The University of Newcastle

FACULTY OF ARCHITECTURE
HANDBOOK
Situation of New South Wales

Postal Address: The University of Newcastle NSW 2308

Telephone: (049) 215000

Telex: AA28194 — Library
      AA28618 — Bursar
      AA28784 — TUNRA (The University of Newcastle Research Associates Limited)

Facsimile: (049) 601661

Hours of Business: Mondays to Fridays excepting public holidays 9 am to 5 pm

The University of Newcastle Calendar consists of the following volumes:

Volume 1 — Legislation
Volume 2 — University Bodies and Staff
Volume 3 — Faculty of Architecture Handbook
Volume 4 — Faculty of Arts Handbook
Volume 5 — Faculty of Economics and Commerce Handbook
Volume 6 — Faculty of Education Handbook
Volume 7 — Faculty of Engineering Handbook
Volume 8 — Faculty of Medicine Handbook
Volume 9 — Faculty of Science and Mathematics Handbook
Volume 11 — Faculty of Music Handbook

Also available are the Undergraduate Guides

This Volume is intended as a reference handbook for students enrolling in courses conducted by the Faculty of Architecture.

The colour band, Garnet BCC 160, on the cover is the lining colour of the hood of Bachelors of Architecture of this University.

The information in this Handbook is correct as at 18 October 1990.

ISBN 0159 — 3412

Recommended Price: Three dollars plus postage.

Designed by: Marie-T Wisniowski
Typeset by: The Secretariat Division, The University of Newcastle
Printed by: Newcastle Camera Print, 17 Arnott Street, Newcastle West.
THE DEAN'S FOREWORD

The professions responsible for the construction of the built environment are among the most important in both economic and social terms to the well-being of society. They also offer some of the most wide-ranging and rewarding careers available to university graduates, with opportunities to pursue a great variety of activities, from the design of buildings and the technical resolution of their components, to the management of the processes and people involved in their construction. The architecture and building degree courses offered at Newcastle reflect the richness of these career opportunities by providing an educational environment in which the student can develop those areas of skill, knowledge and understanding required of the young professional.

For the student of architecture, these areas include graphic skills as well as scientific knowledge, the study of history as well as of the latest developments in computer aided design, as part of a unique range of practical and intellectual activities at the heart of which lies that creative generation of built form in response to human need which constitutes architectural design. Although there will be many forms of practice open to a student at the completion of the university course, it is this capacity for conceiving imaginative design solutions to real problems which underlies the most effective contributions which an architect can make.

Similarly, the skills and techniques related to the management of the construction process form the core of the range of disciplines which the student of building is concerned with, and which provide the basis of professional competence and leadership in an increasingly complex industry.

We believe that the best way in which the Faculty can help students to develop these capacities is by dealing with relevant problems in a way which integrates the various areas of skill and knowledge required. It is this integrated problem-based approach which gives the Newcastle Faculty of Architecture its distinctive character, and which is guiding the development of its courses. We believe it encourages an exciting educational context in which students can achieve the highest levels of preparedness for their future professional careers.

Barry S. Maitland
Dean
CONTENTS

SECTION NINE  GENERAL INFORMATION
PRINCIPAL DATES 1991 (including Medicine)
Advice and Information ii
Faculty/School Secretaries ii
Accommodation Officer ii
Careers and Student Employment Officer ii
Counselling Service ii
Health Service ii
Student Loans ii
Students with Special Needs iii
Enrolment and Re-enrolment iii
Student Conduct and Responsibilities iii

EXAMINATIONS
Examination Periods v
Sitting for Examinations v
Rules for Formal Examinations v
Examination Results v
Special Consideration v

TRANSCRIPTS OF ACADEMIC RECORD vi

UNSATISFACTORY PROGRESS — Regulations vi

CHARGES
Method of Payment vii
Higher Education Contribution Scheme (HECS) vii
Scholarship Holders and Sponsored Students vii
Loans vii
Refund of Charges vii

CAMPUS TRAFFIC AND PARKING viii

STUDENT SERVICES
Banking viii
Cashier ix
Chaplaincy Service ix
Community Programmes ix
Convocation ix
Co-Op Bookshop ix
Lost Property ix
Noticeboards ix
Post Office ix
Public Transport ix
Student Insurance Cover ix
University Computing Services xi
University Libraries

SECTION ONE  PRINCIPAL OFFICERS
Vice-Principal and Principal Professor K.J. Morgan, BSc, MA, DPhil(Oxf)
Deputy Vice-Principal (Academic) Professor M.P. Carter, BA(Nott), PhD(Edin)
Deputy Vice-Principal (Administration) L.F. Hennessy, BA(Syd)
Deputy Vice-Principal (Planning) D.R. Huxley, BA, LittB(NB), MA, PhD

Pro Vice-Principal and Dean of Students Professor K.R. Dutton, MA(Syd), DU(Paris), Officier des Palmes académiques, FACE

Pro Vice-Principal (Development) L.R. Bastock, MEd(Syd), PhD(Alberta), BA, DiplEd
Deputy President of Academic Senate Professor R.J. MacDonald, BSc, PhD(NSW), FAIP
Dean for Research Professor G.M. Kellerman, AO, MB, BS, MSc(Syd), FAACB, FRACP, FRCPA

FACULTY OF ARCHITECTURE STAFF
Dean B.S. Mailand, DipArch, MA(Camb), PhD(Shef), ARAIA
Sub-Dean M.F. Park, BArch(NSW), ASTC, DipPaint
Faculty Secretary J. Norfolk, BA

DEPARTMENT OF ARCHITECTURE
Professor B.S. Mailand, DipArch, MA(Camb), PhD(Shel), ARAIA (Head of Department)
Professor W.D. McGeorge, MSc(H-W), FRICS, AAIQS, MAIB
Senior Lecturers
H.K. Banerjee, BEng(Calc), MEng(Shel), PhD(Glas), MBA(W Aust), FIE(Ind), MIE(Aust)
R.McL. Cowdroy, ASTC, BArch(NSW), MBldgSc(Syd), MBA, FRAlA
R.J. Donaldson, BArch, TDSNZ
L.N. Johnston, DipArch(EngD), ARAIA, MRIAI, MSIM
M.F. Park, BArch(NSW), ASTC, DipPaint
J.R. Rockey, BArch(NSW), PhD(Angelicum, Rome), DPhil(Onf), FRAIA
D.J. Stafford, BArch, BA(Canberra CAE), PRAIA, RIBA
Lecturers
S.E. Chen, BSc(Arch), BArch, MArch, MBA, ARAIA
J. Crichton, DipTch(NCAE), BScArch, BArch, ARAIA
A.J. Kingland, BArch(Melb), DiplCompSc
R.J. Moore, BArch(NSWIT), DipEd(STC), MA(NSW), ARAIA
Senior Technical Officer P. Thomas
Technical Officer P. Muller, AssC/DipArt/Craft, Phot(NCAE), MAIPP
Laboratory Craftsman D.L. Anderson
Computer Programmer T. Gibert, BSc(CompSc)(WCU Philadelphia)

Departmental Office Staff
P. Clark
J. Williams
Location
The Faculty of Architecture functions in a self-contained building on the University campus where it is located across the western footbridge beyond the Library and Union over the ring road and adjacent to Building M. The nearest general car park is north of Building M. See the frontispiece plan for further details.

The postal address is:
Faculty of Architecture
The University of Newcastle
NSW 2308

The University telephone number is 215215.

University of Newcastle
Architectural Students' Association

Membership is open to both students and staff of the Faculty of Architecture as well as members of the architectural profession. Students of other faculties may be admitted as associate members. The Association aims at bringing together students at all levels within the Faculty and holds functions, both social and academic, including lectures by prominent members of the profession. Announcements of the Architectural Students' Association's activities are posted on the Notice Board in the Architecture building.

Professional Recognition
Architecture
The Bachelor of Science (Architecture) and Bachelor of Architecture programs at this University have been approved by the professional and state bodies which accredit architecture courses in Australia. These organisations include the Royal Australian Institute of Architects, the New South Wales Board of Architects, and the Commonwealth Association of Architects. The course of study in architecture leading to graduation and accreditation as an architect consists of two degree programs. The first degree BSc(Arch) consists of 3 years full-time study. The second degree BArch consists of 2 years full-time study. Students may proceed directly from one degree program to the next or may choose to take leave of absence to work or travel.

Building
The course is expected to fulfill the requirements for admission to membership of the Australian Institute of Building (AIB) and the academic component required by the Australian Institute of Quantity Surveyors (AIQS). Additionally, graduates seeking accreditation with the AIQS will be required to complete a minimum period of practical experience as determined by the AIQS.

Professional Association
Students enrolled in the Faculty of Architecture are advised to apply for student membership of the Royal Australian Institute of Architects. The Institute issues a wide range of publications and holds numerous functions both social and educational as specially reduced rates for students, all of which should be of interest and value to the student architect.

Prerequisites for Entry to the Bachelor of Science (Architecture) Degree
There are no mandatory prerequisite HSC subjects required of students entering the course. Students are advised however that the study of architecture will call upon skills of literacy, numeracy and design. The HSC subjects English, Mathematics, Physics, Art and Industrial Arts would provide a basis for the development of these skills.

Prerequisites for Entry to the Bachelor of Building Degree
There are no mandatory prerequisite HSC subjects which prospective students must complete before entry into the Bachelor of Building course. Passes in 3 unit Mathematics and 2 unit Physics are recommended and an adequate pass in English is considered desirable.

Student Representation in Faculty Affairs
Provision is made for student representatives to be elected to the Faculty Board of the Faculty. The Faculty Board has responsibility for the teaching and research activities of the Faculty.

Awards and Prizes
Newcastle Gas Co. Prize
This prize, donated by the Newcastle Gas Co. Ltd, is awarded at the end of 3rd year to the outstanding student in the technology study areas of the Bachelor of Science (Architecture) degree course. Value $50.

Board of Architects of New South Wales Prize
The Board of Architects of NSW Prize is awarded for the best academic performance in the Bachelor of Architecture degree course, if of sufficient merit. Value $300.

Sydney C Morton Prize
Either a black cloth trencher cap or a black Canterbury cap.

Gowns and Prizes
(a) Degree of Bachelor
A gown of black cloth as worn by Bachelors of Arts of the University of Cambridge.

(b) Degree of Master
A gown of black cloth as worn by Masters of Arts of the University of Cambridge.

(c) Degree of Doctor of Philosophy
A gown of garnet cloth faced with silver grey to a width of 10 cms.

Caps and Bonnets
(a) Degree of Bachelor and Master
Either a black cloth trencher cap or a black Canterbury cap.

(b) Degree of Doctor of Philosophy
A black velvet bonnet with a silver cord.

Hoods
(a) Degree of Bachelor of Science (Architecture)
A full hood of black silk lined to a depth of 15 cms with garnet and a 4 cm edging of silver grey.

(b) Degree of Bachelor of Architecture
A full hood of black silk lined to a depth of 15 cms with garnet.

(c) Degree of Master of Architecture
A full hood of black silk lined with garnet.

(d) Degree of Doctor of Philosophy
A hood of garnet lined with silver grey.

