Faculty of Architecture and Planning

The University of Melbourne introduced Australia's first studies in architecture in the 1860s. In 1927 it established the first full-time architecture course. Since then, courses in other disciplines of the built and natural environment have followed. Today, the Faculty of Architecture and Planning trains architects, builders, quantity surveyors, facility planners and managers, environmentalists, landscape architects and urban planners.

The Faculty aims to produce professionals skilled in investigation, analysis, problem-solving and communication and motivated to contribute significantly to professional and community life.

As the first part of their training, students undertake the Bachelor of Planning and Design (BPD) degree course, a three-year (minimum) pre-professional program. An honours program in fourth year is offered (except for architecture) to students who have done particularly well in the BPD. The courses are normally offered only on a full-time basis.

Students enter only one of the following courses: BPD (Architecture), BPD (Building), or BPD (Planning). The planning program offers three streams of study: environmental studies, landscape architecture, and urban planning. Students of planning must choose to major in one of these streams in the second year of their course.

Most of the subjects taken at BPD level in architecture and building are compulsory. The planning course, however, offers more scope for elective studies.

A combined course of Bachelor of Arts/BPD (Planning) is also offered. Students of planning may obtain the two degrees in five full-time years of study. (Normally, each degree requires three years of study.) The combined course requirements are set out in the section following the BPD (Planning) program.

The BPD provides students with foundation studies in their chosen discipline. To gain a professional qualification, graduates of the BPD must continue their studies in an appropriate post-BPD course at either bachelor or masters degree level. Applications should be made through the Faculty Office.

Applications for entry to the post-BPD professional courses are also accepted from students who have completed studies elsewhere. Architecture applicants are expected to have completed studies equivalent to the BPD at a recognised school of architecture and have appropriate work experience.

Building and planning applicants normally have completed studies equivalent to the BPD, but may also be considered on the basis of related studies. Building applicants also require appropriate work experience. In cases where a student's qualifications are deficient for direct entry to a post-BPD professional course, preliminary studies of up to one full-time year may be available to compensate for the deficiency.

Entry to the masters programs by coursework is normally subject to applicants having achieved an average of 70 per cent in their last year of full-time study. (Where part-time study was taken, the full previous academic performance may be reviewed for this purpose.)

The academic requirements for professional qualification in each discipline are:

Architecture: Complete the BPD (Architecture) [three years], one year of approved practical experience, and the Bachelor of Architecture (BArch) [two years].

Building or Quantity Surveying: Complete the BPD (Building) [three years] and the Bachelor of Building (BBlDg) [one year], or the BPD (Hons) [four years] and the Master of Building (MBldg) by coursework [one year full-time, two years part-time]. All students must complete one year of approved practical training before entering the post-BPD course.

Environmental Planning: Complete the BPD (Hons) [four years] or the Master of Environmental Studies (MEnvS) by coursework [two years full-time, four years part-time].

Landscape Architecture: Complete the BPD (Hons) [four years] or the Master of Landscape Architecture (MLArch) by coursework [two years full-time, four years part-time].

Urban Planning: Complete the BPD (Hons) [four years] plus the Master of Urban Planning (MUP) by coursework [one year full-time, two years part-time], or the BPD (Planning) [three years] plus the Bachelor of Town and Regional Planning (BTRP) [one year].

The Faculty maintains close links with five professional institutes, each of which recognises and accredits academic qualifications awarded by the Faculty. They are the Australian Institute of Building, Australian Institute of Landscape Architecture, Australian Institute of Quantity Surveyors, Royal Australian Institute of Architects, and Royal Australian Planning Institute.

Research activity is maintained at a high level, covering key areas such as planning and design, construction and cost management, history and conservation of the built and natural environments. Masters degrees by research can be taken in Architecture, Building, Environmental Studies, Landscape Architecture, and Town and Regional Planning. Candidates are expected to complete a major research study and prepare a thesis based on the research project.

Architecture masters candidates may choose to present design work as a part of their research. In all cases only applicants with an appropriate academic background are admitted. In some cases preliminary studies may be approved as a bridging course for students of other disciplines.

Further information about masters degrees, both coursework and research, should be sought from the Faculty Office.
Objectives of the Faculty
The general objectives of the Faculty of Architecture and Planning are to:

• establish opportunities for exploring, debating and communicating environmental, planning, design, construction and management issues;

• develop research programs in architecture, building and quantity surveying, urban planning, environmental planning, landscape architecture and other areas involved in the transformation and management of the built and natural environment;

• produce graduates who have professional commitment, well-developed problem-solving and communication skills, and who will make a maximum contribution to the community and maintain the habit of curiosity and inquiry;

• contribute actively to the discussion and solution of major community problems.

Faculty courses

Undergraduate

Bachelor of Planning and Design (Architecture) BPD
Bachelor of Planning and Design (Building) BPD
Bachelor of Planning and Design (Planning) BPD
Bachelor of Planning and Design [Honours] (Building) BPD (Hons)
Bachelor of Planning and Design [Honours] (Planning) BPD (Hons)

Graduate

Graduate Diploma in Planning and Design Building DipPD (Bldg)
Graduate Diploma in Planning and Design (Environmental Studies) DipPD (Envs)
Graduate Diploma in Planning and Design (Landscape Architecture) DipPD (LArch) [availability to be confirmed for 1994]
Graduate Diploma in Planning and Design (Urban Planning) DipPD (UP) [availability to be confirmed for 1994]
Graduate Diploma in Facility Planning and Management DipFPM
Graduate Certificate in Facility Studies CertFS
Bachelor of Architecture BArch
Bachelor of Building BBldeg
Bachelor of Town and Regional Planning BTRP

Higher degrees

Master of Architecture MArch
Master of Building MBldg
Master of Environmental Studies MEnvs
Master of Landscape Architecture MArch
Master of Town and Regional Planning MTRP
Master of Urban Planning MUP
Doctor of Philosophy PhD
Doctor of Architecture DArch

General information

Please refer to the general information section in the Introduction of the Handbook.

Planning an undergraduate course

ARCHITECTURE

Bachelor of Planning and Design (Architecture)
Bachelor of Architecture [Pass or Honours]
The architecture course aims to develop competent and responsible architects with the vigour, adaptability, leadership and skill to design and oversee the construction of buildings that are sensitive to cultural, social, physical and economic conditions.
The course takes five years of full-time study. The course consists of the BPD [three years] and the BArch (Pass or Honours) [two years]. After completing the BPD students must gain a year's practical experience before applying to enter the BArch.

COURSE OBJECTIVES

Bachelor of Planning and Design (Architecture)

This course has as its objectives that graduates:

• have an architectural knowledge-base consisting of an integrated system of concepts, principles, theories, technical data and skills relating to the design and practice of architecture;

• have a sound grasp of problem-solving techniques, such that they are able to synthesise and apply this knowledge-base in the planning and design of medium-scale energy-efficient buildings;

• understand the social context of their discipline and have an appreciation of the socio-economic implications and cultural significance of architecture in history;

• have developed critical techniques that enable them to take a responsible role in the community through the formulation of independent evaluations of those social, economic and political institutions, existing conventions, and new ideas that inform the practice of architecture and its professional ethics;

• are competent designers, able to understand, develop, and successfully apply design tactics that are based on the tectonic principles of architecture and the functional organisation of the program;

• are able to engage confidently in the self-directed study necessary to their advancement through the Bachelor of Architecture course and their future continuing professional development;

• understand the extent to which teamwork underscores the design and production of building, and have acquired an appreciation of the interpersonal, communication and management skills necessary for the successful practice of architecture;

• are technically competent and are able to demonstrate the acquisition of those professional and technical skills necessary to gain employment as an architectural Draughts-person/Technical Assistant.
Progress through the courses is by years rather than individual subjects. Students are required to pass all subjects — including electives — and obtain the requisite number of points (normal course load per year is 100 points) before proceeding to the next year of study.

The course satisfies the academic requirements for registration by the Architects Registration Board of Victoria and for membership of the Royal Australian Institute of Architects. An additional requirement for registration is a minimum of two years of approved professional experience in architecture.

The following are course structures for the two degree courses.

**Bachelor of Planning and Design (Architecture)**

Students are considered to be in a particular year level of the course until they have completed all the point requirements for that level of study. Entry to years two and three requires a grade of at least D (50 per cent) in the preceding level of the subject Architectural Design and Practice.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Points</th>
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<tbody>
<tr>
<td>702-103 Architectural Design and Practice 1</td>
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</tr>
<tr>
<td>702-106 Architectural Graphics</td>
<td>12.5</td>
</tr>
<tr>
<td>702-107 Building Construction 1</td>
<td>25.0</td>
</tr>
<tr>
<td>702-108 Computers in Architecture 1</td>
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</tr>
<tr>
<td>702-130 European Architecture</td>
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<td><strong>Total</strong></td>
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**SECOND YEAR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>702-203 Architectural Design and Practice 2</td>
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<tr>
<td>702-207 Building Construction 2</td>
<td>25.0</td>
</tr>
<tr>
<td>702-208 Computers in Architecture 2</td>
<td>12.5</td>
</tr>
<tr>
<td>702-214 Modern Architecture</td>
<td>25.0</td>
</tr>
<tr>
<td>702-223 Building Science 2A</td>
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<td><strong>Total</strong></td>
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**THIRD YEAR**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>702-303 Architectural Design and Practice 3</td>
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<td>702-305 Theories of Architecture</td>
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<td>702-321 Building Science 3A</td>
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<td>702-331 Australian Architecture A</td>
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<td>12.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Note: Electives to be chosen from an approved list.

**Bachelor of Architecture**

The *BArch* is a two year, full-time course of 200 points and is available at both pass and honours levels. It is recognised by the Royal Australian Institute of Architects.

Students are considered to be in a particular year level of the course until they have completed all the compulsory and elective points requirements for that level of study. Entry to year two requires a grade of at least D (50 per cent) in the first-year subject 702-403 Architectural Design and Practice 4.

**Entry into the course in 1993–1995**

Completion of the *BPD* (Architecture), or its equivalent, and one year of approved practical experience. Applicants must attend an interview. Applicants from other institutions may be required to undertake preliminary studies to compensate for deficiencies in their previous studies.

**Entry into the course in 1996 and later years**

To gain entry, graduates of the *BPD* (Architecture) or of any other approved course of studies must have passed the subject 702-303 Architectural Design and Practice 3, or its equivalent, with a grade of at least C (60 per cent) and have completed one year of approved practical experience.

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**COURSE OBJECTIVES**

**Bachelor of Architecture**

This course has as its objectives that graduates:

- are competent designers, able to understand, develop and successfully apply both strategies for developing and organising building programs, and design tactics that can give appropriate cultural and tectonic expression to the resulting architecture;
- are able to engage confidently in the self-directed study and research necessary to their advancement through postgraduate studies and/or the continuing development of their professional careers;
- are technically and professionally competent and are able to demonstrate the acquisition of those professional and technical skills necessary to gain employment as a Graduate Architect and to advance to full professional status as a Registered Architect.

- have a developed architectural knowledge-base consisting of an integrated system of concepts, principles, theories, technical data and skills relating to the design and practice of architecture;
- have a sound grasp of problem-solving techniques, such that they are able to synthesise and apply this knowledge-base in the planning and design of large-scale programmatically-complex, energy-efficient buildings;
- have developed critical techniques that enable them to take a professionally responsible role in the community through the formulation of independent evaluations of those social, economic and political institutions, existing conventions, and new ideas that inform the practice of architecture and its professional ethics;
- understand the social context of their discipline and have a critical appreciation of the aesthetic and functional implications of socio-economic factors on the cultural significance of architecture;
Any student who does not satisfy these criteria will be required to present to the Selection Committee a portfolio of their design work that demonstrates convincingly the ability to complete the BArch course, as well as documented evidence of having satisfactorily completed the practical experience requirement. If further evidence of an applicant’s ability is required, interviews will be conducted by the Selection Committee.

**First Year**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Points</th>
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<tbody>
<tr>
<td>702-403</td>
<td>Architectural Design Practice 4</td>
<td>37.5</td>
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<td>702-404</td>
<td>Architectural Documentation A</td>
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</tr>
<tr>
<td>702-405</td>
<td>Architectural Practice A</td>
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</tr>
<tr>
<td>702-406</td>
<td>Architectural Design Theory</td>
<td>12.5</td>
</tr>
<tr>
<td>702-412</td>
<td>Advanced Services</td>
<td>12.5</td>
</tr>
<tr>
<td>Electives*</td>
<td></td>
<td>18.75</td>
</tr>
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**Second Year**

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<th>Points</th>
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</thead>
<tbody>
<tr>
<td>702-503</td>
<td>Architectural Design Practice 5</td>
<td>37.5</td>
</tr>
<tr>
<td>702-504</td>
<td>Architectural Documentation B</td>
<td>6.25</td>
</tr>
<tr>
<td>702-505</td>
<td>Architectural Practice B</td>
<td>25.0</td>
</tr>
<tr>
<td>Electives*</td>
<td></td>
<td>31.25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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</tr>
</tbody>
</table>

*Note: Electives to be chosen from an approved list.

**Master of Architecture**

The MArch may be undertaken either by research and submission of a thesis, or by design involving preparation of a series of designs with accompanying dissertation. Contact the Faculty Office for further details and application forms.

