Land and Environment Court.

### **12535 PROPERTY ECONOMICS 3**

Two semester hours

The preparation of economic feasibility studies for individual projects including detailed analysis of income/expenditure and required rates of return, methods for determining the impact of critical variables.

### **12536 URBAN PLANNING 2**

Two semester hours

Economics of development; environmental impact assessment; survey techniques and process; graphic and other communication techniques used in planning.

### **12538 LEGAL PROCEDURES 3**

One and one half semester hours

Following from the overview of planning control from Legal Procedures 2, this subject confines itself in the main to local government matters involving subdivision, building control and changes in use.

### **12542 MARKETING**

One and one half semester hours

The student will be able to understand the role played by marketing generally and be able to apply it to all aspects of urban estate management.

### **12543 PROPERTY DEVELOPMENT MANAGEMENT 2**

Two semester hours

Integration of the property development process from initiation of development proposal to completion of project in case studies and assignments. Aspects of professional practice: ethics, professional indemnity. Industrial relations: the Australian system; unions, employer organisations.

### **12545 PROPERTY ECONOMICS 4**

Two semester hours

Corporate strategy, investment market and portfolio analysis, property investment as a component, investment portfolio management, financing and risk management.

### **12549 ORGANISATIONAL POLICY AND MANAGEMENT**

One semester hour

The objective of this subject is to provide the student with an informed perspective of the corporate function: the

formulation of objectives, policy and strategy; how corporate plans and strategic plans are prepared as an outgrowth of objectives and policy; the various styles of management with emphasis on the suitability of each; team building; the recruitment of executive and senior management personnel; the purpose, formation, and management of joint ventures.

### **12550 PROJECT**

Four semester hours

Topics selected by students dealing with Urban Estate Management.

The Urban Estate Management Project may be substituted for any two of the semester 3 and 4 subjects.

### **12560 URBAN ARCHITECTURE (Introduction)**

1½ hours/week/one semester

A general introduction to the subject is followed by a study of typologies; an analysis of historical precedents, and their influence and inter-action on built form-land use policies and philosophies employed in the making of cities, and in particular on the development of Sydney.

### **12561 BUILDING TECHNOLOGY (2)**

A diagnostic appraisal of buildings is undertaken to assess the implications of the concept of Long Life: Loose Fit. Low Energy when applied to buildings.

### **12562 URBAN ARCHITECTURE**

Two hours/week/one semester

A study of the theories of urbanism which have influenced the making and transformation of existing cities this century, and particularly their impact since 1945.

### **12563 URBAN REGENERATION PROCESS 1**

3½ hours average for one semester

This is the first of a three-part presentation of this subject, in which the process of urban renewal and regeneration is studied in depth: dealing initially with these issues at a strategic planning level; next with the the concept of obsolescence; and finally with a series of morphological studies of particular typologies and executed building case-studies.

### **12564 DESIGN MANAGEMENT 1**

0.875 hour/week/average/semester

The management of the project process commencing with identification of opportunities for development resulting from the perceived or actual obsolescence of existing building stock to the final commissioning and handing over of a regenerated building that will ensure customer satisfaction. The subject will concentrate on the management of the marketing and the initial development phases of the project process.

### **12565 PROJECT CONTEXT AND CONSTRAINTS I**

0.875 hour/week/average/semester

The general and project environment in terms of the constraints that impinge on the Project Process and the response of project organisations.

**12566 OPPORTUNITIES AND NEEDS**

0.875 hour/week/average/semester

Entrepreneurship, Stakeholder Conflict, Audits, Client Needs Determination, Delphi methodology and Case Studies.

**12567 MULTI-DISCIPLINARY ASPECTS 1**

0.875 hour/week/average/semester

The individual, Interpersonal skills, Group Dynamics, Project Teams, Negotiation and Decision Making.

**12568 URBAN REGENERATION PROCESS 2**

4.375 h/week all over one semester

This part of the renewal and regeneration process deals with the concept of obsolescence as it affects buildings in use; their technology, fiscal viability, and cultural significance.