The academic dress worn by graduates of the Bachelor of Building and Master of Building has yet to be determined by the Council of the University of Newcastle.
RULES GOVERNING BACHELOR DEGREES OFFERED IN THE FACULTY OF ARCHITECTURE

1. General
These Rules prescribe the conditions and requirements relating to bachelor degrees offered in the Faculty of Architecture.

2. Definitions
In these Rules, unless the context or subject matter otherwise indicates or requires:
“course” means the total requirements as prescribed in the schedule to qualify a candidate for the award of the degree;
“Dean” means the Dean of the Faculty of Architecture;
“degree” means the degree of Bachelor of Science (Architecture), Bachelor of Architecture or Bachelor of Building as the case may be;
“Department” means the department or departments offering a particular subject and includes any other body doing so;
“Faculty Board” means the Faculty Board, Faculty of Architecture;
“Schedule” means the schedule to these Rules relevant to the degree in which a person is enrolled or proposing to enrol;
“subject” means any part of the course for which a result may be recorded.

3. Admission and Enrolment
(1) An applicant for admission to candidature shall satisfy the requirements of the Rules Governing Admission and Enrolment and such other additional requirements as may be specified in the Schedule.
(2) In any year a candidate shall enrol only in those subjects approved by the Dean or his nominee.

4. Standing
(1) The Faculty Board, on the recommendation of the Head of the Department concerned, may grant a candidate standing in specified subjects in recognition of work completed in this University or elsewhere, on such conditions as the Faculty Board may determine.
(2) The standing granted under this Regulation shall not exceed the limit specified in the Schedule.

5. Prerequisites and Corequisites
Except with the approval of the Dean, a candidate may not enrol in a subject unless he or she has passed any subject prescribed as its prerequisite and has already passed or concurrently enrols in or is already enrolled in any subject prescribed as its corequisite.

6. Withdrawal
(1) A candidate may withdraw from enrolment in a subject or the degree only by informing the Secretary to the University in writing and the withdrawal shall take effect from the date of receipt of such notification.
(2) A candidate who withdraws from any subject after the relevant date shall be deemed to have failed in that subject unless granted permission by the Dean to withdraw without penalty. The relevant date shall be:
   (a) in the case of a subject offered only in the first semester, the Monday of the 9th week of first semester;
   (b) in the case of a subject offered only in the second semester, the Monday of the 9th week of second semester;
   (c) in the case of any other subject, the Monday of the 3rd week of second semester.

7. Subject Requirements
(1) To complete a subject, a candidate shall attend such lectures, tutorials, seminars, laboratory classes and field work and submit such written or other work as the Department shall require.
(2) To pass a subject a candidate shall complete it and pass such examinations as the Faculty Board shall require.

8. Grading of Degrees
The degree shall be conferred as an ordinary degree except that in cases where a candidate’s performance in the course has reached a standard determined by the Faculty Board, the degree may be conferred with merit or with honours as provided in the Schedule.

9. Admission to Degree
To qualify for admission to the degree a candidate shall satisfy the requirements prescribed in the Schedule.

10. Exceptional Circumstances
In order to provide for exceptional circumstances arising in a particular case, the Senate on the recommendation of the Faculty Board may relax any provision of these Rules.

SCHEDULE 1 — BACHELOR OF SCIENCE (ARCHITECTURE)

1.(1) To qualify for admission to the degree of Bachelor of Science (Architecture) a candidate shall pass a program of subjects selected from the Appendix to this Schedule totalling 240 credit points.
(2) The course program shall include:
   80 credit points at 100 level
   80 credit points at 200 level
   80 credit points at 300 level.
2. A candidate may be granted standing in not more than one half of the course under the provisions of Rule 4 of these Rules.
3. The degree of Bachelor of Science (Architecture) may be conferred with merit.

(Appendix to Schedule 1)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 level</td>
<td></td>
</tr>
<tr>
<td>ARCH110 Architecture I</td>
<td></td>
</tr>
<tr>
<td>ARCH111 Architecture I(Part 1)* ARCH112 Architecture I(Part 2)*</td>
<td></td>
</tr>
<tr>
<td>200 level</td>
<td></td>
</tr>
<tr>
<td>ARCH210 Architecture II</td>
<td></td>
</tr>
<tr>
<td>ARCH211 Architecture II(Part 1)* ARCH212 Architecture II(Part 2)* ARCH213 Architecture II(Part 3)* ARCH214 Architecture II(Part 4)*</td>
<td></td>
</tr>
<tr>
<td>300 level</td>
<td></td>
</tr>
<tr>
<td>ARCH310 Architecture III</td>
<td></td>
</tr>
</tbody>
</table>

* Available only in exceptional circumstances and if suitable arrangements can be made within the department.
SCHEDULE 2 — BACHELOR OF ARCHITECTURE

1. To be eligible for admission to candidature an applicant shall:
   (a) have satisfied the requirements for admission to the degree
       of Bachelor of Science (Architecture) in the University of
       Newcastle; or
   (b) have satisfied the requirements for admission to a degree in
       another university or a qualification approved by the Faculty
       Board as a degree or qualification equivalent to the
       University's degree of Bachelor of Science (Architecture); or
   (c) in exceptional circumstances hold such academic and
       professional qualifications as may be approved by the
       Faculty Board.

2. A candidate may be granted standing in not more than one half
   of the course under the provisions of Rule 4 of these Rules.

3. Enrolment on a part-time basis is available only to those
   students enrolled on a part-time basis. * Available only to students enrolled on a part-time basis.

4. The degree of Bachelor of Architecture may be conferred with
   honours in one of the following grades:
   (a) Class I;
   (b) Class II, Division I,
   (c) Class II, Division II.

Appendix to Schedule 2

<table>
<thead>
<tr>
<th>Subject</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 level</td>
<td></td>
</tr>
<tr>
<td>ARCH1410</td>
<td>Architecture IV</td>
</tr>
<tr>
<td>ARCH1411</td>
<td>Architecture IV(Part 1)*</td>
</tr>
<tr>
<td>ARCH1412</td>
<td>Architecture IV(Part 2)*</td>
</tr>
<tr>
<td>500 level</td>
<td></td>
</tr>
<tr>
<td>ARCH510</td>
<td>Architecture V</td>
</tr>
<tr>
<td>ARCH511</td>
<td>Architecture V(Part 1)*</td>
</tr>
<tr>
<td>ARCH512</td>
<td>Architecture V(Part 2)*</td>
</tr>
</tbody>
</table>

SCHEDULE 3 — BACHELOR OF BUILDING

1. (1) To qualify for admission to the degree of Bachelor of
   Building a candidate shall pass a program of subjects
   selected from the Appendix to this Schedule totalling 320
   credit points.

   (2) The course program shall include:
       - 80 credit points at 100 level,
       - 80 credit points at 200 level,
       - 80 credit points at 300 level,
       - 80 credit points at 400 level.

2. A candidate may be granted standing in not more than one half
   of the course under the provisions of Rule 4 of these Rules.

3. The degree of Bachelor of Building may be conferred with
   honours in one of the following grades:
   (a) Class I;
   (b) Class II, Division I,
   (c) Class II, Division II.

Appendix to Schedule 1

<table>
<thead>
<tr>
<th>Subject</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 level</td>
<td></td>
</tr>
<tr>
<td>BLDG110</td>
<td>Building I</td>
</tr>
<tr>
<td>200 level</td>
<td></td>
</tr>
<tr>
<td>BLDG210</td>
<td>Building II</td>
</tr>
<tr>
<td>300 level</td>
<td></td>
</tr>
<tr>
<td>BLDG310</td>
<td>Building III</td>
</tr>
<tr>
<td>400 level</td>
<td></td>
</tr>
<tr>
<td>BLDG410</td>
<td>Building IV</td>
</tr>
</tbody>
</table>

FACULTY POLICIES

Faculty Board policies of special interest to students are as follows:

Criteria for the Award of the Degree with Merit and Honours

Merit and Honours awards are normally based on an average of
the weighted marks obtained for all subjects taken in that course.
Marks are weighted according to the credit point value of the
individual subject.

The Head of Department may recommend to Faculty Board that
a grade of merit or honours be awarded other than that indicated
by the average of the weighted marks of the student concerned,
or that no merit or honours be awarded to a particular student.
In such a case Faculty Board may either make an award of merit or
honours in accordance with the recommendation of the Head of
Department concerned or in accordance with (a), (b), (c), (d), (e) or (f) below.

(a) To qualify for the degree of Bachelor of Science (Architecture) with Merit:
   (i) a candidate’s performance expressed as an average
       of the marks obtained for all subjects of that course,
       weighted according to their credit point value, shall be
       75% or better;
   (ii) there shall be no failure in any subject; and
   (iii) a candidate shall gain not less than a Distinction
       in the final subject.

(b) To qualify for the degree of Bachelor of Architecture with
   Honours Class I:
   (i) a candidate’s performance expressed as an average
       of the marks obtained for all subjects of that course,
       weighted according to their credit point value, shall be
       75% or better;
   (ii) there shall be no failure in any subject; and
   (iii) a candidate shall gain not less than a Credit in the
       final subject.

(c) To qualify for the degree of Bachelor of Architecture with
   Honours Class II:
   (i) a candidate’s performance expressed as an average
       of the marks obtained for all subjects of that course,
       weighted according to their credit point value, shall be
       75% or better;
   (ii) there shall be no failure in any subject; and
   (iii) a candidate shall gain not less than a Distinction in
       the final subject.

(d) To qualify for the degree of Bachelor of Building with
   Honours Class I:
   (i) a candidate’s performance expressed as an average
       of the marks obtained for all subjects of that course,
       weighted according to their credit point value, shall be
       75% or better;
   (ii) there shall be no failure in any subject; and
   (iii) a candidate shall gain not less than a Distinction in
       the final subject.

(e) To qualify for the degree of Bachelor of Building with
   Honours Class II, Division I:
   (i) a candidate’s performance expressed as an average
       of the marks obtained for all subjects of that course,
       weighted according to their credit point value, shall be
       less than 75% and equal to or better than 70%;
(ii) there shall be no failure in any subject; and
(iii) a candidate shall gain not less than a Credit in the final subject.

(f) To qualify for the degree of Bachelor of Building with Governing Unsatisfactory Progress, may terminate the student’s enrolment to the Head of Department who, within the terms of Rule 2 of the Rules Governing Unsatisfactory Progress, may terminate the student’s enrolment in the subject.

At the end of first semester a review of each student’s work will be carried out by a semester review panel. Where the review panel determines that a student’s performance has been poor, in terms of attendance or standard of work submitted, it may recommend enrolment in the subject.

Student Progression

A student who is required to repeat a subject may, in exceptional circumstances and at the discretion of the Head of the Department, be permitted to undertake work experience as an alternative to repeating the academic program for such part of the year’s work as the Head of Department may determine. A student wishing to pursue this option should apply to the Head of Department who may approve a work experience program under the following conditions:

- It must be undertaken in the office of an architect or other professional in the building industry;
- The office must write to the Head of Department to confirm the arrangement, which must be approved by the Head of Department, and any change in the arrangements during the period of work experience must be notified to and approved by the Head of Department;
- The student must present a record of the work experience to a semester review panel at the end of the period, in the form of a daily work diary and a portfolio of work undertaken, and must satisfy the panel that the work experience has contributed to the student’s professional development.