**Doctor of Architecture**

The DArch may be awarded to a person who submits for examination published or unpublished works which provide evidence of research and which constitute a definite contribution to architecture.

**Graduate Diploma in Facility Planning and Management**

**Graduate Certificate in Facility Studies**

Facility planning and management is involved with strategic planning, value management, quality assurance, resource inventory, space planning and space management. Facility planners seek to best fit an organisation's facility requirements with its development plans.

The Graduate Diploma in Facility Planning and Management is a two year part-time course, and the Graduate Certificate in Facility Studies is a one year part-time course. For entry into either of these courses a tertiary qualification is desirable but not essential; however, all applicants must have industry background experience.

***BUILDING/QUANTITY SURVEYING***

**Bachelor of Planning and Design (Building)**

**[Pass or Honours]**

**Bachelor of Building**

**Graduate Diploma in Planning and Design (Building)**

**Master of Building**

The emphasis of the building program is on the management of the building process, involving studies in construction management, cost management and building technology. Graduates become project and site managers for building construction projects; advisers for property investment and development; materials and product manufacturers and suppliers; quantity surveyors and cost managers; builders specialising in housing, historic building preservation and renovation, and building interiors; and teachers or researchers.

Academic training is spread over four years if a student chooses to complete the BPD and the BBldg, or five years if the student completes the BPD (Hons) and MBldg. A year of practical work experience in building is compulsory for entry to the BBldg or MBldg degree courses.

All students take three major studies—building technology, construction management, and cost management. Building technology covers the characteristics of materials and structures, the design of

**COURSE OBJECTIVES**

**Bachelor of Planning and Design (Building)**

This course has as its objectives that graduates:

- have a building knowledge-base consisting of an integrated system of concepts, principles, theories, technical data, and skills relating to building technology and the management of the building process;
- have a sound grasp of problem-solving techniques, such that they are able to synthesise and apply this knowledge-base in the construction and financial management of building;
- understand the social context of their discipline and have an appreciation of the history of building technology and management;
- have developed critical techniques that enable them to take a responsible role in the community through the formulation of independent evaluations of those social, economic and political institutions, existing conventions, and new ideas that inform the practice of building and its professional ethics;
- are able to engage confidently in the self-directed study necessary to their advancement through the Bachelor of Building and/or the Master of Building courses and their future continuing professional development;
- understand the extent to which team-work underscores the production of building, and have acquired an appreciation of the interpersonal communication and management skills necessary for the successful practice of building;
- are technically competent and are able to demonstrate the acquisition of technical skills necessary to gain employment as an assistant to a Builder or Quantity Surveyor.
structural elements, construction detailing, the performance of building services such as air-conditioning, building methods and equipment, and land surveying.

Construction management deals with business administration, industrial relations, law and contracts, and project management. Cost management includes economics, accounting, estimating, life-cycle costing, property investment analysis, and quantity surveying.

The courses satisfy the academic requirements for registration by the Australian Institute of Building. A student may also choose to use an elective subject in the BBldg (or MBldg) year to satisfy the academic requirements for registration by the Australian Institute of Quantity Surveyors. Both organisations require two years of approved practical experience for full accreditation and both offer student membership.

Bachelor of Planning and Design (Building)

**FIRST YEAR**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Points</th>
</tr>
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<tbody>
<tr>
<td>316-102</td>
<td>Introductory Microeconomics</td>
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<tr>
<td>451-102</td>
<td>Introduction to Surveying</td>
<td>12.5</td>
</tr>
<tr>
<td>702-109</td>
<td>Building Structures 1</td>
<td>12.5</td>
</tr>
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<td>702-110</td>
<td>Building Construction 1A</td>
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</tr>
<tr>
<td>702-117</td>
<td>Management of Construction 1</td>
<td>12.5</td>
</tr>
<tr>
<td>702-116</td>
<td>Cost Management 1</td>
<td>12.5</td>
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<tr>
<td>702-223</td>
<td>Building Science 2A</td>
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<tr>
<td>705-115</td>
<td>Building Mathematics and Computing 1</td>
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**SECOND YEAR**

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<th>Course Title</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>451-102</td>
<td>Accounting Concepts</td>
<td>12.5</td>
</tr>
<tr>
<td>316-102</td>
<td>Organisational Behaviour</td>
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</tr>
<tr>
<td>702-209</td>
<td>Building Structures and Services 2</td>
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<tr>
<td>702-210</td>
<td>Building Construction 2A</td>
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</tr>
<tr>
<td>702-216</td>
<td>Cost Management 2</td>
<td>12.5</td>
</tr>
<tr>
<td>702-217</td>
<td>History of Building Construction</td>
<td>12.5</td>
</tr>
<tr>
<td>702-236</td>
<td>Management of Construction 2</td>
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</tr>
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**THIRD YEAR**

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<tbody>
<tr>
<td>702-308</td>
<td>Building Structures and Construction 3A</td>
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<tr>
<td>702-309</td>
<td>Building Structures and Construction 3B</td>
<td>12.5</td>
</tr>
<tr>
<td>702-310</td>
<td>Building Methods and Equipment</td>
<td>12.5</td>
</tr>
<tr>
<td>702-315</td>
<td>Building Materials and Soil Mechanics</td>
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<td>702-316</td>
<td>Management of Construction 3</td>
<td>12.5</td>
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<td>702-320</td>
<td>Building Law</td>
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<td>702-361</td>
<td>Cost Management 3</td>
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**Electives**

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<tbody>
<tr>
<td>702-415</td>
<td>Building Economy</td>
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<td>702-418</td>
<td>Land Economy</td>
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<tr>
<td>702-419</td>
<td>Advanced Building Law</td>
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<tr>
<td>702-460</td>
<td>Individual Research Project</td>
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**Honours Year**

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<tbody>
<tr>
<td>702-411</td>
<td>Advanced Construction</td>
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<tr>
<td>702-412</td>
<td>Advanced Services</td>
<td>12.5</td>
</tr>
</tbody>
</table>

**Assessment:** The overall result in BPD honours courses is calculated on the average mark achieved during the student's honours year. The system of grades and marks used by the Faculty is listed below:

- HI 80+
- H2A 75-79
- H2B 70-74
- H3 65-69
- N(Fail) below 65

**Bachelor of Building**

The Bachelor of Building is normally a one year full-time course of 100 points and is available at pass level only. It is recognised by the Australian Institute of Building and by the Australian Institute of Quantity Surveyors (provided that 702-483 Advanced Quantity Surveying is undertaken as the elective).

All prospective students (including BPD graduates) must apply through the Faculty Office.

**COURSE OBJECTIVES**

**Bachelor of Building**

This course has as its objectives that graduates:

- have a building knowledge-base consisting of an integrated system of concepts, principles, theories, technical data and skills relating to building technology and management of the building process;
- have a sound grasp of problem-solving techniques such that they are able to synthesise and apply this knowledge-base in the construction and financial management of buildings;
- have developed critical techniques that enable them to take a professionally responsible role in the community through the formulation of independent evaluations of those social, economic and political institutions, existing conventions, and new ideas that inform the practice of building and its professional ethics;
- are able to engage confidently in the self-directed study and research necessary to their advancement through postgraduate studies and/ or the continuing development of their professional careers;
- are effective managers with an understanding of those principles of interpersonal communication, management and leadership skills that ensure competence in the construction and cost-management of building projects;
- are technically and professionally competent and are able to demonstrate the acquisition of those professional and technical skills necessary to gain employment as a Graduate Builder and/or Graduate Quantity Surveyor and to advance to full professional status as a Builder or Quantity Surveyor.
Graduate Diploma in Planning and Design (Building)
The Graduate Diploma in Planning and Design (Building) provides a preparatory program of studies by coursework in building and quantity surveying. It is open to graduates of bachelor degrees in building, quantity surveying, architecture, civil or structural engineering, or the equivalent. Applicants who do not have such formal qualifications, but do have considerable relevant professional experience, may also apply. The graduate diploma is normally a one-year full-time course of 100 points. Upon successful completion of the course with at least a grade average of 70 per cent, applicants may apply for entry into the Master of Building. Please note: The graduate diploma, by itself, does not satisfy the professional requirements of the Australian Institute of Building or the Australia Institute of Quantity Surveyors.

Master of Building
The MBldg degree can be completed either by coursework or by thesis. Applicants normally must be graduates with a BBldg degree of four years standing or BPD(Hons) or equivalent, with a grade average of at least 70 per cent. An approved period of practical experience (minimum of one year) is required before entry to the MBldg.

Other applicants with considerable relevant professional experience may also apply but may be required to do preliminary studies before being accepted for entry. Information and application forms are available from the Faculty Office.

PLANNING
Within the planning program, three areas of specialisation are offered: Environmental Studies, Landscape Architecture, and Urban Planning. All students apply to the BPD (Planning) course and undertake the same core subjects in the first year of the course. Students choose to specialise in one of the three disciplines in the second year. A combined degree of Bachelor of Arts/BPD (Planning) is also available.

ENVIRONMENTAL STUDIES
Bachelor of Planning and Design [Pass or Honours]
Graduate Diploma in Planning and Design (Environmental Studies)
Master of Environmental Studies
The emphasis in Environmental Studies is on environmental planning and management. The courses offered aim to give graduates the necessary understanding and skills for working in these areas. Students learn how society uses the natural world to satisfy its needs, how the use of it is constrained by its limitations, and how human manipulation of the natural environment has caused environmental stresses which are often cumulative and compounding in their effects.

They discover that although conservation and development are both ways of satisfying human needs, they are not necessarily in conflict and can be complementary. The courses develop skills in applying the multidisciplinary approaches necessary to tackle these complex problems.

In the Environmental Studies stream of the three-year BPD students are encouraged to apply their knowledge to solve problems in new areas. Much time is devoted to project work and emphasis is placed on helping students to take initiative. Graduates are qualified to work in environmental planning and management with private firms or government ministries and statutory authorities.

Students who obtain the required standard in their pass BPD degree are permitted to enrol for an additional honours year of the BPD. Honours students doing environmental studies focus on economic, social, environmental and resource evaluation, policy development and decision-making in areas of conflict. The work includes individual research projects in which they tackle specific problems and report on their findings.

BPD(Hons) graduates have much to offer private and government sectors in environmental planning and management and can expect to move quickly into creative and demanding jobs in these areas. Students taking the BPD pass degree in environmental studies will normally complete the program listed below. Note that all planning students study common subjects in first year. Choice of specialisation in one of the three planning disciplines (environmental studies, landscape architecture, or urban planning) occurs in second year.

Bachelor of Planning and Design (Planning) in Environmental Studies

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Planning</td>
<td></td>
</tr>
<tr>
<td>705-171 Introduction to Planning and Design</td>
<td>12.5</td>
</tr>
<tr>
<td>705-172 Introduction to Planning and Development</td>
<td>12.5</td>
</tr>
<tr>
<td>Natural Environment</td>
<td></td>
</tr>
<tr>
<td>705-181 Human Ecology</td>
<td>12.5</td>
</tr>
<tr>
<td>705-182 Human Settlement</td>
<td>12.5</td>
</tr>
<tr>
<td>Additional compulsory subjects:</td>
<td></td>
</tr>
<tr>
<td>705-101 Communication for Planners</td>
<td>12.5</td>
</tr>
<tr>
<td>705-199 Computing and Statistics for Planning and Design</td>
<td>12.5</td>
</tr>
<tr>
<td>705-102 Understanding Cities, Towns and Regions, or an Economics subject (to be determined)</td>
<td>12.5</td>
</tr>
<tr>
<td>Elective</td>
<td>12.5</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
</tr>
</tbody>
</table>
**SECOND YEAR**

**Environmental Planning**
- 705-202 Land Development and Transport 12.5
- 705-272 Urban Planning and Design 12.5

**Natural Environment**
- 121-251 Physical Geography (Planning) 25.0
- 705-201 Conservation and Development 12.5

**Additional compulsory subjects:**
- 705-271 Planning and Community 12.5
- 705-281 Urbanisation and Urban Structure 12.5

**Elective** 12.5

**Total** 100.0

**THIRD YEAR**

**Environmental Planning**
- 705-371 Development Planning 12.5
- 705-372 Environmental Planning and Design 12.5

**Additional compulsory subjects:**
- 705-382 Urban Sociology and Politics 12.5
- 705-399 Environmental Law 12.5

**Natural Environment**
- 705-392 Environmental Resources and Pollution 12.5

**plus one of the following:**
- 121-339 Biogeography 25.0
- (availability as a 12.5 point subject to be confirmed)
- 200-419 Park and Catchment Management 12.5
- 200-441 Agroforestry 12.5

**Electives, as required**

**Total** 100.0

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**Bachelor of Planning and Design (Planning) [Honours] in Environmental Studies**

Entry requires completion of the BPD(Planning) program, normally with a grade average of at least 65 per cent, especially at the third-year level. Appropriate work experience may also be taken into account.