**12569 DESIGN MANAGEMENT 2**

0.875 hour/week average/semester

Project Planning, Design Management, Value Management, Quality Assurance, Building Audits and Post Occupancy Evaluation studies as design aids.

**12570 PROJECT CONTEXT AND CONSTRAINTS 2**

0.875 hour/week average/semester

Outline of Environmental Planning Legislation, Regional Proposal Strategies, Principles of Environmental Law, Integration of future Building Control requirements, case studies.

**12571 PROJECT APPRAISAL**

0.875 hour/week average/semester

Physical and Economic Feasibility Studies, Cost Benefit Analysis of Regeneration/Refurbishment of Projects.

**12572 URBAN REGENERATION PROCESS 3**

4.375 h/week all over one semester

A series of morphological studies examining the changing pattern of use that generic building types undergo, and the impact which this changing pattern has on their operation and efficiency.

**12573 APPROVALS MANAGEMENT**

0.875 hour/week average/semester

Building control matters, "engineered compliance", accreditation process, approval strategies, "other" authorities and approvals.

**12574 DESIGN PROJECT - RESEARCH METHODOLOGY**

0.875 hour/week average/semester

A series of lectures and seminars dealing with the methodology of research programmes, with the principles thinking, reasoning and argument, and with the critical analysis of contemporary issues.

**12575 DESIGN PROJECT SUBMISSION**

7.0 h/week over one semester

This piece of work will represent the culmination of the course. It will take the form of a group submission, in which each "specialist" will contribute specifically and will document that contribution. The project will be a case study.

**13900 ARCHITECTURAL EXPERIENCE**

Three year hours

Students are required to accumulate at least the equivalent of 192 weeks of approved professional experience, concurrently with their studies, and will be required to satisfy the requirements of Faculty Board in the relevant Experience subject, as determined from time to time, in order to graduate.

**16100 BUILDING EXPERIENCE**

Three year hours

Students are required to accumulate at least the equivalent of 144 weeks of approved professional/ industrial experience, concurrently with their studies, and will be required to satisfy the requirements of Faculty Board in the relevant Experience subject, as determined from time to time, in order to graduate.

**16101 CONSTRUCTION 1F**

Four and one half year hours

As Construction 1P plus 2 P.

**16102 CONSTRUCTION 2F**

Four year hours

As Construction 3P plus 4 P.

**16111 CONSTRUCTION 1P**

Two and one half year hours

Every part of typical domestic buildings is covered in detail. Reference is made to the relevant ordinances and standards. The present day building industry is placed in its historical context by reference to building practices through the ages.

**16112 CONSTRUCTION 2P**

Two year hours

*Prerequisite: 16111 Construction 1P*

The construction details for industrial and commercial (including multi-storey) buildings.

**16113 CONSTRUCTION 3P**

Two year hours

*Prerequisite: 16112 Construction 2P or 16101 Construction 1F*

The construction details for industrial and commercial (including multi-storey) buildings. Construction equipment and methods.

**16114 CONSTRUCTION 4P**

Two year hours

*Prerequisite: 16113 Construction 3P*

Construction methods, temporary works, building regulations.

### **16121 PRACTICAL STUDIES 1**

Four year hours

Basic building trade skills, familiarisation with site conditions, manufacture and/or preparation of building materials, measurement and accuracy of building work, recording of site observations.

### **16122 PRACTICAL STUDIES 2**

Four year hours

Observation and recording of the construction of a small industrial/commercial building, associated plant and equipment, manufacture and/or preparation of building materials and components, site organisation.

### **16131 PROFESSIONAL PRACTICE**

One year hour

The history and definition of professionalism, the organisation of professions in the building field, responsibilities of consultant to client, third party and community, conditions of engagement, indemnity insurance.

### **16152 SURVEYING**

One year hour

The interpretation of survey plans; types of surveys; use of instruments; aerial photography.