A student who is permitted to undertake work experience in partial fulfilment of the requirements for a subject will be required to enrol as a full-time student.

Year in Practice

Students are encouraged to spend a year working in the office of an architect or related professional upon completion of the Bachelor of Science (Architecture) degree and before commencing the Bachelor of Architecture program. This year will be recognised by the Board of Architects as contributing towards the overall minimum seven year period of training/experience which is required of the architectural student, provided it is undertaken under the guidance of the Faculty. Advice on potential employers, log books and other relevant issues is available from the Faculty.

Part-Time Study

The architecture courses are generally considered to require a high level of commitment and time, and students who attempt them on a part-time basis often find this to be an onerous and difficult route. For this reason students are recommended to undertake full-time study wherever possible.

Bachelor of Science (Architecture) degree

The Bachelor of Science (Architecture) degree is a full-time course offered by year. In exceptional circumstances, and if suitable arrangements can be made within the Department of Architecture, students may be permitted to enrol in part of a full-time year program.

Bachelor of Architecture degree

The subjects Architecture IV and V of the Bachelor of Architecture degree can be undertaken on the basis of part-time attendance, amounting to some 12 hours per week of contact hours, spread over three full academic years instead of two. This option is subject to certain conditions, in particular that the student undertake employment during the full period in an architect’s office, or such
SECTION FIVE

COURSE DESCRIPTION — ARCHITECTURE

Introduction
The Bachelor of Science (Architecture) and Bachelor of Architecture degrees comprise three and two parts respectively, these five parts corresponding to the five years of study of an uninterrupted full-time program leading to professional registration.

The Department of Architecture has adopted an integrated form of study in which all of the various discipline areas are treated within the single subject ‘Architecture’. This integrated format applies in all five parts of the course, so that students enrol in each of the single subjects Architecture I, II, III, IV or V. In each of these subjects specific areas of knowledge and skill are developed, and these are grouped into seven study areas for the purposes of assessment and the statement of objectives.

Study Areas
The study areas developed through each subject of the course are as follows:

- Professional Skills:
  - forms of communication, including draughtsmanship, modelmaking, photography, video and verbal and written communication;
  - computer applications.

- User Studies:
  - concerning the people who commission and use buildings:
    - ergonomics;
    - the definition and interpretation of user and client needs.

These seven study areas define the scope of the curriculum, and are described in more detail under the subject descriptions which follow. Students will be expected to attain a required level of competence in all seven study areas at each level of the course. However the study areas do not exist as independent subjects; the essence of the integrated approach is that the knowledge and skills acquired in each study area must be capable of being applied in the context of other parallel areas of skill and knowledge.

For although the development of knowledge and expertise in the individual disciplines which contribute to the practice of architecture is important, it is equally important that the intersection between areas of knowledge is appreciated, and that the integrative nature of design is understood. The method adopted for developing the study areas is thus intended to reflect the way in which the architect responds to design problems in practice.

Problem-Based Learning
Rather than attend a series of independent lecture courses on the various study areas to be mastered, students are presented with a succession of problems of the type encountered in architectural practice, and so designed as to develop the various areas of skill and knowledge appropriate to that level of the course. Thus the organisation of these parts of the course resembles a matrix in which the individual study areas are introduced and developed through their successive application in problem exercises.

Working Method
Students will usually work in groups of 8-10, with the guidance of a group tutor. In addition tutors with particular knowledge of the study areas will act as specialist consultants in running the problem-based exercises.

Assessment
At the start of each problem phase a list of assessment criteria will be made available to students. These criteria will form the basis for assessment at the end of the phase when students will receive advice on their work and, where necessary, help in rectifying areas of difficulty.

Students will be responsible for keeping a portfolio of all their work carried out during that year, and this will be the subject of a formal assessment on two occasions, at the end of the first semester, and at the end of the year, by a panel of examiners.

Credit Points
Credit Point values associated with each subject are shown to the right of the subject heading and are abbreviated to 'cp'.

Texts
The specialist consultant tutors will make available Learning Resources and other specially prepared texts during the course of the problem-exercises to support the development of appropriate skills and knowledge, and will advise on the purchase of text books.

ARCH110 ARCHITECTURE I 80cp

PROBLEM-BASED EXERCISES

The overall theme and focus of the Architecture I exercises is "Problems of the Workplace". This introduces the student immediately to architectural problems arising from clearly perceived needs, and in a relatively direct and unambiguous form. The individual exercises are of varying length, but are grouped into a series of phases, usually lasting about 5 weeks and having a common client, situation or location. They provide a sequence of design experiences which progressively focuses on aspects of designing for people at work, with straightforward objectives and social interactions, and in a variety of physical environments in the Hunter Region, including:

- the survey and analysis of simple traditional buildings, including consideration of the history, climate and geography of the region;
- the ergonomic design of the individual workplace, and the generation of simple spaces around the internal functions of a program;
- the design of the envelope containing simple functional spaces, with regard to climatic and other environmental considerations as well as the functional connections between inside and outside;
- consideration of strategies for assembling a number of functionally related spaces on plan, and introduction to the full production cycle of a building;
- the organisation in plan and section of a more varied number of functional spaces within a contained envelope;
- use of colour, materials and graphics as an integral part of the design process.

Site Studies:
concerning the measurement and interpretation of the site and its context:
  - surveying;
  - landscape design;
  - urban design.

Cultural Studies:
concerning the cultural context of the program:
  - history of architecture;
  - theory of architecture.

Design Studies:
  - the development of design theory and processes.

Technical Studies:
  - building structures;
  - building construction;
  - building services;
  - environmental control;
  - cost planning and specifications.

Implementation Studies:
concerning the implementation of the building project and issues of:
  - the profession;
  - professional practice, law and ethics;
  - project management and business management for the architect.

Working Method
Students will usually work in groups of 8-10, with the guidance of a group tutor. In addition tutors with particular knowledge of the study areas will act as specialist consultants in running the problem-based exercises.

Hours
Contact hours vary from week to week depending upon the stage of development of the design problem, but average approximately 10 hours per week for full-time students. An overall personal time commitment of 50 hours per week for full-time students is assumed, although this will vary between students. The time commitment of part-time students in the Bachelor of Architecture degree is approximately two-thirds of that of full-time students.

Study Areas

<table>
<thead>
<tr>
<th>Problem-based Exercises</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Study Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

Assessment
At the start of each problem phase a list of assessment criteria will be made available to students. These criteria will form the basis for assessment at the end of the phase when students will receive advice on their work and, where necessary, help in rectifying areas of difficulty.

Students will be responsible for keeping a portfolio of all their work carried out during that year, and this will be the subject of a formal assessment on two occasions, at the end of the first semester, and at the end of the year, by a panel of examiners.

Credit Points
Credit Point values associated with each subject are shown to the right of the subject heading and are abbreviated to 'cp'.

Texts
The specialist consultant tutors will make available Learning Resources and other specially prepared texts during the course of the problem-exercises to support the development of appropriate skills and knowledge, and will advise on the purchase of text books.

ARCH110 ARCHITECTURE I 80cp

PROBLEM-BASED EXERCISES

The overall theme and focus of the Architecture I exercises is "Problems of the Workplace". This introduces the student immediately to architectural problems arising from clearly perceived needs, and in a relatively direct and unambiguous form. The individual exercises are of varying length, but are grouped into a series of phases, usually lasting about 5 weeks and having a common client, situation or location. They provide a sequence of design experiences which progressively focuses on aspects of designing for people at work, with straightforward objectives and social interactions, and in a variety of physical environments in the Hunter Region, including:

- the survey and analysis of simple traditional buildings, including consideration of the history, climate and geography of the region;
- the ergonomic design of the individual workplace, and the generation of simple spaces around the internal functions of a program;
- the design of the envelope containing simple functional spaces, with regard to climatic and other environmental considerations as well as the functional connections between inside and outside;
- consideration of strategies for assembling a number of functionally related spaces on plan, and introduction to the full production cycle of a building;
- the organisation in plan and section of a more varied number of functional spaces within a contained envelope;
- use of colour, materials and graphics as an integral part of the design process.

Site Studies:
concerning the measurement and interpretation of the site and its context:
  - surveying;
  - landscape design;
  - urban design.

Cultural Studies:
concerning the cultural context of the program:
  - history of architecture;
  - theory of architecture.

Design Studies:
  - the development of design theory and processes.

Technical Studies:
  - building structures;
  - building construction;
  - building services;
  - environmental control;
  - cost planning and specifications.

Implementation Studies:
concerning the implementation of the building project and issues of:
  - the profession;
  - professional practice, law and ethics;
  - project management and business management for the architect.

Working Method
Students will usually work in groups of 8-10, with the guidance of a group tutor. In addition tutors with particular knowledge of the study areas will act as specialist consultants in running the problem-based exercises.

Hours
Contact hours vary from week to week depending upon the stage of development of the design problem, but average approximately 10 hours per week for full-time students. An overall personal time commitment of 50 hours per week for full-time students is assumed, although this will vary between students. The time commitment of part-time students in the Bachelor of Architecture degree is approximately two-thirds of that of full-time students.

Study Areas

<table>
<thead>
<tr>
<th>Problem-based Exercises</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Study Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
</tbody>
</table>
STUDY AREAS

The topics covered during the course of the problem-based exercises in Architecture I are outlined in each of the study areas as follows:

Professional Skills:
- architectural communication, including letter writing, report writing, drawing, model making, photography, video;
- development of communication skills, including colour, graphics;
- introduction to word processing and other business applications of computers;
- introduction to computing equipment;
- measured drawing of a simple structure.

User Studies:
- patterns of work in the community and the need generated for buildings;
- needs of client and user for simply defined problems;
- ergonomics of the workplace;
- user interaction with electronic equipment.

Site Studies:
- variety of landscape conditions in the Hunter Valley and its natural elements;
- patterns of development in the Hunter Valley;
- measured drawing of a simple structure and its site;
- simple site surveys, contour surveys and site analysis.

Cultural Studies:
- forms of settlement and building in the Hunter Valley having regard to factors of history, climate and geography, and the impact of technological developments in Europe and America;
- the functional tradition in western architecture, from 1800 to the present;
- the strengths and limitations of the functionalist philosophy in modern architecture.

Design Studies:
- design solutions for relatively clearly defined needs and activities, up to a level of complexity of about 10 discrete functional spaces on 3 physical levels;
- introduction to design processes;
- introduction to architectural design theory;
- design of elements of architecture.

Technical Studies:
- light, small-scale framed structures in timber;
- introduction to basic structural types;
- concepts of dead, live and wind loadings, of elementary load analysis, of equilibrium of forces and force analysis, of transmission of forces in a structural system and load path analysis, and of structural stability;
- selection, design and detailing of appropriate constructional solutions for simple framed floor construction, wall construction and medium and low-pitched roof constructions, with alternative claddings and linings;
- simple joinery components and fixtures;
- materials for simple buildings and an understanding of how those materials behave from a technical, economical and environmental viewpoint;
- wired and piped services systems for a small building;
- interactions between buildings and their environment, and between people and their workplace environments;
- problems of noise and glare, and environmental factors affecting the design of a simple building;
- solar geometry and passive solar control;
- principles of energy efficient design;
- simple estimating techniques, cost planning and analysis.