**COURSE OBJECTIVES**

**Bachelor of Planning and Design (Planning)**

This course has as its objectives that graduates:

- can identify, understand and use and evaluate concepts and principles of planning and design, and the theories which systematise them for the practice of architecture, building, quantity surveying, landscape architecture, environmental studies and urban planning;
- have acquired the techniques of planning and design development, implementation and evaluation relevant to their chosen professional field;
- are able to engage in self-directed study;
- have an understanding of the nature of management within the context of their chosen professional field;
- have developed personal and interpersonal communication skills while working with small and large groups;
- understand the social, economic, legal, historical, political and ethical contexts in which their chosen profession is practised;
- have learned to carry out independent research and analysis, have learned to think creatively about planning and design problems, and have developed skills in the evaluation of alternative solutions;
- have developed a critical interest in the development of the built environment, and an understanding of how humans react with the natural environment;
- appreciate the responsibilities of their chosen profession to the community and the individuals within it;
- are committed to the development of a better built environment and the enhancement or conservation of the natural environment;
- have an understanding of the concept of sustainability, and skills in environmental and resource management.

Candidates seeking to enter the honours year with a view to going on to complete a Master of Environmental Studies should have completed a major in Environmental Planning, a pass in 705-199 Computing and Statistics for Planning and Design (12.5 points) and a major in either Natural Environment or another BPD subject combination approved by the School of Environmental Planning.

**HONOURS YEAR**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>705-481</td>
<td>Ecology and Environmental Assessment</td>
<td>12.5</td>
</tr>
<tr>
<td>705-482</td>
<td>Economic Assessment</td>
<td>12.5</td>
</tr>
<tr>
<td>705-489</td>
<td>Urbanisation and Urban Development</td>
<td>12.5</td>
</tr>
<tr>
<td>705-487</td>
<td>Resource Management</td>
<td>12.5</td>
</tr>
<tr>
<td>705-444</td>
<td>Analytical Techniques</td>
<td>12.5</td>
</tr>
<tr>
<td>705-414</td>
<td>Environmental Planning Research Project</td>
<td>25.0</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
<td>12.5</td>
</tr>
</tbody>
</table>

**Total** 100.0

**Assessment:** The overall result in BPD honours courses is calculated on the average mark achieved during the student's honours year. The system of grades and marks used by the Faculty is listed below:

- **H1** 80+
- **H2A** 75-79
- **H2B** 70-74
- **H3** 65-69
- **N(Fail)** below 65

**Master of Environmental Studies and Graduate Diploma in Planning and Design (Environmental Studies)**

The MEnvS offers higher-level study in environmental planning and management to BPD graduates, as well as those from other disciplines such as Arts, Science, Commerce, Law, Agricultural Science and Engineering.

The DipPD(EnvS) provides a program of advanced studies by coursework in environmental analysis and management, for graduates from the above range of disciplines.
The MEnvS may be taken by coursework or by research (by submission of a major thesis). The coursework degree may be completed over two years full time or four years part time, with at least 200 points of study approved by the Faculty. A four years honours degree or equivalent is normally required for direct entry into the MEnvS program. Students with a pass degree should first complete the DipPD(EnvS) - see below - which also replaces the former preliminary studies requirement. To be eligible to proceed into the second year of the MEnvS it is necessary to achieve a minimum honours level (70 per cent average) in the DipPD. Students who have also completed the BPD (Hons) in Environmental Studies may also complete the MEnvS program in one year.

The DipPD(EnvS) consists of 100 points of coursework over one year full time, or two years part time. Applicants with a three year or four year pass degree in an appropriate field may be admitted to this course. The Graduate Diploma may also be entered as a stepping stone to a Masters course. Students require a minimum honours-level pass in the DipPD(EnvS) to be eligible to continue in the final year of the MEnvS program.

The DipPD(EnvS) course and the BPD (Hons) year are both similar to the first year of the MEnvS course, except that for BPD(Hons) students, an honours research project replaces the electives. Second year MEnvS students take the subject Environmental Evaluation and Management, together with three further elective studies and undertake a group research project (incorporating a substantial individual component) involving a multi-disciplinary approach to a program in environmental planning or management.

Further information about the Masters degree, by coursework or research, or the Graduate Diploma may be obtained from the Faculty Office.

LANDSCAPE ARCHITECTURE

Bachelor of Planning and Design (Planning) [Pass or Honours]

Graduate Diploma in Planning and Design (Landscape Architecture) (availability in 1994 to be confirmed)

Master of Landscape Architecture

Landscape Architecture involves the planning, design and management of the natural and built environment. Landscape architects work with open spaces and manufactured and natural materials including soils, landforms and plants. They try to understand how urban, rural and natural landscapes are evolving, and the interaction between people and nature. They learn how people use different spaces, and plan and design public areas, malls, riversides, boulevards and parklands.

Students learn how to simulate changes using computers so as to predict more accurately their potential impact. Exposure is also given to complementary skills in urban planning and environmental analysis and planning.

At the conclusion of the BPD degree course, graduates are qualified to work in areas of landscape and environmental planning, design, and management, either in private practice or in local or state government instrumentalities.

Students who obtain the required standard in their pass BPD degree are permitted to enrol in the honours year, where studies in urban and regional planning and design, ecology, environmental assessment, information and monitoring, and a research project are undertaken.

Students taking the BPD pass degree in landscape architecture will normally complete the program listed below. Note that all planning students study common subjects in first year. Choice of specialisation in one of the three planning disciplines (environmental studies, landscape architecture, or urban planning) occurs in second year.

Bachelor of Planning and Design (Planning) in Landscape Architecture

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Planning</td>
<td>12.5</td>
</tr>
<tr>
<td>705-171 Introduction to Planning and Design</td>
<td>12.5</td>
</tr>
<tr>
<td>705-172 Introduction to Planning and Development</td>
<td>12.5</td>
</tr>
<tr>
<td>Natural Environment</td>
<td>12.5</td>
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<tr>
<td>705-181 Human Ecology</td>
<td>12.5</td>
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<tr>
<td>705-182 Human Settlement</td>
<td>12.5</td>
</tr>
<tr>
<td>Additional compulsory subjects:</td>
<td></td>
</tr>
<tr>
<td>705-101 Communication for Planners</td>
<td>12.5</td>
</tr>
<tr>
<td>705-199 Computing and Statistics for Planning and Design</td>
<td>12.5</td>
</tr>
<tr>
<td>705-102 Understanding Cities, Towns and Regions, or an Economics subject (to be determined)</td>
<td>12.5</td>
</tr>
<tr>
<td>Elective</td>
<td>12.5</td>
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<tr>
<td>Total</td>
<td>100.0</td>
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</tbody>
</table>

SECOND YEAR

<table>
<thead>
<tr>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Planning</td>
</tr>
<tr>
<td>705-202 Land Development and Transport</td>
</tr>
<tr>
<td>705-272 Urban Planning and Design</td>
</tr>
<tr>
<td>Natural Environment</td>
</tr>
<tr>
<td>121-251 Physical Geography (Planning)</td>
</tr>
<tr>
<td>705-201 Conservation and Development</td>
</tr>
<tr>
<td>Additional compulsory subjects:</td>
</tr>
<tr>
<td>705-271 Planning and Community</td>
</tr>
<tr>
<td>705-294 Plants and Planning Design</td>
</tr>
<tr>
<td>Total</td>
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</tbody>
</table>

THIRD YEAR

<table>
<thead>
<tr>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Planning</td>
</tr>
<tr>
<td>705-371 Developmental Planning</td>
</tr>
<tr>
<td>705-372 Environmental Planning and Design</td>
</tr>
<tr>
<td>Additional compulsory subjects:</td>
</tr>
<tr>
<td>705-395 Landscape Technology</td>
</tr>
<tr>
<td>705-399 Environmental Law</td>
</tr>
<tr>
<td>705-396 Landscape History</td>
</tr>
<tr>
<td>Natural Environment</td>
</tr>
<tr>
<td>705-392 Environmental Resources and Pollution plus one of the following:</td>
</tr>
<tr>
<td>121-319 Biogeography</td>
</tr>
<tr>
<td>(availability as a 12.5 point subject to be confirmed)</td>
</tr>
<tr>
<td>200-419 Park and Catchment Management</td>
</tr>
<tr>
<td>200-441 Agroforestry</td>
</tr>
<tr>
<td>Electives, as required</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Bachelor of Planning and Design (Planning) (Honours) in Landscape Architecture

Entry to the BPD(Hons) in Landscape Architecture requires completion of the BPD (Planning) program, normally with a grade average of at least 65 per cent, especially at the third-year level. Appropriate work experience may also be taken into account.
Candidates who seek to enter the honours year with the aim of later completing a Master of Landscape Architecture should have successfully completed a major in Natural Environment and passes in 705-199 Computing and Statistics for Planning and Design (12.5 points), 705-294 Plants and Planting Design (12.5 points) and 705-395 Landscape Technology (12.5 points), plus a major in either Environmental Planning or another BPD subject combination approved by the School of Environmental Planning.

**Honours Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>705-412 Urban Design</td>
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<tr>
<td>705-414 Environmental Planning Research Project</td>
<td>25.0</td>
</tr>
<tr>
<td>705-425 Urban and Landscape Design Theory</td>
<td>12.5</td>
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<tr>
<td>705-481 Ecology and Environmental Assessment</td>
<td>12.5</td>
</tr>
<tr>
<td>705-483 Environmental Information and Monitoring</td>
<td>12.5</td>
</tr>
<tr>
<td>705-486 Regional Planning and Design</td>
<td>12.5</td>
</tr>
<tr>
<td>705-488 Urban Landscape Planning and Design</td>
<td>12.5</td>
</tr>
<tr>
<td>Electives</td>
<td>12.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

**Assessment:** The overall result in BPD honours courses is calculated on the average mark achieved during the student's honours year. The system of grades and marks used by the Faculty is listed below:

- **H1** 80+
- **H2A** 75-79
- **H2B** 70-74
- **H3** 65-69
- N (Fail) below 65

**Graduate Diploma in Planning and Design (Landscape Architecture)**

The DipPD(lArch) is a course in landscape studies and design. It is available to students from a range of disciplinary backgrounds who have reached a satisfactory academic standard.

The coursework degree may be completed in one year full-time or two years part-time with compulsory core subjects and a range of electives. A limited number of places are available any year. (The diploma is not accredited by the Australian Institute of Landscape Architects). Availability for 1994 to be confirmed.

**Master of Landscape Architecture**

The MLArch degree can be completed either by coursework or by research with submission of a major thesis. The coursework degree is a two year full-time or four year part-time program of at least 200 points of study approved by the Faculty.

The degree by coursework is recognised by the Australian Institute of Landscape Architects for corporate membership of the Institute following completion of a prescribed period of practical experience.

Students who complete BPD(Hons) may complete the MLArch degree by coursework in one year. Entry to the MLArch is also open to candidates with a BLArch from another institution or to those who complete a first degree in another discipline and do a preliminary studies year (full or part time).

Graduates from other disciplines typically have backgrounds in agricultural science, geography, architecture, arts, engineering and similar areas, but others may apply. The program has four specialisations:

- **Urban design and urban landscape design:** planning and designing public spaces and understanding the economic, social, political and environmental contexts; assessing project feasibility and land economics; and planning and designing complex projects.
- **Regional landscape policy and design:** planning and designing regional areas and landscapes; understanding their ecology and the environment; evaluating regional landscapes, heritage assessment and planning; regional project planning and design, and related computing techniques.
- **Environmental perception and simulation:** theory of landscape perception; computer simulation techniques as planning tools; and related computer/video skills.
- **Research:** research methods (such as surveys); research projects leading to publication; major research projects in the School and community interaction and benefits.

**Urban Planning**

**Bachelor of Planning and Design (Planning)**

- **[Pass or Honours]**

**Bachelor of Town and Regional Planning**

**Graduate Diploma in Planning and Design (Urban Planning)** (availability in 1994 to be confirmed)

**Master of Urban Planning (by coursework)**

**Master of Town and Regional Planning (by thesis)**

Town planners help shape cities and towns by trying to ensure that transport facilities, shops and industry are conveniently placed, that houses are built away from factories, that historic buildings are preserved, that recreation areas are available, that land prices are kept down, and so on.

To do this, they use a system of land-use strategies and zoning, along with negotiating skills, to mediate and help resolve conflicts between residents, developers, industrialists, farmers, conservationists and government departments.

Students are trained in data collection, information analysis, plan generation, plan testing and plan selection. They study people, societies, the economy, legal systems, environmental problems and organisational behaviour. They also learn report writing, communication and research methods. The main part of their studies is in urban systems, dealing with how cities work, the processes and techniques of intervention, and planning, design and management.

It is possible to gain worthwhile employment in local councils, government departments, planning consultancies or development companies after completing the three-year BPD. However, most town planning students study for at least four years in order to qualify for membership of the Royal Australian Planning Institute.

Upon completion of the BPD, students who have obtained the required standard may enter either the BTRP or the BPD(Hons) majoring in urban planning. The honours course concentrates more on research skills to prepare stronger students for a MUP degree, but apart from this the two courses are identical.