### **16153 BUILDING TECHNOLOGY**

Three year hours

Technology of components and elements of domestic, commercial and industrial buildings, both low and high rise; structures; facades; partitions; services. Relevance of ordinances. Aspects of refurbishing.

### **16155 FACILITY EVALUATION**

Two year hours

*Prerequisite: 16456 Property Management and Maintenance*

The objective is to assess the effects of aspects of the design of buildings on user comfort, energy usage, aesthetics and safety; orientation, use of materials, layout, services. Ageing of buildings. Relationships of buildings to structures.

### **16161 MATHEMATICS AND STATISTICS**

Two year hours

The study of mathematical and statistical tools required for land economics; equations solution; indices and surds; logarithms; graphs; co-ordinate geometry; trigonometry; maximisation.

Descriptive statistics; probability; regression and multiple regression; time series analysis; statistical inference.

### **16162 COMPUTING**

Two year hours

Introduction to computing; BASIC language and writing of simple programmes; problem-solving techniques; use of software packages such as word processing, spreadsheets, databases and statistical applications.

### **16201 DRAWING AND SURVEYING**

Two year hours

Drafting and graphic skills including lettering, plane and solid geometry and projections. Use of drawing to solve detailing problems. Selection of scales and mode of presentation to communicate. Use of drawings in the building process. Architectural floor plans, reconciliation of dimensions, the meaning of lines, building terms, use of references.

The process of setting out works; extractions of information from surveying drawings, levels, contours; the choice of setting out techniques; the use of tape, level, theodolite and optical plummets. The NSW Land Title Systems. Powers of public authorities.

### **16211 COMPUTATIONS**

Three year hours

The exploration and application of functions and graphs, differentiation and integration. An introduction to matrix algebra. Chance and probability, permutations and combinations. Presentation of data. Average and means, central tendency. Scatter, standard deviation, variance. Distribution: binomial, Poisson, normal, confidence.

The computing course is aimed at developing the students' basic knowledge of computing skills and is structured to allow them to further develop these skills through the solving of suitable problems.

### **16221 PROJECT**

Four year hours

A major project, undertaken by each student involving the detailed study of an individual topic with the preparation of a comprehensive report.

### **16222 QUANTITY SURVEYING PROJECT 1**

Two year hours

Commencement of the preparation of a major project, involving the detailed study of an individual topic in the field of quantity surveying.

### **16223 QUANTITY SURVEYING PROJECT 2**

Two year hours

*Prerequisite: Quantity Surveying 1*

Completion of the project selected in Quantity Surveying 1, involving the submission of a comprehensive report.

### **16301 SERVICES 1**

Three year hours

An introduction to hydraulic, electrical, mechanical and fire protection services and systems.

**16302 SERVICES 2**

Two year hours

*Prerequisite: 16301 Services 1*

The effects of aural, visual and thermal performance of buildings on individuals, the design of buildings to produce particular environmental performances.

**16303 SERVICES 3**

Three year hours

*Prerequisite: 16301 Services 1*

Theory of fluid mechanics and hydraulic design of pipes and channels.

**16304 SERVICES 4**

Three year hours

*Prerequisite: 16301 Services 1*

Theory of thermodynamics and application to the design of air-conditioning systems.

**16305 SERVICES 5**

One and one half year hours

*Prerequisite: 16301 Services 1*

Design and installation of gas and electrical systems in accordance with theory and regulations.

**16306 SERVICES 6**

Two year hours

The co-ordination of the installation of services; overview of design and installation of all services.

**16311 FIRE TECHNOLOGY**

Two and one half year hours

*Prerequisite: 16303 Services 3*

Fire fighting media and extinguishment; early warning systems; automatic sprinkler systems, fire growth and development pre- and post-flashover; fire hydrants and fire hose reels; fire prevention; emergency lighting.

**16351 INTRODUCTION TO VALUATION**

One and one half hours

Basic concepts and principles of value and valuation with application to residential properties.