Implementation Studies:
- focus on the role of the architect as an individual employee;
- consideration of individual (personal) management skills, management of small group activities, and issues of professional ethics.

ARCH111 ARCHITECTURE I (PART 1) 40cp

This subject covers the content of the first half of Architecture I. It is offered only in exceptional circumstances and if suitable arrangements can be made within the department.

ARCH112 ARCHITECTURE I (PART 2) 40cp

This subject covers the content of the second half of Architecture I. It is offered only in exceptional circumstances and if suitable arrangements can be made within the department.

ARCH210 ARCHITECTURE II 80cp

PROBLEM-BASED EXERCISES

The focus of Architecture II projects concerns how and where people live. The theme “Problems of the Dwelling” introduces the design of multi-cellular spaces for multiple objectives and social interactions, and for both individual and institutional clients, using framed and load-bearing low-rise structures with high performance envelopes. The design problems considered include:
- the design of a compact living/work unit;
- the design of an individual family house on a steep site, on a number of levels;
- the design of clusters of dwellings, and the spaces between them, raising issues of community, privacy and landscape;
- the design of larger spaces for communal facilities associated with residential areas, such as a primary school;
- the detailed design of specialised areas within the communal facilities, such as a classroom.

GENERAL INFORMATION

Principal Dates 1991

(See separate entry for Faculty of Medicine)

January
1 Tuesday Public Holiday — New Year’s Day
4 Friday Last day for return of Enrolment Application Forms — Commencing Students

February
8 Friday New students accept UAC main round offers
6 Wednesday Re-enrolment Approval Sessions for re-enrolling students TO
14 Thursday
25 Monday First Semester begins

March
31 Friday Last day for a) variation of program in relation to HECS liability for Semester 1, b) addition of Semester 1 and full year subjects, and c) withdraw without academic penalty from Semester 1 Subjects.

April
29 Friday Good Friday — Easter Recess commences

May
7 Monday Lectures resume
28 Thursday Public Holiday — Anzac Day

June
7 Friday First Semester concludes
10 Monday Public Holiday — Queen’s Birthday

July
11 Tuesday Examinations begin
28 Friday Examinations end

August
31 Last day for a) variation of program in relation to HECS liability for Semester 2, b) addition of Semester II subjects, and c) withdraw without academic penalty from Semester II and full year subjects.

NOTE:
Semester One consists of Block One (10 weeks) and 7 weeks of Block Two. Semester Two consists of the remaining 3 weeks of Block Two and all of Block Three (10 weeks).

1 Date yet to be finalised
ADVICE AND INFORMATION

STUDENTS WITH SPECIAL NEEDS

The University of Newcastle has a policy to provide equal opportunity to students with Special Needs.

If you have a disability of any form and feel you need some additional assistance, please do not hesitate to contact one of the following:

Academic Advisers

Mr Peter Summons
Mr Arthur Kingland

Admissions & Technology

Ms Elizabeth Barthei
Mr Joel Murray-Cooper

Faculty of Education

Dr Bill Warren

School of Education

Mr Margaret Davies

Engineering

Dr David Wood

Health

Mr Patricia Jacobs

Science & Mathematics

Dr David Powell

Visual and Performing Arts

Mr John Prescott

Student Division

Ms Sandra Box

Acquity Library

Ms Alicia Hardy

Student Representative Council

Ms Ruth Garde

University Computing Services

Mr John Lambert

Enrolment of New Undergraduate Students

Persons offered enrolment are required to attend in person at the Great Hall in February to enrol. Detailed instructions are given in the Offer of Enrolment booklet which is sent out with the UAC offer.

Transfer of Course

Students currently enrolled in an undergraduate course who wish to transfer to a different undergraduate course (excluding Medicine) must complete an Application for Course Transfer form and lodge it with their enrolment form and Confirmation of Program and Enrolment Branch of the Student Division by 19 December 1990. If a student's request to transfer to another course is successful, the student must complete a separate Higher Education Contribution Scheme (HECS) Payment Form for the new course.

Re-Enrolment by Continuing Students

There are four steps involved for re-enrolment by continuing students:

• Collection of the re-enrolment fee
• Lodging the Enrolment Application form with details of your proposed program
• Attendance at the Great Hall for enrolment approval and
• Payment of the General Service Charge at any Westpac Bank on or before 8 March 1991.

Students enrolled previously at the University of Newcastle, who have not been enrolled previously at the University of Newcastle, or who have been enrolled previously in either a part-time course or less than three-quarters of a full-time program shall be deemed to be a part-time student.

Enrolment Approval

All re-enrolling students are required to attend at the Great Hall on a specific date and time during the period 6 to 14 February 1991. Enrolment Approval dates are on a postcard to University Noticeboard and are included in the enrolment kits issued to students in October. When attending for Enrolment Approval, students will collect their 1991 confirmation of program and student card. Any variations to the proposed program require approval. Enrolments in tutorial or laboratory sessions may be arranged. Staff from academic Departments will be available to answer enquiries.

Enrolment of New Undergraduate Students

Students are urged to take good care of their Student Card. If the card is lost or destroyed, there is a service charge of $5 payable before the card will be replaced. Students who withdraw completely from studies should return the Student Card to the Student Division Office.

Re-Admission After Absence

A person wishing to re-enrol in an undergraduate degree course who has been enrolled previously at the University of Newcastle, but not enrolled in 1990, is required to apply for admission again through the Universities Admissions Centre, Locked Bag 500 Lidcombe 2141. Application forms may be obtained from the UAC or from the Student Division Office and close with the UAC on 28 September each year. There is a $50 fee for late applications.

Attendance Status

A candidate for any qualification other than a postgraduate qualification who is enrolled in three quarters or more of a full-time program shall be deemed to be a full-time student, whereas a candidate enrolled in either a part-time course or less than three-quarters of a full-time program shall be deemed to be a part-time student. As a result of a part-time student classification, the student shall enrol as either a full-time or a part-time student as determined by the Faculty Based.
APPLICATIONS received by the appropriate date should be directed to the Academic Registrar.

Any student who is indebted to the University by reason of non-payment of any fee or charge, non-payment of any fine imposed, or who has failed to pay any overdue debts shall not be permitted to:

(a) complete a course in the following year;
(b) receive a transcript of academic record;
(c) graduate or be awarded a Diploma; or
(d) receive a replacement Student ID Card until such debts are paid.

Students are requested to pay any debts incurred without delay.

LEAVE OF ABSENCE

A student who does not wish to re-enrol may write to the Academic Registrar and seek leave of absence. Leave of absence is normally granted only to those students who are in good standing. Applications should be submitted before the end of the first week of the semester. Leave of absence will not be granted for more than one year and will not be granted retrospectively.

In the case of the B.Math. degree the following applies:

At the completion of an academic year, a candidate whose performance is deemed by the Faculty Board to be satisfactory may be granted leave of absence under such conditions as the Faculty Board may determine. Such leave will not normally be granted for more than one year.

In the case of degree and diploma courses offered by the Faculty of Music, the following applies:

Leave of absence is granted to a student once and then only for a maximum of one year. The rationale behind this rule is to ensure that students maintain their music skills at a high standard during their course of study. Extended periods of leave (greater than 12 months) may mean a student may require remedial tuition before returning to full-time study. Leave of absence is given only in exceptional circumstances.

Application for re-admission to undergraduate degree courses after leave of absence must be made direct to the University.

ATTENDANCE AT CLASSES

Where a student's attendance or progress has not been satisfactory, action may be taken under the Regulations Governing Unsatisfactory Progress.

In the case of illness or absence for some other unavoidable cause, a student may be excused for non-attendance at classes. Application for exemption from attendance at classes must be made in writing to the Head of the Department of the subject. Where tests or examinations have been missed, this fact should be noted in the application.

The granting of an exemption from attendance at classes does not carry with it any waiver of the General Services Charge.

GENERAL CONDUCT

In accepting membership of the University, students undertake to obey the by-laws and other requirements of the University. Students are expected to conduct themselves at all times in a seamanlike fashion. Smoking is not permitted during lectures, examination rooms or in the University Library. Gambling is forbidden.

Students are expected to attend all classes and to be ready for examination at the times stated.

Library

The following regulations apply to the Library:

(a) students may not leave the Library before 9:00 a.m. or after 12:00 noon, or remain after the Library closes; and
(b) if a student is 15 minutes late, he/she will not be permitted to enter the Library and will be fined.

Students are requested to respect the quiet atmosphere of the Library.

APPLICATIONS receives for exemption from attendance at classes must be made in writing to the Head of the Department of the subject. Where tests or examinations have been missed, this fact should be noted in the application.

The granting of an exemption from attendance at classes does not carry with it any waiver of the General Services Charge.

GENERAL CONDUCT

In accepting membership of the University, students undertake to obey the by-laws and other requirements of the University. Students are expected to conduct themselves at all times in a seamanlike fashion. Smoking is not permitted during lectures, examination rooms or in the University Library. Gambling is forbidden.

Students are expected to attend all classes and to be ready for examination at the times stated.

Library

The following regulations apply to the Library:

(a) students may not leave the Library before 9:00 a.m. or after 12:00 noon, or remain after the Library closes; and
(b) if a student is 15 minutes late, he/she will not be permitted to enter the Library and will be fined.

Students are requested to respect the quiet atmosphere of the Library.

APPLICATIONS receives for exemption from attendance at classes must be made in writing to the Head of the Department of the subject. Where tests or examinations have been missed, this fact should be noted in the application.

The granting of an exemption from attendance at classes does not carry with it any waiver of the General Services Charge.
(1) A student whose enrolment in a subject is terminated under this Regulation shall be deemed to have failed the subject.

(2) The Committee shall not make any decision pursuant to regulation 6 (1) (b) or (c) of these Regulations unless it has first given to the student an opportunity to make representations either in person or in writing or both.

(3) A student may appeal to the Vice-Chancellor against any decision made by the Admissions Committee under this Regulation.

7. Where there is an appeal against any decision of the Admissions Committee made under Regulation 6 of these Regulations, the Vice-Chancellor may refer the matter back to the Admissions Committee with a recommendation or shall arrange for the appeal to be heard by the Council. The Council may confirm the decision of the Admissions Committee or may substitute for it any other decision which the Admissions Committee is empowered to make pursuant to these Regulations.

8. (1) A student who has been excluded from further enrolment in a Faculty may enrol in a course in another Faculty only with the permission of the Faculty Board of that Faculty and on such conditions as it may determine after considering any advice from the Dean of the Faculty from which the student was excluded.

(2) A student who has been excluded from further enrolment in any course, Faculty or from the University under these Regulations may apply for permission to enrol therein again provided that in no case such re-enrolment commence before the expiration of two academic years from the date of the exclusion. A decision on such application shall be made:

(a) by the Faculty Board, where the student has been excluded from a single course or a single Faculty; or
(b) by the Admissions Committee, in any other case.

9. (1) A student whose application to enrol pursuant to Regulation 8 (1) or (8 (2)) of these Regulations is rejected by a Faculty Board may appeal to the University Council. The Council may confirm the decision of the Admissions Committee or may substitute for it any other decision which the Admissions Committee is empowered to make pursuant to these Regulations.

(2) A student whose application to enrol pursuant to Regulation 8 (2) of these Regulations is rejected by the Admissions Committee may appeal to the Vice-Chancellor.