Students taking the BPD pass degree in urban planning will normally complete the program listed below. Note that all BPD (Planning) students study common subjects in first year. Choice of specialisation in one of the three planning disciplines (environmental studies, landscape architecture, or urban planning) occurs in second year.
Bachelor of Planning and Design (Planning) in Urban Planning

**FIRST YEAR**

<table>
<thead>
<tr>
<th>Environmental Planning</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>705-171 Introduction to Planning and Development</td>
<td>12.5</td>
</tr>
<tr>
<td>705-172 Introduction to Planning and Development</td>
<td>12.5</td>
</tr>
</tbody>
</table>

**Urban Systems**

| 705-181 Human Ecology | 12.5 |
| 705-182 Human Settlement | 12.5 |

**Additional compulsory subjects:**

| 705-101 Communication for Planners | 12.5 |
| 705-199 Computing and Statistics for Planning and Design | 12.5 |
| 705-102 Understanding Cities, Towns and Regions, or an Economics subject (to be determined) | 12.5 |

**Elective**

| 12.5 |

**Total**

| 100.0 |

**SECOND YEAR**

<table>
<thead>
<tr>
<th>Environmental Planning</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>705-202 Land Development and Transport</td>
<td>12.5</td>
</tr>
<tr>
<td>705-277 Urban Planning and Design</td>
<td>12.5</td>
</tr>
</tbody>
</table>

**Urban Systems**

| 421-240 Urban Transport | 12.5 |
| 705-281 Urbanisation and Urban Structure | 12.5 |

**Additional compulsory subjects:**

| 705-201 Conservation and Development | 12.5 |
| 705-271 Planning and Community | 12.5 |

**Electives**

| 25.0 |

**Total**

| 100.0 |

**THIRD YEAR**

<table>
<thead>
<tr>
<th>Environmental Planning</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>705-571 Development Planning</td>
<td>12.5</td>
</tr>
<tr>
<td>705-372 Environmental Planning and Design</td>
<td>12.5</td>
</tr>
</tbody>
</table>

**Urban Systems**

| 316-322 Economics of Urbanisation A | 12.5 |
| 705-382 Urban Sociology and Politics | 12.5 |

**Additional compulsory subjects:**

| 705-392 Environmental Resources and Pollution | 12.5 |
| 705-399 Environmental Law | 12.5 |

**Electives**

| 25.0 |

**Total**

| 100.0 |

**Bachelor of Town and Regional Planning**

The **BTRP** is a one year full-time course of 100 points. The course is available at pass level only.

Entry from the **BPD** normally requires graduates to have completed a major in Environmental Planning, a major in Urban Systems and to have passes in an approved economics subject (12.5 points), 705-101 Communication for Planners (12.5 points), 705-199 Computing and Statistics for Planning and Design (12.5 points) and 705-399 Environmental Law (12.5 points).

Applicants who do not meet these requirements may become eligible by undertaking preliminary studies. In special circumstances, the Faculty may permit a student to undertake one or more of the above subjects concurrently with the **BTRP**.

Entry from other faculties and institutions normally requires applicants to hold a three-year degree with majors in planning or related areas (such as urban studies, transport engineering, urban economics, urban geography).

Applications may first be required to undertake preliminary studies to compensate for any deficiencies in their previous study.

**BTRP YEAR**

| 705-441 Origins of Modern Urban Planning | 12.5 |
| 705-442 State and Metropolitan Planning | 12.5 |
| 705-443 Planning in Modern Industrial Societies | 12.5 |
| 705-444 Analytical Techniques | 12.5 |
| 705-445 Planning Law and Statutory Planning | 12.5 |
| 705-446 Planning Investigation Project | 25.0 |
| Elective | 12.5 |

**Total**

| 100.0 |

**Bachelor of Planning and Design (Planning) (Honours) in Urban Planning**

Entry normally requires completion of the **BPD** (Planning) with a grade average of at least 65 per cent, especially at the third-year level. Appropriate work experience may also be taken into account.

Candidates who seek to enter the honours year with the aim of later completing a Master of Urban Planning should have completed the following: a major in Urban Systems, passes in an approved Economics subject (12.5 points) or 705-102 Understanding Cities, Towns and Regions (12.5 points), 705-101 Communication for Planners (12.5 points), 705-199 Computing and Statistics for Planning and Design (12.5 points) and 705-399 Environmental Law (12.5 points), plus a major in either Environmental Planning or another **BPD** subject combination approved by the School of Environmental Planning.

**HONOURS YEAR**

| 705-441 Origins of Modern Urban Planning | 12.5 |
| 705-442 State and Metropolitan Planning | 12.5 |
| 705-445 Planning Law and Statutory Planning | 12.5 |
| 705-446 Planning Investigation Project | 25.0 |

**plus either this group:**

| 705-489 Urbanisation and Urban Development | 12.5 |
| 705-443 Planning in Modern Industrial Societies | 12.5 |
| 705-444 Analytical Techniques | 12.5 |

**or this group:**

| 705-488 Urban Landscape Planning and Design | 12.5 |
| 705-412 Urban Design | 12.5 |
| 705-425 Urban and Landscape Design Theory | 12.5 |

**Total**

| 100.0 |

**Assessment:** The overall result in **BPD** honours courses is calculated on the average mark achieved during the student's honours year. The system of grades and marks used by the Faculty is listed below:

- **H1** 80+
- **H2A** 75-79
- **H2B** 70-74
- **H3** 65-69
- **N(Fail)** below 65

**Master of Urban Planning**

The **MUP** degree is a two year full-time or four year part-time coursework masters degree of at least 200 points of study approved by the Faculty. It is recognised by the Royal Australian Planning Institute for membership (after a period of practical experience).

To enter the **MUP** degree course candidates must complete the **BPD(Hons)** in Urban Planning (which allows exemptions from some **MUP** subjects) or complete a first degree in another discipline and do a preliminary
Faculty of Architecture and Planning

This degree is offered by research only, and involves the submission of a major thesis.

In the second year there is a strong emphasis on the study of contemporary planning issues, research methods and research to investigate the role of planning in contemporary society.

**Master of Town and Regional Planning**

This degree is offered by research only, and involves the submission of a major thesis.

For further information and an application form for either masters course, please contact the Faculty Office.

**Bachelor of Arts/BPD (Planning)**

The combined course is available for students wishing to enrol in one of the Planning streams of the BPD (Environmental Studies; Landscape Architecture; Urban Planning) and who also want to undertake a Bachelor of Arts majoring in related subjects. The BA/BPD in one of these streams will require five years of equivalent full-time study to complete. It is designed to offer students flexibility in choosing subjects from both Faculties.

To be selected into the combined course, students will need to satisfy the prerequisite and cut-off score requirements of both Faculties.

Students need to complete a minimum of 500 points to meet the requirements for the combined course. Within these 500 points, students must complete:

- a minimum of 250 points of BPD (Planning) subjects, including two BPD majors and any compulsory support subjects; at least 150 of these 250 points from 200- and 300-level subjects;
- a minimum of 216 Arts points, which would normally include 50 Arts points from 100-level subjects; 66 Arts points from 200-level subjects; and 100 Arts points from 300-level subjects.
- The 50 points at first-year level, 66 points at second-year level and 50 of the 100 points at third-year level must be taken from subjects offered by budget departments of the Faculty of Arts (consult Arts course advisers for details).

**Applications for entry to the combined BA/BPD course**

All candidates (including students currently enrolled in other courses at the University of Melbourne) should apply through the Victorian Tertiary Admissions Centre (VTAC) at 40 Park Street, South Melbourne by the closing date of 17 September 1993.

**Undergraduate entry**

For students who apply for 1994 and later entry, the following VCE subjects are prerequisites:

- **Architecture:** (Units 3 & 4) English, Physics, Change and Approximation or Extensions (C&A) and one from the acceptable group of subjects set by the University.
- **Building:** as for Architecture.
- **Planning:** English (Units 3 & 4), Change and Approximation or Extensions (C&A), and three from the acceptable group of subjects set by the University.

Students who do not complete these subjects satisfactorily during their VCE will not be eligible for entry to the Faculty's courses from 1994 onward.

For environmental studies, landscape architecture and urban planning a background in any of economics, geography, history, politics or law is a valuable asset. In all of the professional streams a capacity for creative problem-solving, an imaginative understanding of people's needs and aspirations, and an ability to communicate and organise are all highly desirable.

**Higher award**

**Doctor of Philosophy**

The PhD degree is administered and awarded by the University (not the Faculty). It may be taken in any discipline in which the Faculty offers an undergraduate degree. For further details contact the Faculty or the University's Office for Research.
Careers for Architecture, Building and Planning graduates

A typical role for an architect is to head the team which designs buildings (which may consist of structural, mechanical and electrical engineers, quantity surveyors, land surveyors, property consultants and interior designers).

An architect in a small firm, however, may design buildings, document them (which takes an extensive knowledge of structures, materials and law), administer contracts, run an office and keep the business financially viable.

Many architects combine careers (architect/developer, architect/builder, architect/lawyer, architect/planner). Some enter service industries, specialising for instance in furniture design and manufacture or programming for computer-aided design.

Graduates in building, depending on their majors, find employment in construction or project management or in the cost management of building projects (quantity surveying). They may begin on site (often as a coordinator or construction programmer) or in a contractor's office (as a contract administrator, estimator, or cost or project planner).

As construction managers they consult with designers on how a building will be erected, plan the job and the logistics, and manage labour, materials and equipment.

As quantity surveyors they take responsibility for the financial feasibility of potential projects and, when under construction, for cost monitoring and cost control.

Building graduates also work as directors of real estate firms in sales, leasing, property management and valuation; as computer systems designers; as consultants in historic buildings; as commercial arbitrators; as commercial property and volume home building contractors; in specialist subcontracting, maintenance and renovation; and as teachers, researchers and academics.

Planning graduates work in government agencies such as the Department of Conservation and Environment and the Ministry for Planning and Housing, or for local government instrumentalities. They may also work in private practices.

Environmental Planners are involved in land-use planning and management. They assess, plan and manage our resource use, such as water and energy, and develop local conservation strategies. They work as consultants, preparing environmental impact statements and assessing the economic, social and ecological effects of proposed developments. Some work as economists and environmental lawyers.

Landscape Architects work with open space and natural materials such as soils, landforms and plants. They seek to understand how urban, rural and natural landscapes are evolving and the interaction between people and nature. They plan and design public areas such as malls, riversides, boulevards and parks.

Urban Planners help shape cities and towns and solve urban problems. They work to ensure that transport facilities are well located, shops and jobs are conveniently placed, houses are built away from factories, which developments should proceed, and which buildings or spaces should be preserved.

With a three year BPD they may work in government or private industry, but most elect to study for at least four years. This qualifies them to work as accredited town planners for local councils, government departments, planning consultancies or development companies.

For more information
Assistant Registrar (Architecture and Planning), Faculty of Architecture and Planning, The University of Melbourne, Parkville, 3052: Telephone: +613 (03) 344 6430/6450

Special dates
Closing dates for applications are:
BPD degree: 17 September 1993 through VTAC.
BArch, BBldg, BTRP degrees, DipFII, DipFPM, CertFPM: 31 October 1993, through Faculty Office.
All Masters Degrees by Coursework: 31 October 1993, through Faculty Office.
Architecture and Planning subjects

306-102 ACCOUNTING CONCEPTS
Credit points: 12.5
Coordinator: L. Hilton, Department of Accounting and Business Law.
Contact: Two 1-hour lectures and a 1-hour tutorial a week (Second semester)
Objectives: Students should:
- understand accounting concepts and the terminology used in accounting;
- understand the doctrines and procedures used to classify and process accounting transactions;
- be able to assess and make use of the financial information published in accounting reports;
- understand the elements in the costing of jobs and processes;
- appreciate and be able to use accounting techniques to assist managers in making both short and long-run business decisions.
Assessment: One 3-hour end-of-semester paper (100%).
Note: Accounting Concepts is a single subject alternative to 306-103 Accounting 1A and 306-104 Accounting 1B. It is a non-specialised subject for students who do not wish to major in Accounting. A quota applies to non-Commerce students. Students may not gain credit for both 306-102 Accounting Concepts and either 306-103 Accounting 1A or 306-104 Accounting 1B.

702-411 ADVANCED CONSTRUCTION
Credit points: 12.5
Coordinator: Professor John Scrivener.
Contact: Two hours of lectures and up to two hours of drawing office/laboratory/tutorial a week for one semester.
Objectives: Advanced Construction is an extension of structural behaviour, design and construction given in Building Structures and Construction 3A and 3B. The student's knowledge of building economics, building services and construction management is also essential. At the conclusion of Advanced Construction students should:
- understand the behaviour, construction and elementary design of long-span structures such as space frames, suspended cable and pneumatic structures and shells;
- understand the economics, social implications and trade skills required in building rehabilitation;
- appreciate the architectural, construction and performance requirements of building facades;
- understand structural masonry behaviour and be able to conduct elementary designs in masonry;
- appreciate the development of industrialised building;
- be able to conduct elementary feasibility studies of existing or proposed buildings taking into account economic, structural, constructional and other technical considerations.
Note: Not all of the above objectives will be met in every year as students may not be exposed to all of the content. The content for any particular year is taken from a larger list.
Content: Topics from Industrialised Buildings: the context for the development of industrialised building; Australian case and field studies. Building Rehabilitation: the economics of building rehabilitation and its social implications; the practice of building rehabilitation and its technical considerations; traditional trade skills and modern standards, rehabilitation of services. Advanced Structures: the development, form and structural behaviour of spatial structures, structural masonry buildings; prefabrication including precast concrete practice; the building facade, architectural, performance and construction aspects.
Assessment: One 2-hour examination (50 per cent). Written and drawn assignments equivalent to not more than 5000 words (50 per cent).