**16352 VALUATION METHODOLOGY**

Two year hours

*Prerequisites: 16351 Introduction to Valuation, 16161 Mathematics and Statistics, 16361 Real Estate Fundamentals*

The application of compound interest functions to valuations. Valuation of specialised categories including rating, taxing, compensation, strata titles and leasing, report and writing procedures.

**16353 ADVANCED VALUATION METHODS**

Two year hours

*Prerequisite: 16352 Valuation Methodology*

A rigorous theoretical and practical treatment of each of the main types of urban valuation problems and especially use of financial calculators and computers. An assessment of the merits of various valuation methods.

**16354 SPECIALISED VALUATION TOPICS**

Two year hours

*Prerequisites: 16352 Valuation Methodology, 16161 Mathematics and Statistics*

The application of the principles of valuation to rural land including aspects of agronomy and farm management. Analysis of value of rural properties including improvements. Valuation of extractive industries.

**16355 SPECIALISED VALUATION TOPICS**

Two year hours

*Prerequisite: 16352 Valuation Methodology*

The valuation of domestic and simple industrial and commercial projects work in progress. Development of appropriate bills of quantities. Estimating techniques for preliminaries and trades. The summation approach to value and methods of business valuation.

**16361 REAL ESTATE FUNDAMENTALS**

Two year hour

An introduction to the real estate industry including the main institutions, aspects of law and economic town planning and statutory controls, roles played by the public sector, analysis of the market.

**16401 MANAGEMENT 1**

One year hour

The subject is designed to give students entering the course an orderly approach to their studies, to acquaint them with the facilities available, and to structure their attitude to the construction industry. Simple management approaches.

**16402 MANAGEMENT 2**

Two year hours

*Prerequisites: 16401 Management 1, 16111 Construction 1P*

Organisation theory, the individual in the workplace, leadership, needs hierarchy, motivation, communication, problem solving, organisational variables, buildability and construction planning of domestic scale projects.

**16403 MANAGEMENT 3**

One year hour

*Prerequisites: 16402 Management 2, 16113 Construction 3P*

Organisations as systems, company objectives, management of organisations to achieve objectives, management practice, personnel management and basic industrial relations, quality control and safety, site management, construction planning and time control.

**16404 MANAGEMENT 4**

Two year hours

The principles and practice of the writing and interpretation of specifications for building work; the impact of standard codes and building regulations; developments in the standardisation and computerisation of specifications.

The administration of contracts. By case studies, an examination of the administrative requirements for efficient contracts.

#### **16405 MANAGEMENT 5**

Two year hours

*Prerequisite: 16403 Management 3*

Statistics, operations research techniques, construction management.

#### **16406 MANAGEMENT 6**

Two year hours

*Prerequisites: 16405 Management 5, 12058 Legal Studies 2*

Building process as a system, project constraints, project management, complex project analysis, roles of licensing boards, advanced site safety, safety and design, industrial relations.

#### **16411 CONTRACT ADMINISTRATION**

Three year hours

*Prerequisite: Legal Studies 1*

The principles and practice involved in the administration of building contracts from the quantity surveyor's viewpoint, including preparation of variations, progress claims, activity reports, cash flows and package-deal documentation. Building price indices, cost escalation and rise and fall. General conditions of contract. Specification writing. Construction planning for residential projects.

#### **16451 COMMUNICATIONS**

One year hour

This subject is intended to develop human communication skills and to promote understanding of the communication process. Emphasis is on business writing and effective speech communication. Intensive writing practice is related to communication principles. Teaching is by lecture for communication principles and in small group workshops for writing and oral communication.

#### **16452 REAL ESTATE ORGANISATIONS AND MANAGEMENT THEORY**

One and one half year hours

*Prerequisite: 16361 Real Estate Fundamentals*

Examination of the relevance of organisation theory to real estate, valuation and property departments: contributions of various theorists; technology, motivation, group behaviour, structure, goals; analysis of various organisational forms.

#### **16453 DEVELOPMENT MANAGEMENT**

One and one half year hours

*Prerequisite: All years 1 and 2 subjects part time*

Aspects of the management of projects under development: client needs determination; procurement methods; design management including cost planning and buildability; approvals management.