CHARGES

The General Services Charge (details below) is payable by all students. New undergraduate students are required to pay all charges when they attend to enrol. Re-enrolling students receive in October each year, as part of their re-enrolment kit, a Fees and Charges Notice. Students are expected to pay charges in advance of re-enrolment at any Westpac Bank. The last date for payment of charges with the Westpac Bank is 8 March 1991.

1. General Services Charge
(a) Students Preceding to a Degree or Diploma $243
(b) Plus Students joining Newcastle University Union for the first time $35
(c) Non-Degree Students $35
(d) External Students $37
(e) The exact amount must be paid in full by the prescribed date.

2. Late Charges
Where the Fees and Charges Notice is lodged with all charges payable after the 8 March 1991 $50

3. Other Charges
(a) Examination under special supervision $15 per paper
(b) Review of examination results, per subject $25

(c) Replacement of re-enrolment kit $10
(d) Replacement of Student Card $5
(e) Statement of Matriculation Status for non-member of the University $10
(f) Academic Transcripts, minimum 2 copies $100
(g) Each additional copy $1

Note:
(i) Graduands will be provided with two copies of their transcript free upon notification of graduation.
(ii) Graduands will be issued free to other institutions or employers nominated by the student.

4. Indebted Students
All charges, including debts outstanding to the University, must be paid before or upon enrolment — part payment of total amount due will not be accepted.

METHOD OF PAYMENT

Students are requested to pay charges due at any Westpac Bank up to and including 8 March 1991. After 8 March 1991 payment of charges will incur a $35 late fee and should be paid direct to the University Cashier. The Cashier’s Office is located on 1st Floor McMullin Building and on A Level, Hunter Building.

HIGHER EDUCATION CONTRIBUTION SCHEME (HECS)

The Higher Education Contribution Scheme (HECS) was introduced in 1989 by the Federal Government to supplement the funding of higher education in Australia. It requires contributions to be made by students towards the cost of their higher education undertaken from the start of 1989.

All students, apart from some exceptions, enrolled in institutions of higher education from 1989 are liable under the HECS. Exemption from payment of the Higher Education Contribution (HECS) applies to:

- a fee-paying student in a “fees-approved postgraduate award course”
- a student in a "basic nurse education course"
- a "full-fee-paying overseas student"
- a "student who has paid the Overseas Student Charge"
- a "fully sponsored overseas student"
- a "mature aged course"
- a "student in a ‘non-award’ course"
- a student who has been awarded a "HECS postgraduate sponsorship".

The amount each student contributes depends upon the subject undertaken each semester and is payable whether the subject is passed or failed. The total liability depends on the proportion of a standard full time load in which the student is enrolled on the semester census date, which is the last day for withdrawing from a subject without being assessed, to March 31 in Semester 1 and August 31 in Semester 2. If a student withdraws from a subject after one of the above dates, the liability for that subject will stand for that semester.

In 1990 the HECS charge for a standard full time program was $1,882 for the year or $941 for a semester. This amount will be indexed each year in accordance with the consumer price index.

HECS is paid as part of the enrolment process. Students must select one of three sections on the HECS Payment Options form. On enrolment students must do one of the following:

(a) Elect to pay up-front which would require payment of 85% of the contribution for the semester, with the balance to be paid by the Commonwealth. Students electing to pay up from Semester 2 will be asked to do so at the commencement of Semester 2;
PERSONS WISHING TO BRING MOTOR VEHICLES (INCLUDING MOTOR CYCLES) ON CAMPUS

If including parking in approved parking areas, complying with road dangerous driving, failing to stop when signalled to do so by an Officer (Patrol) and Auckland (patrol) Office located in the foyer of the Great Hall or with the University's Security Department may be fined.

Any change of address must be advised.

A refund of the General Services Charge paid on enrolment or part paid by the sponsor. Sponsors must provide a separate voucher warrant number as part of their enrolment institutions.

The range of fines which may be imposed in respect of various categories of breach include:
- A student failing to notify the registered number of a vehicle brought on to the campus $10
- Parking in areas not set aside for parking $10
- Parking in special designated parking areas without a parking permit for that area $15
- Driving offences — including speeding and dangerous driving $30
- Failing to stop when signalled to do so by an Officer (Patrol) Failing to obey the directions of an Officer (Patrol) $30
- Refusing to give information to an Officer (Patrol) $30
- Failing to obey the directions of an Officer (Patrol) $30
- The Traffic and Parking Regulations are stated in full in the Calendar, Volume 1.
- The University Conservatorium of Music, located at the corner of Gibson and Auckland Streets, has no parking facilities, however, there is a Council car-park in Gibson Street.

BANKING

1) Commonwealth Bank
2) Westpac Banking Corporation
3) The State Bank of New South Wales
4) ANZ Banking Group
5) National Australia Bank

The Chaplain's offices are located in the demountable buildings at the rear of the Mathematics Building on the former Institute side of the campus.

Communal enterprises, workshops and seminars for the public can be virtually any subject area, and those interested should telephone for further details.

CONVOCATION

All students of the University of Newcastle become members of Convocation upon graduating. Convocation is the graduate body of the University of Newcastle, and, under the provisions of the University of Newcastle Act, is one of the constituent parts of the University. By virtue of the Act and the University By-Laws, Convocation has a voice in the government of the University through its right to elect members of Council and the Standing Committee's right to direct communication with the Council and the Senate. Through its membership of the Australian University Graduate Conference, Convocation also cooperates with its counterparts in other universities to give effective expression of opinion on matters of concern to graduates.

CO-OP BOOKSHOP

There are two bookshops on the campus.

Vol. 1

Volume 1.

The Chaplaincy offices are located adjacent to the McMullin Building, rear of the Mathematics Building on the former Institute side, and in C69 in the Hunter Building.

Pastoral care is available at both the University and the Conservatorium of Music from the following denominations:-

Anglican Catholic
Baptist Presbyterian
Uniting Church Assembly of God

Chaplaincy offices are located in the demountable buildings at the rear of the Mathematics Building on the former Institute side, and in C69 in the Hunter Building.

It is suggested that you telephone in advance.

NOTEBOARDS

Students wishing to post notices within the glass-fronted locked noticeboards should contact Mr D. Heggart, Property Services in the Hunter Building.

POST OFFICE

Offers all normal postal services EXCEPT interviews for passports.

Monday to Tuesday from 9.00am - 5.00pm

Monday to Tuesday from 9.00am - 5.00pm

Monday to Tuesday from 9.00am - 5.00pm

Monday to Tuesday from 9.00am - 5.00pm

Monday to Tuesday from 9.00am - 5.00pm

Monday to Tuesday from 9.00am - 5.00pm

MONDAY TO THURSDAY FROM 9.00AM - 5.00PM

TUESDAY TO THURSDAY FROM 9.00AM - 5.00PM

WEDNESDAY FROM 9.00AM - 5.00PM

THURSDAY FROM 9.00AM - 5.00PM

FACILITIES

There are two bookshops on the campus. Both offer discounts to Co-op members. The main branch is located within the Student Union. It stock textbooks, general publications, computer discs and other software, audio-visual cassettes.

Hours of Opening

Monday, Wednesday and Friday 9.00am - 5.00pm

Tuesday and Thursday 9.00am - 6.00pm

CASHIER

There are two cashiers' offices on-campus.

i) Located on First Floor, McMullin Building. Hours of Opening
   (a) During Semester 10.00am - 4.00pm (Open during lunch break)
   (b) Vacation Period 10.00am - 12.30pm 2.00pm - 4.00pm
   ii) Located inside entrance of Hunter Building. Hours of Opening
   All year except for one week during Christmas break. 9.00am - 11.00am 1.30pm - 3.30pm

CHAPLAINCY SERVICE

The Chaplain's offices are located in the demountable buildings at the rear of the Mathematics Building on the former University side, and in C69 in the Hunter Building.

Pastoral care is available at both the University and the Conservatorium of Music from the following denominations:-

Anglican Catholic
Baptist Presbyterian
Uniting Church Assembly of God

Hours of Opening for both Centres Monday to Friday 8.30am - 5.00pm

COMMUNITY PROGRAMMES

The Department of Community Programmes offers bridging courses for students in its Summer programmes (January and February), as well as courses for people who do not have to be formally accepted as University students.

Students interested in bridging courses should call at the Department's office in Room 81, Floor 1, the Mathematics building. Courses, workshops and seminars for the public can be virtually any subject area, and those interested should telephone for further details.

CONVOCATION

All students of the University of Newcastle become members of Convocation upon graduating. Convocation is the graduate body of the University of Newcastle and, under the provisions of the University of Newcastle Act, is one of the constituent parts of the University. By virtue of the Act and the University By-Laws, Convocation has a voice in the government of the University through its right to elect members of Council and the Standing Committee's right to direct communication with the Council and the Senate. Through its membership of the Australian University Graduate Conference, Convocation also cooperates with its counterparts in other universities to give effective expression of opinion on matters of concern to graduates.

CO-OP BOOKSHOP

There are two bookshops on the campus. Both offer discounts to Co-op members. The main branch is located within the Student Union. It stock textbooks, general publications, computer discs and other software, audio-visual cassettes.

Hours of Opening

Monday, Wednesday and Friday 9.00am - 5.00pm

Tuesday and Thursday 9.00am - 6.00pm

STUDENT SERVICES

First two weeks of semester

8.30am - 7.00pm

An agency is located in the Hunter Union.

Hours of Opening

(a) During Semester
   Monday to Thursday 10.00am - 3.00pm
   (b) During Teacher Training
   Monday to Thursday 10.00am - 2.00pm
   First two weeks of semester 9.00am - 5.00pm

LOST PROPERTY

Lost property may be collected from, or deposited at two locations on campus:

(a) Patrol Office, Great Hall between 9.00am - 4.00pm
   (b) Property Services, C110, between 9.00am - 4.00pm (Hunter Building)

It is suggested that you telephone in advance.

NOTICEBOARDS

Students wishing to post notices within the glass-fronted locked noticeboards should contact Mr D. Heggart, Property Services in the Hunter Building.

POST OFFICE

Offers all normal postal services EXCEPT interviews for passports.

Monday to Friday 9.00am - 5.00pm

PUBLIC TRANSPORT

The State Transit Authority provides a comprehensive bus service to the University from the following locations:

Newcastle (Parramatta Place), Newcastle Regional Museum, The Junction, Tighes Hill, Broadmeadow, Adamstown, Lambton Park, Mayfield, Warners Bay, Wallsend, Rankin Park, Cardiff, Chatswood, Belmont.

Bus Timetables are available from the enquiry counter at Students Services.

STUDENT INSURANCE COVER

Studentplan Insurance is an accident policy which is administered by the Sports Union on behalf of American Insurance Underwriters (A.I.U.).

This policy provides benefits for death, disability, hospitalization, loss of wages and medical expenses (these are restricted to injuries sustained whilst engaged in campus activities). The injury must be the result of a "fortuitous act" (i.e. due to chance). It does not cover disability arising from sickness or disease. There is a $20,000 excess applying to each accident, not each claim. This excess is deducted from the first part claim only.

Studentplan can cover:
- Students who are members of the Sports Union (this does not include students who have deferred study);
-Active life and active associate members of the Insured organisation;
-Staff of the Sports Union and staff of the University.