702-483 ADVANCED QUANTITY SURVEYING
Credit Points: 12.5
Coordinator: Anthony Mills
Prerequisite: Cost Management 3
Contact: Two hours of lectures and up to three hours of tutorials and seminars per week for one semester.
Objectives: The subject examines the advanced Quantity Surveying techniques, and cost evaluation procedures. At the conclusion of the subject the student should:
- be able to measure structural and Civil Engineering works;
- have a complete understanding of Australian Standard Method of Measurement;
- understand the professional practice of Quantity Surveying.
Content: Measuring and taking off quantities for Civil Engineering construction. The Professional Practice of Quantity Surveying. Tax depreciation, value management, fire insurance valuation and cost evaluation procedures.
Assessment: One 2-hour examination (40%) and staged written assignments (60%) equivalent to not more than 7500 words.
Prescribed Texts: As per Cost Management 3.
702-412 ADVANCED SERVICES
Credit points: 12.5
Coordinator: P. Williams.
Contact: Two hours of lectures and up to two hours seminar/tutorial a week throughout one semester.
Objectives: This subject is designed to extend the understanding of building engineering services and building fire control beyond that dealt with in the Services section of Building Structures and Services 2 and Building Construction 2. At the conclusion of the subject students should:
• understand how best to deal with key issues concerning the design installation, commissioning and operation of services such as air-conditioning so as to maximise the productivity and quality of life of building occupants while achieving optimum aesthetic and cost performance;
• be able to competently direct the work of specialist consultants and contractors in the integration of sophisticated services systems in multi-storey and complex building types;
• understand the essential features and be able to effectively select appropriate engineering systems from a range of available options;
• be able to successfully document air conditioning system designs and conduct post-occupancy evaluations of building air quality;
• be further able to competently address issues of life safety and building fire control.
Content: Advanced services: A study of the distribution and integration of services in buildings. Air-conditioning and environment comfort, refrigeration, heating and air handling plant, air distribution, owning and operation costs, evaporative cooling, heat recovery, the heat pump and active solar heating and cooling systems. Special considerations covered will include the complex servicing of hospitals auditoria, the ventilation of industrial buildings, commercial kitchen planning, plant integration in services intensive buildings. Building Fire Control: Fire control applicable to both new and existing building stock including a study of intensive buildings. Building Fire Control: Fire control applicable to both new and existing building stock including a study of intensive buildings.
Assessment: One 90 minute examination; written and drawn assignments equivalent to not more than 5000 words.

200-441 AGROFORESTRY
Coordinator: Mr R. Reid.
Contact: 36 hours of lectures and 36 hours of practical work. (Second semester.)
Objectives: On completion of this subject, students should: have first-hand experience of a wide range of agroforestry projects and their management; have an appreciation of the historical development of agroforestry (in all its forms) both within Australia and overseas; be able to prepare and present whole farm plans; understand the light, moisture and nutrient relations within integrated agroforestry systems; appreciate the potential role of trees in controlling land degradation; understand the role of trees in providing shade and shelter; be familiar with the multidisciplinary experimental designs appropriate for agroforestry systems; have a practical knowledge of the management of trees, crops and stock in agroforestry systems; have an understanding of methods of economic analysis of agroforestry systems and the taxation implications for farmers; and appreciate the nature of agroforestry as an agricultural innovation and its potential for widespread adoption by farmers.
702-203 ARCHITECTURAL DESIGN AND PRACTICE 2
Credit points: 25.0
Coordinator: Alex Selenitsch
Prerequisite: Grade D or higher in 700-103 Architectural Design and Practice 1.
Contact: Up to 12 hours of lectures, seminars, tutorials, and studio classes a week throughout the year.
Objectives: For students to synthesise in the design of small-to-medium-scaled energy-efficient buildings their concurrent studies in building construction, architectural history, building science, and CADD to the extent that they can demonstrate their acquisition of skills and abilities to undertake the final year of the BPD course.
Content: The design of a house and other small-to-medium-scaled energy-efficient buildings with increasingly complex programs; and with regard to context, climate, and site. The measurement, and the recording in drawings, of buildings of moderate size to a standard adequate for the design of alterations and renovations. Projects with exercises in: human/environment relations, perception, cognition, and place-making; the establishment of functional, statutory, and user requirements; site analysis; techniques for developing design concepts; architectural ordering techniques for organising the program in terms of plan, section, internal space, and external form; the influence of structure, materials, and constructional technique on building form and architectural expression; the application of passive solar control techniques; design development including construction detailing, services, finishes, interior design, and furnishings; human comfort conditions by passive and active means; natural and artificial lighting; building costs and economic feasibility; the use of colour in architecture; architectural rendering, draughting, graphic, and model-making techniques; architectural practice procedures.
Assessment: Assessment will be based on a major final design project and the review of a portfolio of all assignments set during the year. (Projects, exercises, and tutorial presentations to the equivalent of 15 000 words.)

702-303 ARCHITECTURAL DESIGN AND PRACTICE 3
Credit points: 25.0
Coordinator: Andrew Hutson
Prerequisite: Grade D or higher in 700-203 Architectural Design and Practice 2.
Contact: Up to 12 hours of lectures, seminars, tutorials, and drawing office classes a week throughout the year.
Objectives: For students to synthesise in the design of medium-scaled energy-efficient buildings their concurrent studies in building construction, architectural history and theory, and building science to the extent that they can demonstrate both the academic and professional standards of a graduate of the BPD and the acquisition of technical and legal factors into the design process. Projects involve exercises in: human/environment relations, perception, cognition, and place-making; the establishment of functional, statutory, and user requirements (the ‘program’); developing design programs from economic, programmatic, and planning criteria; site analysis; developing design concepts; architectural ordering techniques for organising the program in terms of plan, section, internal space, and external form; applying passive solar control techniques; architectural expression including iconographic, programmatic, structural, and constructional; design development including construction detailing, construction documentation, mechanical and electrical services, finishes, interior design, and furnishings; the use of colour in architecture; architectural rendering, draughting, graphic, and model-making techniques.
Assessment: Assessment will be based on a major final design project and the review of a portfolio of all assignments set during the year. (Projects, exercises, and tutorial presentations to the equivalent of 22 500 words.)

702-403 ARCHITECTURAL DESIGN AND PRACTICE 4
Credit points: 37.5
Coordinator: Kathi Ilott-Damant
Prerequisite: Grade C (not D) or higher in 700-303 Architectural Design and Practice 3.
Contact: Up to 18 hours of lectures, seminars, tutorials, and drawing office classes a week throughout the year.
Objectives: For students to synthesise in the design of medium-to-large-scaled energy-efficient buildings their concurrent studies in architectural practice, theory, documentation, and building services to the extent that they can demonstrate their acquisition of skills and abilities to undertake the final year of the BPD course. The following standards must be achieved in order to satisfactorily complete this subject and progress to BPD 5:
• design a building with aesthetic content, i.e. one with an idea of some substance, effectively realised in the architecture;
• design responsively to the needs of client, user and community with consideration for the scarcity of resources;
• integrate technical and legal factors into the design process.
You must know how the structure works, how the major building systems work, and accommodate major code requirements.
• represent architectural propositions with clarity, economy and poetry.
Content: Designing medium-to-large-scaled energy-efficient buildings and groups of buildings with increasingly complex programs, and with regard to urban, suburban and rural settings. Projects involve exercises in establishing functional, statutory, and user requirements (the ‘program’); developing design programs from primary and secondary sources; feasibility studies in terms of economic, programmatic, and planning criteria; site analysis; techniques for developing design concepts; architectural ordering techniques for organising the program in terms of plan, section, internal space, and external form; applying passive solar control techniques; architectural expression including iconographic, programmatic, structural, and constructional; design development including construction detailing, construction documentation, mechanical and electrical services, finishes, interior design, and furnishings; the use of colour in architecture; architectural rendering, draughting, graphic, and model-making techniques.
Assessment: Assessment will be based on a major final design project and the review of a portfolio of all assignments set during the year. (Projects, exercises, and tutorial presentations to the equivalent of 22 500 words.)

702-503 ARCHITECTURAL DESIGN AND PRACTICE 5
Credit points: 37.5
Coordinator: Haig Beck
Prerequisite: Grade D or higher in 700-403 Architectural Design and Practice 4.
Contact: Up to 18 hours of lectures, seminars, tutorials, and drawing office classes a week throughout the year.
Objectives: The objective of Architectural Design & Practice 5 is to ensure that students, by the time they have completed the subject, are able to design and document large scale energy efficient projects, along with the development of their complex programs, and to carry out detailed design development and construction documentation of medium scale energy efficient buildings, and that they can demonstrate both the academic standards of a graduate of the Bachelor, and the acquisition of technical skills commensurate with those required by the architectural profession of a Graduate Architect.

Content: The design of large-scaled energy-efficient projects, along with the development of their complex programs and the detailed design development and construction documentation of medium-scaled energy-efficient buildings.

Assessment: Assessment will be based on a major final design project and the review of a portfolio of all assignments set during the year. (Projects, exercises, and tutorial presentations to the equivalent of 22 500 words.)

702-406 ARCHITECTURAL DESIGN THEORY
Credit points: 12.5
Coordinator: Professor Graham Brawn
Contact: Up to six hours of lectures, seminars, tutorials, and practical work a week for a period equivalent to one semester.

Objectives: For students to be able to apply Human Environment Relations (HER) theory in the design process.

Content: Meaning and identity in the built environment, human/environment interaction, environmental psychology, psychology of perception, evaluating user satisfaction, post-occupancy evaluation; and their application to design programming and design.

Assessment: A review of all assignments set during the year. (Assignments to the equivalent of 7500 words.)

702-404 ARCHITECTURAL DOCUMENTATION A
Credit points: 6.25
Coordinator: A. Mussen
Contact: Up to four hours of lectures, tutorials, and drawing office work a week for a period equivalent to one semester.

Objectives: For students to be able to document – with drawings and specifications – a medium-to-large-scaled, fully-serviced, commercial or institutional building.

Content: Development of graphic skills and drawing techniques including CAD and other systems to ensure the orderly delivery of documents for complex buildings including: design and presentation documents, feasibility studies and reports, briefing technical consultants, procedures for co-ordinating documentation from technical consultants, documentation for estimates, complying with requirements of statutory authorities and regulatory bodies, documentation for permits and approvals, documentation for tendering, specifications, schedules and ancillary information, documentation for contracts, documentation for construction, documentation for post-occupancy evaluation, maintenance programs, documentation for marketing, documentation for publication. Documentation for preliminary cost-estimates of a large, fully-serviced, commercial or institutional building.

Assessment: A review of a portfolio of all assignments set during the year. (Assignments to the equivalent of 5000 words.)

702-405 ARCHITECTURAL PRACTICE B
Credit points: 6.25
Coordinator: A. Mussen
Contact: Up to four hours of lectures, drawing office and practical work a week throughout the year.

Objectives: For students to demonstrate the acquisition of those architectural graphic and model-making skills necessary to undertake the second year of the BPD course.

Content: Introduction to architectural graphic methods, techniques and conventions. Exercises in: descriptive drawing and projective geometry; sciaigraphy; perspective; free-hand drawing, measured drawing and architectural rendering, model-making, presentation, and documentation.

Assessment: One 3-hour examination and the review of a portfolio of all work set during the year. (Assignments to the equivalent of 5000 words.)

702-106 ARCHITECTURAL GRAPHICS
Credit points: 12.5
Coordinator: S. Hunt
Contact: Up to four hours of lectures, drawing office and practical work a week throughout the year.

Objectives: For students to be able to demonstrate the acquisition of those architectural graphic and model-making skills necessary to undertake the second year of the BPD course.

Content: Meaning and identity in the built environment, human/environment interaction, environmental psychology, psychology of perception, evaluating user satisfaction, post-occupancy evaluation; and their application to design programming and design.

Assessment: A review of all assignments set during the year. (Assignments to the equivalent of 4000 words.)
702-505 ARCHITECTURAL PRACTICE B
Credit points: 25.0
Coordinator: A. Mussen.
Contact: Up to six hours of lectures, seminars and project work a week throughout the year.
Objectives: For students to be able to demonstrate the acquisition of professional practice skills and procedures commensurate with those required by the architectural profession of a Graduate Architect.
Content: Delivery of architectural services: delivery of architectural services as defined by the standard stages and including additional and supplementary services; the standard documents emanating from architects offices; methods of control under the broad headings of data base, client requirements, budgets, cost planning and time programs; consultants and the co-ordination of their services. Control of building projects: procurement of buildings and the control of building projects; project control including the methods of assessing, monitoring, adjusting and reporting with particular regard to quality, time, and costs; relationship between the contributing parties; methods of dispute resolution including arbitration. Planning and other regulatory considerations: identification, assessment, and incorporation of regulations to gain the relevant building approvals and planning permits.
Assessment: Two 3-hour examinations and a review of all assignments set during the year. (Assignments to die equivalent of 10 000 words.)

702-324 ARCHITECTURAL STUDIES A1
Credit points: 6.25
Coordinator: To be advised.
Contact: Normally offered for a period equivalent to less than one semester.
Objectives: For students to gain an introductory understanding of a particular aspect of architectural topics.
Content: The subject provides a framework to enable students to study a special topic, such as: history, theory, computing, conservation, building science, building practice, building services, facilities planning, architectural practice, art in architecture, urban architecture, etc. Syllabus details will be made available at the beginning of the semester.
Assessment: Project work amounting to not more than 4000 words, or equivalent. Details will be made available at the beginning of the semester.