#### **16454 INVESTMENT AND PORTFOLIO MANAGEMENT**

One and one half year hours

*Prerequisite: All years 1 to 4 subjects part time*

Property investment: objectives of investment; investment market; decision making; risk, taxation. Investment strategies. Discounted cash flow and internal rate of return for investment. Market analysis. Property Portfolio Analysis and Management, Mixed Portfolio.

#### **16455 PROFESSIONAL PRACTICE REVIEW**

Two year hour

Definition of responsibilities of consultant to client, third party and community; conditions of engagement; indemnity insurance.

#### **16456 PROPERTY MANAGEMENT AND MAINTENANCE**

Three year hours

*Prerequisite: Completion of Years 1-3 part time*

The management of a property department in an organisation with a large property holding; development and administration of systems for market research, rent collection, tenancy management, investment and taxation negotiation. Development of maintenance, standards for and estimates of components. Lives of buildings.

#### **16500 QUANTITY SURVEYING EXPERIENCE**

Three year hours

Students are required to accumulate at least the equivalent of 144 weeks of approved professional experience, concurrently with their studies, and will be required to satisfy the requirements of Faculty Board in the relevant Experience subject, as determined from time to time, in order to graduate.

#### **16501 QUANTITY SURVEYING 1**

Two and one half year hours

An introduction to quantity surveying purposes and methods. The measurement and calculation of simple quantities. Principles of measurement set-out and notation. Professional quantity surveying activities and opportunities, including membership of the Australian Institute of Quantity Surveyors. Written communication skills.

#### **16502 QUANTITY SURVEYING 2**

Three year hours

*Corequisite: Quantity Surveying 1*

The preparation and uses of a bill of quantities and types of documentation formats in common use. The acquiring of competence in preparing trade packages within a bill of quantities in accordance with the current Australian Standard Method of Measurement of Building Works. Measurement rules and procedures.

#### **16503 QUANTITY SURVEYING 3**

Three year hours

*Prerequisite: Quantity Surveying 2*

Measurement of complex building trades, specifically hydraulics and bulk earthworks, in accordance with the current Australian Standard Method of Measurement. Measurement of civil projects in accordance with AS 1181-



1982. Computer measurement benefits and problems. Alternative methods of measurement.

### **16506 QUANTITY SURVEYING PRACTICE**

Three year hours

A critical evaluation of the quantity surveying profession and an examination of non-technical areas essential to a professional.

### **16511 ECONOMIC MANAGEMENT 1**

Three year hours

Principles of accounting and business finance. Profit and loss statements; balance sheets; cash budgets. services of funds and financial decision making are examined in detail.

### **16512 ECONOMIC MANAGEMENT 2**

Two year hours

The financial control of construction projects which involves variances, budgets and development of various systems of control. The second part of the subject concentrates on the preparation of feasibility studies for development and investment projects.

### **16521 BUILDING ECONOMICS 1**

Three year hours

An examination of principles and practices relating to building economics, including feasibility studies, cost planning, preliminary estimating, elemental cost analysis and budgeting. Cost modelling techniques and expert systems are discussed. Computer solutions are used to solve cost problems.

### **16522 BUILDING ECONOMICS 2**

Two year hours

Basic macro and micro economic theories and their relationship with building economics are examined. Analysis of the economic forces that underlie design and construction processes. Investment in residential property.

### **16523 BUILDING ECONOMICS 3**

Three year hours

*Prerequisite: Building Economics 1*

Techniques used by building economists in evaluating design alternatives are examined, specifically life-cost planning, taxation cost planning, cost-benefit analysis, multi-objective decision analysis, value analysis and post occupancy evaluation.

### **16531 ESTIMATING 1**

Two year hours

*Prerequisites: 16112 Construction 2, 16542 Quantities 2 or 16504 Quantity Surveying 2*

Estimating brings together a wide variety of construction industry practices and principles, particularly those of the operating trades, and translates these practices into costs. The builder's estimate, and the relevant unit rates, are related to the quantity surveyor's methods of measurement.