For further information, please telephone the Sports Union office during business hours.
**UNIVERSITY COMPUTING SERVICES**

**CONDITIONS OF USE**

The University of Newcastle has made use of computers in research and teaching and for administrative purposes since the first computer was installed in October 1963.

All students will become familiar with the University Libraries’ use of computers in providing the On Line Public Access Catalogue (Alleyway) and in managing the circulation system.

Students are allowed to use library computers for any purpose, subject to the rules specified in this document.

**Computers are widely used in teaching wherever this is appropriate. Some of these are managed by the teaching departments while others are maintained and supported by University Computing Services in publicly available locations. The central computer and many others are connected to the campus Local Area Network (LAN) which in turn is connected to the Australian Academic and Research Network (AARNet) and to the worldwide Internet.**

**University Computing Services provides and supports computing services for all activities of the university: for academic departments, for administrative divisions and for service units such as the University Libraries. Services are provided through central computers, through a campus network with external links, and through assistance to users of both the central computers and distributed desk-top computers. There are more than 800 terminal connections directly to the central computer network, allowing connection to various computers, both in University Computing Services (McMullen and Hunter Buildings) and in University departments. A number of School and Departmental computers and networks are also connected to the campus network.**

Students are given access to central Unix/VMS computers and centrally controlled software systems (such as for databases, networks, 386-Model) and to departmental and special purpose computers as appropriate to their course of study. Many packages are available such as the NAG numerical algorithms library, statistical programs such as MINITAB, SAS, SPS-63B and BMDP and word processing. All students are free to use the electronic News and Mail services.

Students enrolling in a subject for which a computer connect-time quota is limited on connect-time and are allocated disk quotas appropriate to their course of study. The calculation of connect-time and appropriate disk quotas is made by the Computing Services Department.

The Biomedical Library

The University of Newcastle has made use of computers in research and teaching and for administrative purposes since the first computer was installed in October 1963.

All students will become familiar with the University Libraries’ use of computers in providing the On Line Public Access Catalogue (Alleyway) and in managing the circulation system.

**Computers are widely used in teaching wherever this is appropriate. Some of these are managed by the teaching departments while others are maintained and supported by University Computing Services in publicly available locations. The central computer and many others are connected to the campus Local Area Network (LAN) which in turn is connected to the Australian Academic and Research Network (AARNet) and to the worldwide Internet.**

**University Computing Services provides and supports computing services for all activities of the university: for academic departments, for administrative divisions and for service units such as the University Libraries. Services are provided through central computers, through a campus network with external links, and through assistance to users of both the central computers and distributed desk-top computers.**

There are more than 800 terminal connections directly to the campus network, allowing connection to various computers, both in University Computing Services (McMullen and Hunter Buildings) and in University departments. A number of School and Departmental computers and networks are also connected to the campus network.

Students are given access to central Unix/VMS computers and centrally controlled software systems (such as for databases, networks, 386-Model) and to departmental and special purpose computers as appropriate to their course of study. Many packages are available such as the NAG numerical algorithms library, statistical programs such as MINITAB, SAS, SPS-63B and BMDP and word processing. All students are free to use the electronic News and Mail services.

Students enrolling in a subject for which a computer connect-time quota is limited on connect-time and are allocated disk quotas appropriate to their course of study. The calculation of connect-time and appropriate disk quotas is made by the Computing Services Department.

**UNIVERSITY LIBRARIES**

**Conditions of use**

The facilities of the University Libraries are available to members of the Council, members of staff, and students of the University. The facilities of the University Libraries are available to such persons who may be approved by the University Librarian. Students who are not students of the University of Newcastle must apply to the University Librarian for permission to use the Library.

As a member of the University of Newcastle, you are entitled to use the Auchenflower and Huxley Libraries as well as the Libraries of the teaching hospitals. Library services are currently being developed at the Central Coast campus and at University's Shortland. Only students and staff of the Conservatorium of Music can borrow from its Library. This includes full-time and part-time Music Education students. They are entitled to have three books for one week and seven scores for a term. Access to the collection by other categories of users can be arranged by contacting Collins shipman, the Conservatorium of Music Librarian (Phone 29 4133).

**Borrowing/Identification Cards**

You cannot borrow without an identification card. Student cards are issued to students upon payment of fees. Borrower cards are issued to staff upon application at the Loans Enquiry Desk in the Auchenflower Library and the Circulation Desk in the Huxley Library.

Please remember to carry your card with you at all times if you wish to borrow. If you are on loan or have been borrowed on your card by anyone else, you are responsible for them. Report any lost card to the Loans Enquiry Desk immediately if you are concerned about unauthorized use. Replacement cards are available for $5.00 from Student Division Office in the McMullen Building. Borrowing rights are returned to the Library from which they were issued. You cannot return Auchenflower Library books at the Huxley Library. You may not attempt to copy information belonging to other users, nor may you attempt to interfere with the operation of computing facilities.

The University accepts no responsibility for any damage to or loss of data arising directly or indirectly from use of these facilities or for any consequential loss or damage. The University makes no warranty, express or implied regarding the computing services offered, or their fitness for any particular purpose.

The University’s liability in the event of any loss or damage shall be limited to the fees and charges paid to the University for the use of the computing facilities which resulted in the loss or damage.
The Newcastle Conservatorium of Music Library

This Library is located on the second floor of the old section of the Newcastle Conservatorium of Music, corner of Gibson and Auckland Streets. Limited on-street parking is available. Off-street parking is available in the King Street Council Car Park, and Conservatorium students may obtain parking concessions from the Information Centre, Shortland Union Building.

The topics covered in the study areas in Architecture II include the following:

### Professional Skills:

- development and application of skills in all areas of architectural communication;
- introduction to production drawing;
- use of prepared computer programs for testing design performance;
- development of simple computer programming techniques relating to aspects of the building process.

### User Studies:

- housing provision in the community and the needs of different user groups;
- individual and social factors influencing house design and concepts of community and privacy;
- methods for identifying client and user needs;
- needs of handicapped and other special user groups.

### Site Studies:

- photographic, contour and dimensional surveys of a site to establish an analysis and preliminary design;
- landscape problems of underground services, slope, terracing, steps and drainage;
- grass, shrub and tree environments integrated with building design.

### Cultural Studies:

- investigation, through study of historical models, of issues arising in the design problems;
- evolution of house form in relation to social structure;
- creation of community and privacy both within the dwelling and in groupings of dwellings and villages;
- detail design of forms and materials in the dwelling;
- impact of technological developments on dwelling form and construction;
- key developments in the design of housing in the nineteenth and twentieth centuries in Europe, North America and Australia.

**ARCH211 ARCHITECTURE II (PART 1)**

This subject covers the content of the first half of Architecture II. It is offered only in exceptional circumstances and if suitable arrangements can be made within the department.

Details on availability and content may be obtained from the Dean or Faculty Secretary.

**ARCH212 ARCHITECTURE II (PART 2)**

This subject covers the content of the second half of Architecture II. It is offered only in exceptional circumstances and if suitable arrangements can be made within the department.

Details on availability and content may be obtained from the Dean or Faculty Secretary.
SECTION FIVE  BACHELOR OF SCIENCE (ARCHITECTURE)

ARCH310 ARCHITECTURE III  80cp

PROBLEM-BASED EXERCISES

Architecture III extends the scale and complexity of design problems by considering a variety of public building types, under the theme of "problems of public space". These entail the study of a new group of public, institutional clients and of a much wider diversity of users. Strategies for the organisation of hierarchies of the building types are studied, as are the more onerous requirements for communication with other members of the building team through drawings and specifications, for cost control and for the overall management of the project. The building problems studied in Architecture III also provide the opportunity for the study of a wide range of historical models, both from Australia and overseas, and of the formal and cultural issues they present.

STUDY AREAS

The study area topics for Architecture III cover the following:

Professional Skills:
- development of techniques in architectural communication for testing and presenting larger design proposals;
- production drawings for larger projects;
- applications, capabilities and relative costs of computer systems in the building industry;
- computer programs for technical and design evaluations;
- computers for drafting and design;
- computer-based specifications.

User Studies:
- assessment of need for different types of public facilities in the community;
- public sector clients and other parties involved in the commissioning of public buildings.

Site Studies:
- requirements for traffic, parking and services in relation to public buildings;
- landscape design of the urban park and garden.

Cultural Studies:
- survey of the history of European architecture;
- translation of historical European models to the Australian context;
- individual study of selected historical examples;
- concepts of symbolism, formalism and order in public architecture.

Design Studies:
- design solutions for complex buildings, with requirements for public circulation for large numbers of people on many levels;
- design solutions for specialised spaces for public assembly, performance or display;
- development of conceptual and detailed design processes;
- development of architectural design theory;
- introduction to formal architectural design analysis;
- detailed design of elements of architecture.

Technical Studies:
- continuity in structural systems and their effects on structural analysis, design and construction;
- structural design of simple structural elements using concrete and steel;
- frame and floor systems;
- concepts of joint design;
- architectural implications of steel and concrete construction for medium sized public buildings;
- sub-soil investigation and foundation design;
- construction design and detailing of frame systems, basements, floors, walls, roofs, claddings, internal elements and finishes;
- selection and performance of materials and components;
- fire protection, fire resisting construction;
- building compartmentation and means of escape;
- piped and wired services, air-conditioning systems, lifts and escalators;
- environmental appraisal of civic sites;
- techniques of assessment and control of environmental conditions in the design process, with special reference to thermodynamics, ventilation and air-conditioning, lighting and acoustics, in the context of public buildings;
- pre-contract cost planning;
- post-contract cost control;
- types of specifications, and legal and technical considerations;
- methods of writing specifications, and use of master specifications.

Implementation Studies:
- focus on the medium-scale practice;
- traditional and alternative modes of practice;
- traditional and alternative modes of project management;
- consideration of traditional and alternative documentation systems;
- traditional and alternative measures of quality, time and cost controls;
- introduction to complex network analysis for decision and planning.

ARCH311 ARCHITECTURE III (Part 1)  40cp

This subject covers the content of the first half of Architecture III. It is offered only in exceptional circumstances and if suitable arrangements can be made within the department.

Details on availability and content may be obtained from the Dean or Faculty Secretary.

ARCH312 ARCHITECTURE III (Part 2)  40cp

This subject covers the content of the second half of Architecture III. It is offered only in exceptional circumstances and if suitable arrangements can be made within the department.

Details on availability and content may be obtained from the Dean or Faculty Secretary.

ARCH410 ARCHITECTURE IV  80cp

PROBLEM-BASED EXERCISES

Having considered a range of individual building types in the course of the design problems undertaken in Architecture I, II, and III, the Architecture IV problems investigate the ways in which large groupings and assemblages of buildings combine to generate the form of town and cities. Projects carried out under the theme "Problems of the City" include:

- high-rise buildings;
- medium-rise, densely packed types, using atria, arcades and elevators;
- the extension of environmental, circulation, land use and other design issues beyond the individual building plot;
- commercial and multi-use building types;
- conservation of buildings in the city.

STUDY AREAS

The scope of the study area topics for Architecture IV includes:

Professional Skills:
- development of graphic and other communication skills;
- use of computer to develop and monitor simple contracts and building time schedules.