702-325 ARCHITECTURAL STUDIES A2
Credit points: 12.5
Coordinator: To be advised.
Contact: Normally offered for a period equivalent to one entire semester.
Assessment: Project work amounting to not more than 8000 words, or equivalent. Details will be made available at the beginning of the semester.

702-326 ARCHITECTURAL STUDIES B1 (AS FOR 700-324 ARCHITECTURAL STUDIES A1)
Credit points: 6.25

702-327 ARCHITECTURAL STUDIES B2 (AS FOR 700-325 ARCHITECTURAL STUDIES A2)
Credit points: 12.5

702-328 ARCHITECTURAL STUDIES C1 (AS FOR 700-324 ARCHITECTURAL STUDIES A1)
Credit points: 6.25

702-329 ARCHITECTURAL STUDIES C2 (AS FOR 700-325 ARCHITECTURAL STUDIES A2)
Credit points: 12.5

702-424 ARCHITECTURAL STUDIES D1 (AS FOR 700-324 ARCHITECTURAL STUDIES A1)
Credit points: 6.25

702-425 ARCHITECTURAL STUDIES D2 (AS FOR 700-325 ARCHITECTURAL STUDIES A2)
Credit points: 12.5

702-426 ARCHITECTURAL STUDIES E1 (AS FOR 700-324 ARCHITECTURAL STUDIES A1)
Credit points: 6.25

702-427 ARCHITECTURAL STUDIES E2 (AS FOR 700-325 ARCHITECTURAL STUDIES A2)
Credit points: 12.5

702-428 ARCHITECTURAL STUDIES F1 (AS FOR 700-324 ARCHITECTURAL STUDIES A1)
Credit points: 6.25

702-429 ARCHITECTURAL STUDIES F2 (AS FOR 700-325 ARCHITECTURAL STUDIES A2)
Credit points: 12.5

702-524 ARCHITECTURAL STUDIES G1 (AS FOR 700-324 ARCHITECTURAL STUDIES A1)
Credit points: 6.25

702-525 ARCHITECTURAL STUDIES G2 (AS FOR 700-325 ARCHITECTURAL STUDIES A2)
Credit points: 12.5

702-526 ARCHITECTURAL STUDIES H1 (AS FOR 700-324 ARCHITECTURAL STUDIES A1)
Credit points: 6.25

702-527 ARCHITECTURAL STUDIES H2 (AS FOR 700-325 ARCHITECTURAL STUDIES A2)
Credit points: 12.5

702-528 ARCHITECTURAL STUDIES I1 (AS FOR 700-324 ARCHITECTURAL STUDIES A1)
Credit points: 6.25

702-529 ARCHITECTURAL STUDIES I2 (AS FOR 700-325 ARCHITECTURAL STUDIES A2)
Credit points: 12.5

702-341 ARCHITECTURAL THEORY 3A
Credit points: 12.5
Coordinator: To be advised.
Contact: Six hours of lectures and practical work a week throughout one semester.
Objectives: For students to gain an introductory understanding of a particular aspect of architectural theory.
Content: The following four options will be offered at the third and fourth levels of Architectural Theory; they will not necessarily all be run in the one semester. Students may select any one of the options but should check with the Departmental Office which options will be presented each semester. The Department may allow other

Assessment: Projects; assignments and exercises submitted equivalent to not more than 7500 words.

702-342 ARCHITECTURAL THEORY 3B
Credit points: 12.5
Coordinator: To be advised.
Contact: Six hours of lectures and practical work a week throughout one semester.
A number of options will be offered from time to time; they will not necessarily all be run in the one semester. Students may select any option that they have not completed in Architectural Theory 3A. They should check with the Departmental Office which options will be presented each semester.
Objectives: For students to gain an introductory understanding of a particular aspect of architectural theory.
(Options and Syllabi see under Architectural Theory 3A.)
Assessment: Projects, assignments and exercises submitted during the semester equivalent to not more than 7500 words.

702-468 ARCHITECTURAL THEORY 4A
Credit points: 12.5
Coordinator: To be advised.
Contact: Six hours of lectures and practical work a week throughout one semester.
Objectives: For students to gain an introductory understanding of a particular aspect of architectural theory.
Content: Several options will be offered (not all in the one semester). Students select any option they have not completed in Architectural Theory 3A or 3B. They should check with the Departmental Office which options will be presented each semester.
(Options and Syllabi see under Architectural Theory 3A.)
Assessment: Projects, assignments and exercises submitted during the semester equivalent to not more than 7500 words.

702-469 ARCHITECTURAL THEORY 4B
Credit points: 12.5
Coordinator: To be advised.
Contact: Six hours of lectures and practical work a week throughout one semester.
Objectives: For students to gain an introductory understanding of a particular aspect of architectural theory.
Content: A number of options will be offered from time to time; they will not necessarily all be run in the one semester. Students may select any option that they have not completed in Architectural Theory 3A, 3B or 4A. They should check with the Departmental Office which options will be presented each semester.
(Options and Syllabi see under Architectural Theory 3A.)
Assessment: Projects, assignments and exercises submitted during the semester equivalent to not more than 7500 words.

702-233 ASIAN ARCHITECTURE A
Credit points: 12.5
Coordinator: H. O'Neill
Contact: Up to two lectures and one tutorial per week during one semester.
Objectives: On completion of this subject students should:
• have an understanding of the origins and currency of traditional architecture and art of societies of South and Southeast Asian countries;
• to have developed a critical perspective of implications within recent design and artistic production;
• to have demonstrated skills in independent interpretation of these insights.
Content: A historical study of selected aspects of the architecture and art traditions of societies of South and Southeast Asia with a particular focus on those of India, Sri Lanka, Malaysia, Thailand, Cambodia and Indonesia. Emphasis is given to the impact of social, political, economic and religious factors in urban, architectural and artistic expression within and between these societies and in the context of their interaction with Australian cultural development.
Assessment: An essay, major study and class paper to the equivalent of not more than 7500 words
Note: This subject is not available to first year students.

702-234 ASIAN ARCHITECTURE B
Credit points: 12.5
Coordinator: H. O'Neill
Contact: Up to two lectures and one tutorial per week during one semester.
Objectives: On completion of this subject students should:
• have an understanding of the importance of traditional architecture and art in the societies of China and Japan;
• to have developed a critical perspective of recent design and artistic production within processes of social change in the region;
• to have demonstrated skills in independent interpretation of these insights.
Content: A historical study of selected aspects of the architecture and art traditions of the societies of China and Japan relating them to others in the Asian region. Particular emphasis will be given to developments since the nineteenth century under the impact of social, political and economic contacts with the cultures of Europe and America, and to their relation to contemporary art and architecture in Australia.
Assessment: An essay, major study and class paper to the equivalent of not more than 7500 words
Note: This subject is not available to first year students.

702-331 AUSTRALIAN ARCHITECTURE A
Credit points: 12.5
Coordinator: G. Tibbits.
Contact: Up to six hours of lectures, tutorials, and studio classes a week for a period equivalent to one semester.
Objectives: For students to understand the general historical traditions in Australian architecture and be familiar with representative examples.
Content: The development and planning of settlements in Australia, the colonial architecture of New South Wales and Tasmania, urban conditions, building techniques, the development of architecture in Melbourne from its founding to the First World...
War, and the emergence of modern architecture. Special emphasis will be placed on the Melbourne environment.

**Assessment:** One 3-hour examination, an essay, and class papers. (Essay and class papers to the equivalent of 5000 words.)

**702-332 AUSTRALIAN ARCHITECTURE B**

**Credit points:** 12.5

**Coordinator:** M. Lewis.

**Corequisite:** Australian Architecture A.

**Contact:** Lectures and tutorials requiring the equivalent of 12 hours work a week for a period of one semester.

**Objectives:** To develop a knowledge of the technical aspects of Australian buildings and a broad familiarity with the philosophy of conservation and the main avenues for researching buildings, plus a substantial skill in the measurement and recording of buildings.

**Content:** An introduction to the history of building technology in Australia, the techniques of measuring and recording buildings, historical investigation from primary sources, conservation analysis, and the development of conservation policy for buildings and areas.

**Assessment:** A measured drawing exercise, investigation paper, and tutorial exercises to the equivalent of not more than 7500 words.

**121-339 BIOGEOGRAPHY**

**Credit points:** 25.0

**Coordinator:** Dr Enright, Department of Geography.

**Pre or corequisites:** 121-251 Physical Geography (Planning)

**Contact:** Two one-hour lectures, one 1-hour seminar per week and, either three hours practical work per week or up to seven days field work. (Second semester)

**Aim:** To develop an understanding of the structure and functioning of terrestrial biological communities (ecosystems) and the major environmental processes influencing their geographic location and extent.

**Objectives:**

- To understand the major concepts of the species, succession, climax and diversity, as they apply to plant communities.
- To understand the major interactions between the plant and soil systems in context of ecosystem nutrient cycling and the influence of soils on plant community structure and floristics.
- To identify how environmental variables influence the properties and pattern of communities and populations.
- To be able to apply basic field methods for community and population description.

**Content:** The major concepts of ecological biogeography; succession and diversity theory; population dynamics; island biogeography; plant-soil relationships; conservation of biological resources.

**Assessment:** Weekly practical exercises or field reports up to 3000 words (40%), seminars (10%), a final 2-hour exam (50%)

**702-107 BUILDING CONSTRUCTION 1**

**Credit points:** 25.0

**Coordinator:** To be advised.

**Contact:** Up to eight hours of lectures, tutorials, practical exercises, drawing office and laboratory work, and site visits a week throughout the year.

**Objectives:** On completion of this subject students should be able to:

- document a small building so as to demonstrate basic brick and timber-framing construction detailing and trade practices of contemporary Australian residential building practice, while showing an understanding of current building codes and regulations;
- understand the purpose of structure in buildings; to have developed an understanding of loadings and their resultant forces; to be able to trace load paths; to understand the modes of structural action – and the behaviour of materials – for a range of simple structural systems; and to have acquired techniques for approximating the size of structural members.

**Content:** Construction practice: introduction to construction practices and materials in domestic-scaled Australian building; building regulations and codes; the primary structural concepts of mass and trabeation as revealed through brick-laying and timber-framing. Documentation: introduction to documentation for building; technical drafting; specifications; architectural practice procedures. Structures: purpose of structures in architecture; taxonomy of elements of structural systems; forces and types of loading; laws of statics; conditions of equilibrium; concepts of stress and strain; load paths in typical structures; analysis of systems with axial action; stresses; properties of common structural materials; analysis and design of axially loaded members; calculation of deflections; analysis and design of flexural members.

**Assessment:** Two 2-hour examinations and the review of a portfolio of all assignments set during the year. (Assignments to the equivalent of 10 000 words)

**702-110 BUILDING CONSTRUCTION 1A**

**Credit points:** 12.5

**Coordinator:** To be advised.

**Contact:** Up to six hours of lectures, tutorials, practical exercises, drawing office and laboratory work and site visits a week throughout the year.

**Objectives:** For students to be able to document a small building so as to demonstrate basic brick and timber-framing construction detailing and trade practices of contemporary Australian residential building practice, while showing an understanding of current building codes and regulations.

**Content:** Construction practice: introduction to construction practices and materials in domestic scaled Australian building; building regulations and codes; elementary brick laying and timber framing. Documentation: introduction to documentation for building, technical drafting, specifications; architectural practice procedures.

**Assessment:** One 2-hour examination; written and drawn assignments and tests equivalent to not more than 5000 words.

**702-207 BUILDING CONSTRUCTION 2**

**Credit points:** 25.0

**Coordinator:** Clare Newton

**Contact:** Up to six hours of lectures, tutorials, practical exercises, drawing office and laboratory work, and site visits a week throughout the year.

**Objectives:** On completion of this subject students should be able to:

- resolve and communicate the construction of a non-standard small building;
- design simple statically determinant beams and frames in steel, timber, and reinforced concrete, including simple connections; to be able to demonstrate an appreciation of the design of statically indeterminate structural systems; and to be able to choose a structural system by understanding the modes of structural action – and the behaviour of materials – for a range of medium-scale building types;
- understand the essential features and be able to effectively select appropriate engineering services systems from a wide range of options applicable to less complex building types.
Content: Construction practices, materials and detailing in building up to three storeys in height, including: surveying, light timber framing and masonry construction; roofing and wall claddings; joinery and internal finishes; the application of building regulations and codes; the use of trade literature. Documentation of a domestic building including: technical draughting and CAD techniques; design development, working drawings, detailing, and services; specification writing; architectural practice procedures. Services for domestic-scaled buildings including: heating plant and paths in structures, statics of flexural systems, shear force and sanitary plumbing, waste disposal, and drainage. Introduction to distribution systems; electrical, gas, and hot and cold water supply, techniques; design development, working drawings, detailing, and services; specification writing; architectural practice procedures. Services for medium-scaled buildings including: heating plant and distribution systems; electrical, gas, and hot and cold water supply; sanitary plumbing, waste disposal, and drainage. Introduction to mechanical circulation, heating, ventilation, air-conditioning, telecommunications, security systems, and fire control in buildings; the planning of services intensive spaces. Structures: loadings, load paths in structures, statics of flexural systems, shear force and bending moments, analysis and design of flexural systems, stress, deflections, indeterminate structures, beams and frames, analysis and design of trusses.