### **16532 ESTIMATING 2**

Two year hours

*Prerequisite: 16531 Estimating 1*

A review of the techniques used in preparation of competitive tenders for building projects is undertaken. Specifically, tendering objectives, methods of preparing estimates and methods of predicting optimum mark-up are examined in detail.

### **16541 QUANTITIES 1**

One and one half year hours

An introduction to quantity surveying purposes and methods. The measurement and calculation of quantities.

### **16542 QUANTITIES 2**

Two year hours

*Prerequisite: 16541 Quantities 1*

Measurement of work involving most trades from documents prepared by the School.

### **16551 ECONOMICS**

Three year hours

The content of this subject is largely traditional microeconomic theory; it includes the following major topics: consumer equilibrium theory; production theory; competition theory; resource pricing theory; income distribution; urban location theory; externalities; and market failure. The treatment is of an applied nature, examining various industries using the concepts and theories that comprise microeconomics.

An introduction to macroeconomics. Analytical tools are developed to provide an insight into the nature and causes of the problems of inflation and unemployment. Both the Keynesian and Monetarist approaches are examined in an attempt to provide a sound understanding of the relationship between macro variables within the economy. The analysis is then applied to particular problems facing the Australian economy.

### **16552 FINANCIAL AND TRUST ACCOUNTING**

Three year hours

An introduction to basic accounting: the preparation and use of accounting information; the tools used. Accounting concepts related to partnerships, corporations, manufacturing enterprise; accounting relating to business funds and cash flows. Trust accounting. Use of data processing.

### **16553 REAL ESTATE FINANCE**

Two year hours

An overview of the corporate financial system in Australia: concepts and techniques of financial evaluation; time value of money; risk management; financing of investments.

Real estate and methods of financing. The institutional structure of financing; primary and secondary mortgage markets; financing techniques.

### **16554 URBAN ECONOMICS**

Two year hours

*Prerequisite: 16551 Economics*

Economic theories of land use including urbanisation, effects of controls, provision of services, rehabilitation and

renewal, welfare provision, transportation, decentralisation.

### **16601 CONTEXTUAL STUDIES 1**

Two year hours

The relationship of people to the physical environment. The function of human and natural systems; their responses. The environmental impact of cities.

Relationships of culture, materials and technology to the buildings produced throughout various historical periods.

### **16602 CONTEXTUAL STUDIES 2**

Two year hours

Social and political systems in the urban situation. Urban planning.

### **16611 BUILDING DESIGN**

Two year hours

*Prerequisite: 16601 Contextual Studies 1*

An examination of the parameters that affect building design; the problems that architects face in designing buildings; case studies of design, both professional and other. Design exercises.

### **16621 DESIGN EVALUATION**

Three year hours

An examination of the factors that affect building design; the problems that architects face in designing buildings; building orientation and thermal performance. Sun path diagrams. Solar and earth-sheltered housing. Structural evaluation of building systems. Design exercises.

### **16622 ENVIRONMENTAL PLANNING**

Three year hours

Contextual issues relating to man's impact on the environment. Urban planning and sociology. Environmental impact statements. Economic theories of land use including urbanisation, effects of controls, provision of services, rehabilitation and renewal, welfare provision, transportation and decentralisation. Legal aspects of town planning.

### **16651 URBAN PLANNING**

One and one half year hours

Social and political systems, particularly in the Western urban situation; stability and change.

### **16652 ENVIRONMENTAL DESIGN**

Two year hours

The relationship of people to the physical environment. The function of human and natural systems; their responses. The environmental impact of cities. Architectural History and Design.

### **16701 MATERIALS 1**

Two year hours

An introductory course in the properties of building materials. Most commonly used materials are covered but not in depth.