User Studies:
- institutional clients and their form of organisation;
- construction projects;
- Development Application Reports for larger projects;
- feasibility studies for larger projects.

Site Studies:
- planning frameworks and urban design guidelines for development in an urban context;
- concepts of urban design;
- landscape design in urban conditions for public amenity, conservation, commercial development and vehicle management.

Cultural Studies:
- investigation of the evolution of built form in an urban context, through the study of historical models, including the assessment of the impact of individual buildings on their environment, and of systems of circulation;
- theories and models of urban form.

Design Studies:
- design solutions of considerable complexity and with multiple uses on many levels;
- design of public space on an urban scale;
- development of personal theoretical position;
- development of formal architectural analysis techniques.

Technical Studies:
- structural solutions for medium and high-rise buildings;
- one-way, two-way, flat plate, slab, slab, waffle slab and other floor systems;
- elementary concepts of lightweight and prestressed concrete structures;
- architectural implications of construction and materials selections for major urban buildings;
- site investigation of urban blocks including ground conditions and services;
- foundation systems and basement construction;
- criteria for building design and operation of buildings;
- environmental appraisal of public urban space;
- interaction of major buildings and their environments;
- primary and secondary control of internal environments;
- specifications for large/complex projects;
- management of document production, computer techniques;
- word processing, scheduling, coordination; preparation of specifications for a major project;
- financial control of building at all stages of design and construction;
- basic cost planning theory and practice; preparation of a cost plan for a major project.

Implementation Studies:
- focus on the large-scale practice and extended roles and services;
- consideration of the social and economic impact of major projects.
In addition to the core program, the scope of which is indicated above, students in Architecture IV undertake an elective component which allows them to investigate some aspect of the projects in greater depth.

ARCH411 ARCHITECTURE IV (PART 1) 55cp
This subject is taken over one year of part-time study and covers the content of the first two-thirds of Architecture IV. Enrolment is subject to certain conditions, in particular that the student must be employed for the full period in an architect’s office.

Details of the conditions which apply are available from the Dean or Faculty Secretary.

ARCH412 ARCHITECTURE IV (PART 2) 25cp
This subject is taken over one semester of part-time study and covers the content of the final third of Architecture IV. Enrolment is subject to certain conditions, in particular that the student must be employed for the full period in an architect’s office.

Details of the conditions which apply are available from the Dean or Faculty Secretary.

ARCH510 ARCHITECTURE V 80cp

PROBLEM-BASED EXERCISES
In the final year of study, students are able to select a major architectural design problem as the basis for their program of work through the year. This choice is intended to allow each student to choose a design problem which best suits their individual interests and likely context of future practice. The chosen project is expected to be a demanding one, extending the areas of knowledge and skills developed over the previous years of study and allowing the student to present their achievement in some depth.

In order to allow students to research the typology and precedents of their selected projects, and to become familiar with the opportunities and constraints of the locality and with the modus operandi of the client type, the Architecture V program is introduced in the latter part of the previous year. Students are thus encouraged to have their project type and locality selected and approved in principle before the end of Year 4, so that some reading, visiting and information gathering can be conducted over the long vacation. Guidance on the scope of this work will be provided.

Students will be able to choose a tutor for the program, subject to staff availability, and will work under the general direction of a Year Manager who will provide guidance on all aspects of its development.

RESEARCH STUDY
In addition to the work undertaken in all of the above study areas, each student will carry out a study in any one of these areas by choice, to a greater depth. This Research Study may be a continuation of the elective topic undertaken in Architecture IV.

ARCH511 ARCHITECTURE V (PART 1) 25cp
This subject is taken over one semester of part-time study and covers the content of the first third of Architecture V. Enrolment is subject to certain conditions, in particular that the student must be employed for the full period in an architect’s office.

Details of the conditions which apply are available from the Dean or Faculty Secretary.

ARCH512 ARCHITECTURE V (PART 2) 55cp
This subject is taken over one year of part-time study and covers the content of the final two-thirds of Architecture V. Enrolment is subject to certain conditions, in particular that the student must be employed for the full period in an architect’s office.

Details of the conditions which apply are available from the Dean or Faculty Secretary.
SECTION SIX

COURSE DESCRIPTION — BUILDING

Introduction
The Bachelor of Building Degree is a four-year program designed to prepare students for a professional career in either building or quantity surveying.

The degree program is structured in an integrated form of study in which all the various discipline areas are treated within the single subject 'Building'. This integrated format applies in all four years of the course, so that students enrol in one of the single subjects Building I, II, III or IV. In each of these subjects, specific areas of knowledge and skill are developed, and these are grouped into four study areas for the purposes of assessment and the statement of objectives.

The Building Degree program is also integrated with the Architecture program. Students of Architecture, Building and Quantity Surveying will undertake projects with the same theme but with different emphasis and perspectives. This integrative approach attempts to overcome the normally perceived barriers which exist between the process of design and the process of construction.

Study Areas
The study areas developed through each subject of the course are as follows:

- Communication and Computing Skills
  - various forms of communication - graphic, written, verbal;
  - computer applications.

- Technical Studies
  - building technology - materials and construction;
  - structures;
  - services;
  - environmental studies.

- Professional Studies
  - professional practice;
  - building law and ethics;
  - organisational behaviour.

These four study areas define the scope of the curriculum, and are described in more detail under the subject descriptions which follow. Students will be expected to attain a required level of competence in all four study areas at each level of the course. However, the study areas do not exist as independent subjects; the essence of the integrated approach is that the knowledge and skills acquired in each study area must be capable of being applied in the context of other parallel areas of skill and knowledge.

Although the development of knowledge and expertise in the individual disciplines which contribute to the practices of building and quantity surveying is important, it is equally important that the integration between the areas of knowledge is appreciated, and that the integrative nature of the building process is understood. The method adopted for developing the study areas is thus intended to reflect the way in which builders and quantity surveyors respond to problems in practice.

Integrated Learning
Rather than regard the various study areas as discrete pieces of information which can be assimilated independently on one another, students are presented with a linked series of tasks or projects of the type encountered during the building procurement and production process, and so designed to develop the various areas of skill and knowledge appropriate to that level of the course.

Hours
Contact hours for students will average 21 hours per week.

Assessment
Students will be assessed by examination, assignments and continuous assessment.

Credit Points
Credit point values associated with each subject will be shown to the right of the subject heading and will be abbreviated to 'cp'.

Texts
Learning Units and other specially prepared texts will be made available during the course of the projects to support the development of appropriate skills and knowledge. These Learning Units will complement the text books appropriate to each study area.

Course Structure
The weighting and focus given to the four study areas is illustrated in the diagram below. Integration between study areas is achieved by the fact that individual projects in each study area will simultaneously address the same building type. Additionally and at various stages throughout each year of the course, students will also undertake an integrative major project which will draw on all four study areas.

Year

<table>
<thead>
<tr>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comm. &amp; Computing Studies</td>
<td>Technical Studies</td>
<td>Environmental Studies</td>
<td>Professional Studies</td>
</tr>
</tbody>
</table>

Credit Point values associated with each subject will be shown to the right of the subject heading and will be abbreviated to 'cp'.

Economics and Management
- quantity and surveying measurement and estimating;
- cost planning and control;
- building management;
- project management.

The topics covered during the course of Building I are outlined in the diagram below. Integration between study areas is achieved by the fact that individual projects in each study area will simultaneously address the same building type. Additionally and at various stages throughout each year of the course, students will also undertake an integrative major project which will draw on all four study areas.

BACHELOR OF BUILDING

and quantity surveying professionals. Emphasis in Building I is on rapidly developing proficiency in the Technical Studies and Building Economics and Management study areas.

A range of building types will be studied and the problems represented by these building types will increase in complexity throughout the progression of the year. The building types will typically include the following:
- a small shed or hut;
- single detached house;
- clusters of town houses; and
- large volume single storey buildings — commercial and agricultural.

STUDY AREAS
The topics covered during the course of Building I are outlined in each of the study areas as follows:

- Communication and Computing Studies [Hours: 84]
  - Communication skills including letter writing, report writing, graphics, photography and verbal presentation;
  - introduction to word processing and other business applications of computers including electronic office equipment.

- Technical Studies [Hours: 308]
  - introduction to domestic scale construction;
  - simple footings and retaining walls;
  - brickwork;
  - timber framed construction;
  - concrete slabs on ground;
  - doors, windows, fittings, hardware.

- Building Services
  - drainage;
  - septic systems;
  - hydraulic services;
  - electric services;
  - space heating, ventilation, air conditioning;
  - lighting installations - internal, external.

- Environmental Studies
  - interactions between buildings and the environment;
  - comfort criteria;
  - thermal performance of domestic buildings;
  - problems of noise and glare;
  - productivity and the working environment;
  - solar geometry and passive solar control;
  - lighting design principles;
  - principles of energy efficient design.

Total Hours: 588

Introduction
The overall objective of Building I is to acquaint students with the multi-faceted nature of the building industry. The intention is to develop in the students a sense of purpose and direction and to encourage students to perceive themselves as future building and
Structures
- introduction to basic structural types;
- introduction to forces and moments;
- concepts of dead, live, wind and earthquake loadings;
- load analysis;
- force analysis;
- concepts of equilibrium;
- load path analysis;
- structural aspects of brick veneer, post and beam and stud frames construction;
- analysis of roof trusses and beams;
- introduction to portal frames;
- approximate sizing of structural elements;
- concepts of structural stability.

Surveying
- principles of measurement;
- taking levels;
- setting out domestic scale buildings;
- setting out large ground slabs;
- plumbing of steel and precast concrete framed buildings.

Economics and Management [Hours: 112]

Building Economics and Cost Planning
- introduction to macro-economics;
- major variables in capital cost prediction;
- introduction to management theory.

Management
- introduction to management theory.

Quantity Surveying Measurement and Estimating
- introduction to the concepts of measurement;
- single rate methods of prediction;
- measure and estimate:
  - minor site works;
  - timber framed construction;
  - brickwork;
  - doors and windows;
  - domestic services;
  - single industrial services;
  - finishing trades;
  - roadworks (pavement, car parks);
  - steelwork;
  - ground slabs.

Professional Studies [Hours: 84]
- introduction to time management;
- introduction to programming;
- use of bar charts and other programming tools;
- organisation of simple industrialised systems.

BLDG210 BUILDING II 80cp
Total Hours: 588

Introduction
On completion of Building I the student will have developed a sound technical knowledge of simple building types. The emphasis in Building II is on developing a student’s ability to apply this technical knowledge to a series of management and economic problems. Technical studies will also continue to improve the student's proficiency in this study area.

As in Building I the technical complexity of problems will increase throughout the progression of the year. Building types which will act as a focus for study will include:
- shopping centres;
- office buildings up to 5 storeys; and
- rehabilitation of existing commercial buildings.

STUDY AREAS
The topics covered in the study areas in Building II include the following:

Communication and Computing Studies [Hours: 84]
- development and application of presentation skills to client bodies;
- computer techniques in bill preparation and estimating;
- use of macro commands in computer aided design.

Technical Studies [Hours: 224]
Building Construction and Materials
- frame and floor systems;
- industrialised building systems;
- detailed construction of basements, floors, walls, roofs, claddings internal elements and finishes;
- selection and performance of materials and components;
- assembly implications of steel and concrete construction.