Assessment: Up to 4 hours of examinations and the review of a portfolio of assignments set during the year. (Assignments to the equivalent of 10000 words.)

702-210 BUILDING CONSTRUCTION 2A
Credit points: 12.5
Coordinator: Clare Newton
Contact: Up to six hours of lectures, tutorials, practical exercises, drawing office and laboratory work and site visits a week throughout the year.

Objectives: On completion of this subject students should be able to:
- convert a design concept into a building and be able to resolve the construction of non-standard small buildings;
- understand the principles of prestressed concrete design;
- understand capital works budgeting and be able to analyse a prospective project;
- understand methods of approximate estimating;
- be able to analyse and report on the management of facilities with an emphasis on costs in use.

Content: Construction practices, materials, and detailing used in buildings of up to three storeys, including: light timber framing and masonry construction; roofing and wall claddings; joinery and internal finishes; the application of building regulations and codes; the use of trade literature. Documentation of a two-three storey building including: technical drafting, working drawings, detailing, and services; specification writing.

Assessment: One 2-hour examination and an assignment equivalent to not more than 5000 words.

702-307 BUILDING CONSTRUCTION 3
Credit points: 25.0
Coordinator: Clare Newton
Contact: Up to six hours of lectures, tutorials, practical exercises, drawing office and laboratory work, and site visits a week throughout the year.

Objectives: On completion of this subject students should be able to:
- model cash flows using computer techniques;
- understand the law as it impacts on Builders, Quantity Surveyors and the other participants involved in the construction process.

Content: Construction practices, materials, and detailing used in commercial and institutional buildings, including: soils, soil mechanics; soils and their influence on building foundations and building behaviour; foundations, and footings; steel and concrete framing: in situ, precast, and pre-stressed concrete construction; roofing and wall claddings; joinery and internal finishes; provisions for mechanical and electrical services; the application of building regulations and codes; the use of trade literature. Documentation of a medium-scaled two-three storey commercial or institutional building, including: technical draughting and CAD techniques; design development, working drawings, detailing, and services; specification writing; co-ordinating with consultants, contractors, and authorities; managing the documentation process in a design office; introduction to various project delivery systems; further exercises in architectural practice procedures. Building materials: introduction to the weathering, deterioration, and other characteristics of building materials including glass, metal, masonry, timber, concrete, steel, sheet materials, sealants, and finishes; their selection; their manufacture, fabrication, and erection procedures; and their detailing at junctions. Structures: the process of structural design, design of axial and flexural elements, design of steel structural systems, design of reinforced concrete elements, design of prestressed concrete elements, design of timber elements, behaviour and design of foundations, choice of structural systems.

Assessment: Up to 4 hours of examinations and the review of a portfolio of assignments set during the year. (Assignments to the equivalent of 10 000 words.)

702-415 BUILDING ECONOMY
Credit points: 12.5
Coordinator: R. Kenley.
Prerequisite: BPD 3 (Architecture or Building).
Contact: Two hours of lectures and up to three hours of tutorials per week for one semester.

Objectives: The subject examines the interaction between the economy and the building industry, concentrating on methods of analysis of the economics of buildings and building. At the conclusion of the subject the student should:
- be able to model cash flows using computer techniques;
- understand capital works budgeting and be able to analyse a prospective project;
- understand methods of approximate estimating;
- be able to analyse and report on the management of facilities with an emphasis on costs in use.

Content: Modelling cash flows and their use a predictive management tool. Financial analysis of capital works including the analysis required by semi-government bodies in budget reviews. Cost planning, life cycle cost analysis and facilities management. Trend analysis, value management and marketing.

Assessment: One 2-hour examination (50 per cent); assignments totalling no more than 5000 words (50 per cent).


702-320 BUILDING LAW
Credit points: 12.5
Coordinator: P. Williams.
Contact: Up to four hours a week of lectures and tutorials for one semester.

Objectives: The objectives of the Building Law subject are for students to gain a preliminary theoretical and practical knowledge of the law as it impacts on Builders, Quantity Surveyors and the other participants involved in the construction process.
The objectives include the gaining of specific skills to enable students to achieve competency relevant to the following procedures:

- negotiations relevant to contracts generally;
- negotiations relevant to building contracts and the legal requirements pertaining to quality, time and cost;
- construction with risk management;
- construction with minimum dispute and appropriate dispute resolution.

**Content:** Introduction to legal principles and business law; the legal system and legal processes; sources of law; precedent; interpretation of statutes; court hierarchy and civil procedure. The law as it impacts on builders; the law of contract and tort; laws relating to planning, building control and property; building contracts and the attendant responsibilities of the parties; negligence, liability, professional indemnity insurance, management of risk; roles undertaken by the builders and the provision of their professional services. Business law; laws relating to business finance; business organisations, partnership and agency, incorporation.

**Assessment:** One 2-hour examination paper; assignments equivalent to not more than 5000 words.

### 702-315 BUILDING MATERIALS AND SOILS

**MECHANICS**

**Credit points:** 12.5

**Coordinator:** Professor John Scrivener

**Prerequisite:** Building Structures and Services 2.

**Contact:** Two lectures a week and up to four hours of tutorials, drawing office, laboratory work and site visits a week throughout one semester.

**Objectives:** On completion of this subject students should be able to demonstrate:

- an appreciation of building materials, their characteristics, and their detailing;
- a practical appreciation of soils and their influence on building foundations.

**Content:** Materials: An extension of the study of building materials such as timber, steel, concrete, masonry, glass and sheet materials. Weathering and deterioration of building materials. Influence of design factors on material behaviour. Soil Mechanics: The characteristics and physical properties of rocks and soils and their influence on building foundations and building behaviour.

**Assessment:** One 2-hour examination paper; written and drawn assignments and tests equivalent to not more than 5000 words.

### 702-223 BUILDING SCIENCE 2A

**Credit points:** 12.5

**Coordinator:** N. Bamford

**Contact:** Up to four hours of lectures, tutorials, drawing office and laboratory work a week throughout semesters one and two.

**Objectives:** Upon successful completion of Building Science 2A students should have:

- achieved an understanding of the factors which influence human comfort;
- developed an appreciation of the relevance of heat flow, solar impact, lighting and acoustics to the built environment;
- learned to integrate, mainly from a qualitative standpoint, the design requirements of thermal, lighting and acoustics into their architectural design work;
- enhanced their skills in establishing project Briefs, working to these Briefs and reporting in writing (to clients).

**Content:** Introduction to human comfort in the built environment and the relevance of heat flow, solar impact, lighting and acoustics to its achievement. Parameters influencing energy efficiency and associated application techniques; understanding lighting/colour relationships, daylighting and artificial lighting design and terms and methods used; noise/sound (acoustics) relationships, terms used and design objectives and methods; integration of all three building science elements into architectural design work; case studies of previously designed buildings.

**Assessment:** One 3-hour examination and a review of all assignments to the equivalent of 5000 words.

### 702-321 BUILDING SCIENCE 3A

**Credit points:** 12.5

**Coordinator:** N. Bamford

**Contact:** Up to four hours of lectures, tutorials, drawing office and laboratory work a week throughout semesters one and two.

**Objectives:** Upon successful completion of Building Science 3A students should have:
• learned to incorporate the principles which contribute to environmental quality and energy performance into their architectural design work;
• carried out calculations to establish the heating and cooling loads, acoustic requirements and lighting designs for simple spaces - either within architectural design work or by means of case studies;
• developed an appreciation of the respective roles of architects/consulting engineers/lighting designers and an ability to work within the consulting team environment.

Content: Building envelope thermal performance; responses to solar impact, infiltration, ventilation and moisture flow; heating and cooling load calculations; energy utilisation and environmental implications; types of heating and cooling systems; daylight and daylight calculations; light sources; colour; artificial lighting calculations; modelling; using manufacturer's data; architect/lighting designer/consulting engineer relationships; structure-borne noise; vibration isolation; building services acoustics; acoustics in open-planned spaces and multi-use spaces; electro-acoustics.

Assessment: One 3-hour examination and a review of all assignments and laboratory work. (Assignments to the equivalent of 5000 words.)

702-109 BUILDING STRUCTURES 1
Credit points: 12.5
Coordinator: To be advised.
Contact: Two lectures a week and four hours of tutorials, practical exercises, drawing office, laboratory work and site visits a week throughout one semester.

Objectives: At the conclusion of Building Structures 1 students should:
• understand the purpose of structures;
• be aware of the actions which structures are required to resist;
• be able to identify the modes of action by which forces are transferred and directed in structural systems;
• understand how forces can be combined and manipulated by graphical and analytical methods;
• understand the graphical and analytical conditions for equilibrium of forces;
• be able to identify the appropriate model for use in the determination of forces in structural systems;
• be able to determine the distribution of forces in simple structural systems by the application of the conditions of equilibrium;
• have a basic knowledge of the means for analysing the structural behaviour of elements subjected to axial action, shear, bending and torsion;
• be aware of the physical properties of materials relevant to the behaviour of structures fabricated from these materials.


Assessment: One 2-hour examination; written and drawn assignments and tests equivalent to not more than 5000 words.


702-308 BUILDING STRUCTURES AND CONSTRUCTION 3A
Credit points: 12.5
Coordinator: Professor John Scrivener.
Prerequisite: Building Structures and Services 2.
Contact: Two lectures a week and up to four hours of tutorials, drawing office, laboratory work and site visits a week throughout one semester.

Objectives: Building Structures and Construction 3A is an extension of the structural behaviour given in the structures section of Building Structures and Services 2 and the construction given in Building Construction 2A.

At the conclusion of Building Structures and Construction 3A students should:
• understand the use and structural behaviour of reinforced concrete, prestressed concrete and timber;
• be able to conduct structural design of beams, columns and connections in reinforced concrete, prestressed concrete and timber;
• understand the documentation required for the construction of buildings;
• be able to determine the most appropriate structural system for a building.

Content: The use, behaviour and elementary structural design of reinforced concrete, prestressed concrete and timber. The documentation of such designs for construction purposes. Selection of structural systems.

Assessment: One 2-hour examination; written and drawn assignments and tests equivalent to not more than 5000 words.

702-309 BUILDING STRUCTURES AND CONSTRUCTION 3B
Credit points: 12.5
Coordinator: Professor John Scrivener.
Contact: Two lectures a week and up to four hours of tutorials, drawing office, laboratory work and site visits a week throughout one semester.

Objectives: Building Structures and Construction 3B is an extension of the structural behaviour, design and construction given in Building Structures and Construction 3A.

At the conclusion of Building Structures and Construction 3B students should:
• be able to conduct elementary structural design of framed buildings in reinforced concrete, steel, prestressed concrete and timber;
• understand the techniques of prefabrication of building elements including precast concrete;
• appreciate the techniques required for the erection of steel structures;
• be able to design formwork for concrete;
• understand basement and ground slab construction and be able to design such construction.


Assessment: One 2-hour examination paper. Written and drawn assignments and tests equivalent to not more than 5000 words.
702-209 BUILDING STRUCTURES AND SERVICES 2
Credit points: 12.5
Coordinator: P. Williams
Prerequisite: Building Structures 1.
Contact: Two lectures a week and four hours of tutorials, drawing office, laboratory work and site visits throughout one semester.
Objectives: On completion of this subject students should be able to:
- design simple statically determinate beams and frames in steel, timber, and reinforced concrete, including simple connections;
- demonstrate an appreciation of the design of statically indeterminate structural systems;
- choose a structural system by understanding the modes of structural action – and the behaviour of materials – for a range of medium-scale building types;
- understand the essential features and be able to effectively select appropriate engineering services systems from a wide range of options applicable to less complex building types.
Assessment: One 2-hour examination; written and drawn assignments and tests equivalent to not more than 5000 words.

705-101 COMMUNICATION FOR PLANNERS
Credit points: 12.5
Coordinator: L. Cosgrove.
Contact: Three hours of lectures and tutorials a week throughout one semester.
Objectives: At the conclusion of this subject students should:
- have an understanding of the process of communication with a view to improving the effectiveness of their communication in planning and in professional activities generally;
- have developed skills and confidence in written presentation of information and ideas;
- have been provided with expertise in the practical aspects of research;
- have developed skills in the verbal presentation of ideas and information;
- have developed skills which will assist them to work in teams for course work purposes and for later professional life.
Content: The course will, particularly through supporting assignment work related to other subjects comprising the BPD1 Semester 1 course, concentrate on developing student’s ability to communicate effectively both verbally and in writing, including: Analysis of assignment questions and assignment requirements; writing briefs. Research techniques and sources, including library search skills and approaches. Analysis and synthesis of material. Written presentation skills: Orientation, organisation of information; graphic communication support; referencing and bibliographic materials, style, syntax; written expression. Verbal presentation skills: organisation of information; audience orientation; visual support material and spatial facilitation; audio visual aids; presentation and question asking/answering; non-verbal communication. Interpersonal communication skills.
Assessment: Verbal presentation, class participation (details to be provided at the beginning of the semester), and written arguments not exceeding 4,500 words.