### **16702 MATERIALS 2**

Two year hours

*Prerequisite: 16701 Materials 1*

A detailed course in concrete technology emphasising those aspects of concrete properties which are relevant to the building site. The properties and uses of those metals commonly used in building. The properties and uses of mastics and sealants. Properties of surface coatings.

### **16711 BUILDING SCIENCE**

One year hour

The physics of heat, light and sound are covered with reference to applications in buildings.

### **16721 MATERIALS SCIENCE**

Three year hours

An introductory course in the properties of building materials. Most commonly used materials are covered but not in depth. Heat, light and sound principles applied to materials are investigated.

### **16751 INTERNATIONAL REAL ESTATE**

One and one half year hours

To examine foreign investment in the real estate markets with particular focus on Australia and the Pacific regions. The students will develop an understanding of the globalisation of the real estate markets, the mechanism involved and the influence of the foreign sector.

### **16801 LEGAL STUDIES 1**

Two year hours

The legal system in Australia; sources of law; the court system; legal personality; the law of business association; an introduction to criminal law, civil law, industrial law and the law of torts, commercial arbitration and insurances. A detailed study of contract law.

### **16802 LEGAL STUDIES 2**

Two year hours

*Prerequisite: 16801 Legal Studies 1*

The tortious liability imposed by the law upon professionals, some major contractual problems and an outline of private land and statutory industrial regulations.

### **16851 INTRODUCTION TO LAW**

Two year hours

The structure and functioning of the Australian legal system: structure of the court system; the sources of law; statute and case law; the notion of precedent. An introduction to common law; the law of business association, commercial arbitration and insurance, especially contract law applicable to building and engineering works.

### **16853 PLANNING AND ENVIRONMENTAL LAW**

Two year hours

*Prerequisite: 16851 Introduction to Law*

Introduction to the overall legal, social and political framework within which property development occurs; background and major aspects of environmental law;

environmental control legislation. Common law; principles; third party appeals and class actions.

### **16854 REAL ESTATE LAW AND CONVEYANCING**

Two year hours

*Prerequisite: Completion of Years 1 and 2 Part Time*

The principles and details of real estate law including: the law relating to agents; consumer protection; sale of goods and trade practices legislation. Principles associated with the transfer and acquisition of property. Titles of property.

### **16901 STRUCTURES 1**

Two year hours

Equilibrium; properties of sections; axial stress and strain; bending moment and shear force; bending and shear stress deflection.

### **16902 STRUCTURES 2**

Three year hours

*Prerequisite: 16901 Structures 1*

Loading; structural timber, structural steel, soil properties, soil mechanics, small retaining walls, temporary soil retaining structures.

### **16903 STRUCTURES 3**

Two year hours

*Prerequisite: 16902 Structures 2*

Deformation of statically indeterminate structures; ultimate strength of reinforced concrete, stress in prestressed concrete, cracking in buildings, joint movements, computing.

### **16922 STRUCTURES 2S**

One and one half year hours

*Prerequisite: 16901 Structures 1*

Loading, structural steel beams and columns in relation to services, reinforced concrete beams, slabs and columns and services penetrations.

### **16951 REAL ESTATE MARKETING**

Two year hours

Application of marketing principles to real estate organisations: objectives setting; policy formulation; market segmentation; motivation of staff; listing procedures; negotiating an offer; role of auctions.

### **16952 ELECTIVE 1**

### **16953 ELECTIVE 2**

*Prerequisite: All year 4 subjects*

The study of a relevant topic by senior students in some depth.

### **16961 PROJECT**

Four year hours

A detailed study under supervision, of an individual topic with the presentation of a comprehensive report.

### **16999 LAND ECONOMICS EXPERIENCE**

Three year hours

Students are required to accumulate at least the equivalent of 440 days of approved professional experience, concurrently with their studies, and will be required to satisfy the requirements of Faculty Board in the relevant Experience requirement, as determined from time to time, in order to graduate.

### **17101 PROJECT PROCESS 1**

Introduction to the four major generic phases of the project process (sometimes called the project life cycle); Discussion of the first of these phases, Project Initiation and Concept, in detail, including basic needs determination, feasibility of alternative solutions, leading to product requirement determination, and approvals.