Building Services
- piped and wired services;
- air-conditioning systems, lifts and escalators;
- fire protection and fire resisting construction;
- building automated systems (BAS).

Environmental Studies
- zoning and compartmentation of buildings;
- principles, requirements and modelling of building thermal performance;
- energy management principles.

BLDG310 BUILDING III 80cp
Total Hours: 588

Introduction
Building III extends the students’ horizons by considering buildings which present a high degree of complexity (high rise, commercial building) and also by the introduction of some aspects of civil engineering works. A strong emphasis is placed on the management and economic aspects of the building procurement and production process. On completion of this year students should have well developed organisation and problem solving abilities and be capable of applying these abilities in situations of some technical complexity.
SECTION SIX

Management
- management of professional and site offices;
- claims and contractual issues;
- management of the project team.

Quantity Surveying Measurement and Estimating
- measurement and estimating of civil engineering works;
- gaming and bidding theory;
- statistical approach to estimating major buildings.

Professional Studies [Hours: 140]
- financial control of building at all stages of design and production;
- logistic of construction management of a major building on a constrained urban site;
- building project management;
- professional indemnity insurance.

BLDG410 BUILDING IV 80cp
Total Hours: 588

Introduction
In the final year of study, students are able to focus on a major project whilst also undertaking a series of elective projects relating to the individual study areas and supportive of the major project. These electives may (with approval) be selected from the Architectural program or may be taken from units offered by other faculties. This choice is intended to allow each student to choose projects which best suit their individual interest and in particular allow students to explore a specialisation in either quantity surveying or building. The chosen projects are expected to be demanding, extending the areas of knowledge and skills developed over the previous years of study and allowing the students to present their achievements in some depth.

Students will be able to choose a tutor for the program, subject to staff availability, and will work under the general direction of a Year Manager who will provide guidance in all aspects of its development. Students will have the opportunity to collaborate with architecture students who are undertaking Architecture V.

STUDY AREAS
The selected projects are intended to provide the vehicle for the development of knowledge and skills in all four study areas. The final presentation of material, on which assessment will be based, in each area is as follows:

Communication and Computing Studies [Hours: 84]
- written and oral communication with clients and consultants;
- appropriate use of computers through all stages of the building procurement and construction process.

Technical Studies [Hours: 84]
- selection and schematic design of an appropriate structural solution;
- basic unit aggregation patterns, pattern manipulations, etc;
- structural design issues;
- innovative structural systems;
- design and construction of formwork;
- strategies for integration of structures, fabric and services at a detailed level;
- strategic management of environmental issues.

Economics and Management [Hours: 112]
- comparative economic analyses techniques - life cycle, costing, cost benefit analyses, threshold analyses;
- progressive development of cost planning and cost control throughout all stages of the design and construction process.

Professional Studies [Hours: 308]
- focus on professional development of the individual personal attitudes and skills for effective design and control of complex projects;
- effective interaction with consultants, authorities and the client;
- application of practice skills to a complex project.

RULES GOVERNING THE DEGREES OF MASTER OF ARCHITECTURE AND MASTER OF BUILDING

Part I — General
1.(1) These Rules prescribe the conditions and requirements relating to the degrees of Master of Architecture, Master of Arts, Master of Building, Master of Commerce, Master of Education, Master of Educational Studies, Master of Engineering, Master of Engineering Science, Master of Mathematics, Master of Psychology (Clinical), Master of Psychology (Educational), Master of Science, Master of Medical Science, Master of Scientific Studies, Master of Special Education and Master of Surveying.

2. An application for admission to candidature for a degree of Master shall be made on the prescribed form and lodged with the Secretary.

3. (1) To be eligible for admission to candidature an applicant shall:

(a)(i) have satisfied the requirements for admission to a degree of Bachelor in the University of Newcastle as specified in the Schedule; or
(b)(ii) have satisfied the requirements for admission to a degree or equivalent qualification, approved for the purpose by the Faculty Board, in another tertiary institution; or
(c)(iii) have such other qualifications and experience as may be approved by the Senate on the recommendation of the Faculty Board or otherwise as may be specified in the Schedule; and

(2) Unless otherwise specified in the Schedule, applications for admission to candidature shall be considered by the Faculty Board which may approve or reject any application.

(3) An applicant shall not be admitted to candidature unless adequate supervision and facilities are available. Whether these are available shall be determined by the Faculty Board unless the Schedule otherwise provides.

4. To qualify for admission to a degree of Master a candidate shall enrol and satisfy the requirements of these Rules including the Schedule.

5. The program shall be carried out:

(a)(i) under the guidance of a supervisor or supervisors either appointed by the Faculty Board or as otherwise prescribed in the schedule; or
(b) as the Faculty Board may otherwise determine.
6. Upon request by a candidate the Faculty Board may grant leave of absence from the course. Such leave shall not be taken into account in calculating the period for the program prescribed in the Schedule.

7. (1) A candidate may withdraw from a subject or course only by informing the Secretary to the University in writing and such withdrawal shall take effect from the date of receipt of such notification.

(2) A candidate who withdraws from any subject after the relevant date shall be deemed to have failed in that subject unless granted permission by the Dean to withdraw without penalty. The relevant date shall be:
   (a) in the case of a subject offered in the first half of the academic year, the last Monday of first term;
   (b) in the case of a subject offered in the second half of the academic year, the fourth Monday of third term;
   (c) in the case of any other subject, the last Monday of second term.

8. (1) If the Faculty Board is of the opinion that the candidate is not making satisfactory progress towards the degree then it may terminate the candidature or place such conditions on its continuation as it deems fit.

(2) For the purpose of assessing a candidate's progress, the Faculty Board may require any candidate to submit a report or reports on his or her progress.

(3) A candidate against whom a decision of the Faculty Board shall apply to all examinations with respect to a degree of any other tertiary institution unless the Faculty Board otherwise permits.

(4) A candidate may appeal to the Vice-Chancellor against any decision made following the review under Regulation 8(3) of these Rules.

9. In exceptional circumstances arising in a particular case, the Senate, on the recommendation of the Faculty Board, may relax any provision of these Rules.

Part II — Examination and Results

10. The Examination Rules approved from time to time by the Council shall apply to all examinations with respect to a degree of Master with the exception of the examination of a thesis which shall be conducted in accordance with the provisions of Rules 12 to 16 inclusive of these Rules.

11. The Faculty Board shall consider the results in subjects, the reports of examiners and any other recommendations prescribed in the Schedule and shall decide:
   (a) to recommend to the Council that the candidate be admitted to the degree; or
   (b) in a case where a thesis has been submitted, to permit the candidate to resubmit an amended thesis within twelve months of the date on which the candidate is advised of the result of the first examination or within longer period of time as the Faculty Board may prescribe; or
   (c) to require the candidate to undertake such further oral, written or practical examinations as the Faculty Board may prescribe; or
   (d) not to recommend that the candidate be admitted to the degree, in which case the candidature shall be terminated.

Part III — Provisions Relating to Theses

12. (1) The subject of a thesis shall be approved by the Faculty Board on the recommendation of the Head of the Department in which the candidate is carrying out his research.

(2) The thesis shall not contain as its main content any work or material which has previously been submitted by the candidate for a degree in any tertiary institution unless the Faculty Board otherwise permits.

13. The candidate shall give to the Secretary to the University three months' written notice of the date he expects to submit a thesis and such notice shall be accompanied by any prescribed fee.

14. (1) The candidate shall comply with the following provisions concerning the presentation of a thesis:
   (a) the thesis shall contain an abstract of approximately 200 words describing its content;
   (b) the thesis shall be typed and bound in a manner prescribed by the University;
   (c) three copies of the thesis shall be submitted together with:
      (i) a certificate signed by the candidate that the main content of the thesis has not been submitted by the candidate for a degree of any other tertiary institution; and
      (ii) a certificate signed by the supervisor indicating whether the candidate has completed the program and whether the thesis is of sufficient academic merit to warrant examination; and
   (iii) if the candidate so desires, any documents or published work of the candidate whether bearing on the subject of the thesis or not.

(2) The Faculty Board shall determine the course of action to be taken should the certificate of the supervisor indicate that in the opinion of the supervisor the thesis is not of sufficient academic merit to warrant examination.

15. The University shall be entitled to retain the submitted copies of the thesis accompanying documents and published work. The University shall be free to allow the thesis to be consulted or borrowed, and subject to the provisions of the Copyright Act, 1968 (Com), may issue it in whole or any part in photocopy or microfilm or other copying medium.

16. (1) For each candidate two examiners, at least one of whom shall be an external examiner (being a person who is not a member of the staff of the University) shall be appointed either by the Faculty Board or otherwise as described in the Schedule.

   * At present there is no fee payable.
SUBJECT COMPUTER NUMBERS

The subjects selected should be written on the enrolment form in the following manner.

<table>
<thead>
<tr>
<th>BACHELOR OF SCIENCE (ARCHITECTURE)</th>
<th>Computer Number</th>
<th>Subject Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH110</td>
<td></td>
<td>ARCHITECTURE I</td>
</tr>
<tr>
<td>ARCH111</td>
<td></td>
<td>ARCHITECTURE I (PART 1)</td>
</tr>
<tr>
<td>ARCH112</td>
<td></td>
<td>ARCHITECTURE I (PART 2)</td>
</tr>
<tr>
<td>ARCH210</td>
<td></td>
<td>ARCHITECTURE II</td>
</tr>
<tr>
<td>ARCH211</td>
<td></td>
<td>ARCHITECTURE II (PART 1)</td>
</tr>
<tr>
<td>ARCH212</td>
<td></td>
<td>ARCHITECTURE II (PART 2)</td>
</tr>
<tr>
<td>ARCH310</td>
<td></td>
<td>ARCHITECTURE III</td>
</tr>
<tr>
<td>ARCH311</td>
<td></td>
<td>ARCHITECTURE III (PART 1)</td>
</tr>
<tr>
<td>ARCH312</td>
<td></td>
<td>ARCHITECTURE III (PART 2)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BACHELOR OF BUILDING</th>
<th>Computer Number</th>
<th>Subject Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLDG110</td>
<td></td>
<td>BUILDING I</td>
</tr>
<tr>
<td>BLDG210</td>
<td></td>
<td>BUILDING II</td>
</tr>
<tr>
<td>BLDG310</td>
<td></td>
<td>BUILDING III</td>
</tr>
<tr>
<td>BLDG410</td>
<td></td>
<td>BUILDING IV</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BACHELOR OF ARCHITECTURE</th>
<th>Computer Number</th>
<th>Subject Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH410</td>
<td></td>
<td>ARCHITECTURE IV</td>
</tr>
<tr>
<td>ARCH411</td>
<td></td>
<td>ARCHITECTURE IV (PART 1)</td>
</tr>
<tr>
<td>ARCH412</td>
<td></td>
<td>ARCHITECTURE IV(PART 2)</td>
</tr>
<tr>
<td>ARCH510</td>
<td></td>
<td>ARCHITECTURE V</td>
</tr>
<tr>
<td>ARCH511</td>
<td></td>
<td>ARCHITECTURE V (PART 1)</td>
</tr>
<tr>
<td>ARCH512</td>
<td></td>
<td>ARCHITECTURE V (PART 2)</td>
</tr>
</tbody>
</table>