### **17102 PROJECT MANAGEMENT SCIENCE 1**

Examination of the first four generic project management functions most relevant to Project Process 1, namely time, cost, quality and risk management, plus the management of integration of these functions.

### **17103 PROJECT CONTEXT 1**

Identification of the general environmental constraints which impinge on projects, and examination of some aspects most relevant to Project Process 1, including economic constraints.

### **17104 SPECIALIST STUDIES 1**

The project organisation as an open system: the five primary subsystems, namely goals and values, structural, psycho-social, technology and management.

### **17201 PROJECT PROCESS 2**

The second of the four major generic phases of the project process: Project Planning and Development, including institution of planning and controls, concept development, design and documentation, prototyping and approvals.

### **17202 PROJECT MANAGEMENT SCIENCE 2**

Examination of three further generic project management functions which are particularly relevant to Project Process 2, namely management of project scope, decision making and project organisation.

### **17203 PROJECT CONTEXT 2**

Examination of three further environmental constraints identified in Project Context 1, namely financial, political and legal constraints.

### **17204 SPECIALIST STUDIES 2**

Economic and financial aspects as they apply specifically to projects.

### **17301 PROJECT PROCESS 3**

The third and fourth of the four major generic project processes, namely project execution and implementation, and project commissioning and handover.

### **17302 PROJECT MANAGEMENT SCIENCE 3**

Examination of the three remaining generic project management functions, namely the management of project

human resources, its closely associated function communications, and the management of project contracts and procurement.

### **17303 PROJECT CONTEXT 3**

Examination of the last two of the environmental constraints identified in Project Context 1, namely sociological/demographic and physical; and marketing and technology in the context of projects.

### **17304 SPECIALIST STUDIES 3**

Legal aspects applying specifically to projects and project organisations; some specific aspects of marketing at the project level; corporate social responsibility in project management; and computer applications in project management.

### **17401 BUILDING & CONSTRUCTION PROJECT PROCESS**

The four phases of the project process as they apply specifically to building and construction, namely initiation and concept, planning and development, project execution and implementation, and project commissioning and handover.

### **17402 BUILDING & CONSTRUCTION PROJECT MANAGEMENT PRACTICE 1**

Examination of seven of the basic project management functions as they apply specifically in building and construction, namely time, cost, quality, risk and scope management, management of project decision making, and management of project organisations.

### **17403 BUILDING & CONSTRUCTION PROJECT CONTEXT**

Examination of certain factors and constraints which are especially relevant to building and construction projects, namely town planning principles, building project law, approvals management, construction economics and finance, and aspects of construction technology.

### **17404 BUILDING & CONSTRUCTION SPECIALIST STUDIES 1**

Detailed examination of two specific topics from the project process which are particularly important in the context of building and construction, namely feasibility studies, and aspects of property management and project marketing.

### **17502 BUILDING & CONSTRUCTION PROJECT MANAGEMENT PRACTICE 2**

An examination of the remaining basic project management functions as they apply specifically to building and construction projects, namely management of project resources, management of project human resources, management of project communications, including building project negotiation, and management of construction project contracts and procurement.

### **17504 BUILDING & CONSTRUCTION SPECIALIST STUDIES 2**

Detailed examination of three further topics of particular importance for building and construction projects, namely planning methods and techniques, post-project analysis, and occupational health and safety.

### **17505 BUILDING & CONSTRUCTION SPECIALIST STUDIES 3**

Examination of industrial relations, and matters appertaining thereto, in the context of building and construction, namely industrial arbitration, organisations and policies, dispute resolution, and cost of disputes.

### **17600 MAJOR REPORT**

A major study, undertaken by each student individually, and equal in value to 50% of the Degree, involving a detailed study of an individual topic and the preparation of a comprehensive report.



PUBLIC AFFAIRS AND PUBLICATIONS UNIT  
ISSN 1030 5947