702-108 COMPUTERS IN ARCHITECTURE 1
Credit points: 12.5
Coordinators: Bruce Duyshart and Jonathan Finkelstein.
Contact: Up to 4 hours of lectures and practical work per week for the equivalent of one semester.
Objectives: At the conclusion of this subject students should:
- have a theoretical context for computers in architecture and building;
- have acquired a basic technical competence so that they may use the Department’s resources in other areas of study and engage in self-education.
Content: Introduction to the Department network and resources; computers in context with architecture and building; essay, notations and report writing using word processing; illustrations using pixel based paint programs; information management using spreadsheets and data bases; introduction to CAD systems; introduction to perspective as a geometric system; integrating information; learning processes to combine the above.
Assessment: A review of a portfolio of all assignments set during the year. (Assignments to the equivalent of 7500 words.)

702-208 COMPUTERS IN ARCHITECTURE 2
Credit points: 12.5
Coordinators: Bruce Duyshart and Jonathan Finkelstein.
Prerequisites: Students must have completed Computers in Architecture 1 or the equivalent.
Contact: Up to 4 hours of lectures and practical work per week for the equivalent of one semester.
Objectives: At the conclusion of this subject students should:
- have an understanding of which aspects of CAD systems are more suited to the different tasks associated with design and documentation;
- understand the underlying principles that are fundamental to CAD systems;
- have attained a level of proficiency such that the student may further their own self-education.
Content: Application of a 2D/3D CAD system (AutoCAD); introduction to 3D modelling and spatial exploration; design and presentation techniques; information sharing and integration with CAD systems; documentation.
Assessment: A review of a portfolio of all assignments set during the year. (Assignments to the equivalent of 7,500 words.)

702-323 COMPUTERS IN ARCHITECTURE 3
Credit points: 12.5
Coordinators: Bruce Duyshart and Jonathan Finkelstein.
Prerequisites: Students must have completed Computers in Architecture 1 and 2, or the equivalent.
Contact: Up to 4 hours of lectures and practical work per week for the equivalent of one semester.
Objectives: At the conclusion of this subject students should:
- have an understanding of the concepts of computer aided modelling, rendering and animation;
- understand the methods by which a CAD system can be customised to suit individual user needs.
Content: The course will cover a number of essential topics that are necessary for the mastery of computer-aided design including: Operating systems; basic customisation; programming with Lisp; 3-dimensional surface; modelling and solid modelling; cosine shading; photo-realistic rendering; animation.
Assessment: Satisfactory completion of assigned project work to the equivalent of not more than 5000 words, and participation in CADD studio work.
Note: Class size will be strictly limited to 16 places. Students will be selected on the basis of their academic record in Computers in Architecture 1 and 2, or have shown an enthusiasm and competence to study in this area.

705-199 COMPUTING AND STATISTICS FOR PLANNING AND DESIGN
Credit points: 12.5
Coordinator: N. Low.
Contact: Four hours of lectures and workshops a week throughout one semester.
Objectives: To introduce the Macintosh; to enable students to use a range of relevant software packages, and to provide a basic understanding of the logics of computer programming and statistics. At the conclusion of the subject students should:
- be competent in micro-computer operation, keyboard use and document preparation with text and graphics;
- understand the logic of programming using the BASIC language;
- be able to apply a limited number of software packages to planning and design problems;
- have elementary knowledge of questionnaire design, sampling procedures, data collection and computerised data manipulation;
- be able to summarise and analyse data using a number of statistical techniques;
- be able to present data using simple computerised tabular and graphical techniques.
Content: Computing: Introduction to micro computing using BASIC language; basic concepts of programming; file handling, data management and analysis; use of software packages - word processing, elementary CADD, and other applications relevant in planning and design. Statistics: Data collection, organisation and presentation; correlation and regression; probability, binomial, normal and t-distribution; sampling and chi-square analysis; hypothesis testing. The course will integrate the computing and statistical aspects wherever possible.
Assessment: Written and computer-based assignments up to the equivalent of 4500 words and a 2-hour examination.

702-116 COST MANAGEMENT 1
Credit points: 12.5
Coordinator: R. Kenley.
Contact: Two one-hour lectures and up to three hours of tutorials and seminars a week for one semester.
Objectives: The subject continues examination of financial management of the building process. At the conclusion of the subject the student should:
- have an overview of the relationship between the various parties involved in the building procurement process;
- understand the role of the quantity surveyor;
- understand the tendering process;
- have commenced analysis of the Australian Standard Method of Measurement;
- have gained preliminary techniques in cost planning and project budgeting.
Content: Overview of cost management, cost budgeting and elementary cost planning techniques. Measuring and estimating bills of quantities, tendering and bidding. Practice in oral and written communication.
Assessment: A 3-hour examination (70 per cent) and tutorial exercises and a staged written assignment (30 per cent) equivalent to not more than 5000 words.

702-216 COST MANAGEMENT 2
Credit points: 12.5
Coordinator: R. Kenley.
Prerequisite: Cost Management 1 or BPD 2 (Architecture).
Contact: Two one-hour lectures and up to three hours of tutorials and seminars a week for one semester.
Objectives: The subject continues examination of financial management of the building process. At the conclusion of the subject the student should:
- understand the comparison between estimating and cost planning;
- understand the NPWC standard elements and sub-elements;
- have commenced the analysis of the Australian Standard Method of Measurement;
- be able to prepare simple bills of quantities and cost estimates.
Content: Development of cost management concepts including: cost budgeting and cost planning techniques. Detailed analysis of measuring and estimating bills of quantities. Tax depreciation, cash flow and administration.
Assessment: A 3-hour examination (50 per cent) and a staged written assignment (50 per cent) equivalent to not more than 7500 words.

702-361 COST MANAGEMENT 3
Credit points: 12.5
Prerequisite: Cost Management 2.
Coordinator: A. Mills
Contact: Two hours of lectures and up to three hours of tutorials and seminars a week for one semester.
Objectives: The subject continues examination of financial management of building process, and the practice of the professional quantity surveyor. At the conclusion of the subject the student should:
- be able to prepare complete bills of quantities according to the Australian Standard Method of Measurement;
- be able to prepare detailed cost plans;
- be able to tender for building works;
- to be able to measure building services such as hydraulics, electrical and mechanical services.

Content: Further development of cost management concepts including: cost budgeting and cost planning techniques, detailed analysis of measuring and estimating bills of quantities. Builders estimating and tendering, construction cost control techniques, methods of measurement of building services.
Assessment: A 3-hour examination (40 per cent) and two staged written assignments (60 per cent) equivalent to not more than 7500 words.


705-371 DEVELOPMENT PLANNING
Credit points: 12.5
Coordinator: N. Flannigan
Contact: Lectures, seminars and practical work totalling about four contact hours a week throughout one semester. An excursion may be arranged in the vacation following the semester in which the subject is taught.

Objectives: At the conclusion of the subject students should:
- understand procedures for planning the economic development of urban areas, with particular regard to commerce and retailing;
- understand the practice of planning for local economic development in Australia;
- understand the theories and techniques used in planning for local economic development;
- understand the rationale for "District Centre" policy.

Content: This subject provides an understanding of the urban development process by focusing on the interplay between private sector developers and public sector planners. The theory, practice and techniques of local development planning: the USA, UK and Australia comparison. The nexus between urban economy and urban structure. The nexus between urban policy and urban program. Innovative statutory and non-statutory mechanisms for plan and policy implementation, including economic development initiatives. The staging of implementation programs. Appropriate mathematical and statistical techniques are introduced.

Assessment: A major planning project and a minor assignment equivalent to no more than 4000 words, and one 2-hour examination.
Note: Knowledge of 705-172 Introduction to Planning and Development or equivalent will be assumed.

200-021 ECOLOGY (SURVEYING COURSE)
Credit points: 12.5
Coordinator: Faculty of Agriculture and Forestry.
Contact: A course of 13 lectures and 26 hours of practical work (including some excursions) throughout one semester.

Objectives: By completion of the subject the student should:
- be able to identify the major vegetation types in Victoria;
- understand the import factors affecting their distribution;
- be able to identify many of the more important genera and species of native plant.

Content: A systematic study of Victorian vegetation types (such as forest, grassland) including identification of some of the more important plants species in Victoria. Environmental factors and their relation to the structure and distribution of vegetation in Australia and, in particular, in Victoria. Soil properties; nature of the soil profile; soil erosion and soil salinity.

Assessment: One 90 minute theory paper and one 1-hour practical examination for pass and honours. Excursion reports will be assessed as part of the examination.

705-481 ECOLOGY AND ENVIRONMENTAL ASSESSMENT
Credit points: 12.5
Coordinator: J. Schapper.
Contact: Three hours of lectures and tutorials a week throughout one semester. Attendance at a one day excursion at a time to be stated at the start of the semester.

Objectives: At the conclusion of the subject students should:
- have reviewed key ecological principles and factors and their relevance to the planning process and be able to show how these factors can be assessed and information carried forward into planning and design;
- have the ability to derive environmental assessment techniques from an analysis of appropriate case studies;
- have gained an understanding of the ecological principles and processes relevant for planning and design;
- have confidence in dealing with a range of environmental problems and some understanding of the practical problems involved in implementing certain solutions.

At the conclusion of the subject students should have gained an understanding of the ecological principles and processes relevant for planning and design, confidence in dealing with a range of environmental problems and some understanding of the practical problems involved in implementing certain solutions.

Content: The subject aims to provide a bridge between the planning and design professions and environmental science. It includes a review of some key ecological principles and factors, their relevance to the planning process and techniques for their assessment. Geology, geomorphology, soils, hydrology, including rivers and wetlands, a range of vegetation types such as forest and grassland, fire and wildlife will be examined in relation to planning and design. Included will be a consideration of climate, an introduction to visual quality and to cultural and heritage issues, and an overview. A brief examination of the evolution of assessment and current practice is included.
Assessment: Individual written and practical assignments equivalent to not more than 6000 words (60 per cent); group written and practical assignments equivalent to not more than 4000 words (40 per cent).

Prescribed text: Calder W Beyond the View.

705-482 ECONOMIC ASSESSMENT
Credit points: 12.5
Coordinator: A. Atkins.
Contact: Three hours of lectures and tutorials a week throughout one semester.
Objectives: At the conclusion of the subject students should:
- understand the main concepts and theory underlying environmental economics and learn and apply selected techniques to evaluate environmental problems in public decision-making;
- gain insights and skills in environmental assessment applicable to natural resource management and project appraisal aspects of planning and landscape architecture.

Content: Concepts and techniques in environmental economics and social choice mechanisms. Outline of microeconomic and analytical welfare economics theory applicable to environmental policy formulation and evaluation. Benefit-cost analysis; its theory and practice; application to resource management. The intertemporal problem and discounting. Natural resources in economic thought. An introduction to the economics of conservation.

Assessment: Written assignments totalling not more than 5000 words (50 per cent) and one 2-hour examination (50 per cent).


121-253 ECONOMIC GEOGRAPHY
Credit points: 12.5
Coordinator: Professor M. Weber (Department of Geography)
Contact: Two one-hour lectures, a tutorial and one three-hour practical class a week. Some of the practical work may be in the field. (First semester)
Objectives: Students who complete this unit should:
- understand the application of economic principles to the location of economic activity and to regional development;
- comprehend the main international forces and domestic changes that have affected the development of industry within Australia since 1945;
- understand how industrial changes in local places are related to larger scale forces;
- realise how the industrial changes that have taken place and are now occurring affect the livelihoods and well-being of men and women;
- be capable of demonstrating this understanding through critical examinations of industrial and regional development policies.

Content: Changes in organisation and location of industry at the world scale and their implications for Australia. The development and location of industries. The effects of industrial restructuring on ethnic and gender groups.

Assessment: An essay of up to 3000 words; an examination of 1.5 hours. Proportions to be advised. Students are required to submit evidence of satisfactory completion of seminar work.

316-322 ECONOMICS OF URBANISATION A
Credit points: 12.5
Coordinator: Department of Economics.
Contact: Two one-hour carrel sessions and one one-hour tutorial a week throughout one semester.
Objectives: On completion of this subject students should be able to:
- extend their knowledge of economics of urbanisation via the undirected study of books and articles dealing with theory and policy in this area;
- judge the usefulness and the limitations of existing theory in the area of economics and urbanisation.

Content: The pattern of urban development in terms of the distribution of social and economic opportunities within the city. Contrasted positions in urban economic theory and their implications for public policy formulation and implementation. Urbanisation processes and trends: suburbanisation, inner city change and gentrification, environmental pollution.

Assessment: A 2-hour examination, and one essay during the semester of not more than 4500 words.

705-483 ENVIRONMENTAL INFORMATION AND MONITORING
Credit points: 12.5
Coordinator: H. Hossain.
Prerequisite: 705-199 Computing and Statistics for Planning and Design.
Contact: Five hours of lectures and practical work a week throughout one semester.
Objectives: At the conclusion of the subject students should:
- be skilled at collecting and processing environmental information;
- have knowledge of remote sensing, data base management systems, computer mapping and geographic information systems;
- be able to apply their skills to pollution monitoring, terrain analysis, land capability assessment, resource management, selection of plants, environmental impact assessment, development monitoring, and design documentation.

Content: The collection and processing of environmental and geographic information: remote sensing techniques and media; data base management systems; computer mapping and geographic information systems (GIS). Applications to pollution monitoring, terrain analysis, land capability assessment, land use planning resource management, selection of plant materials, environmental impact assessment, development monitoring, design documentation.

Assessment: Four to six written and practical assignments equivalent to not more than 10 000 words.

705-399 ENVIRONMENTAL LAW
Credit points: 12.5
Coordinator: M. Gutjahr.
Contact: A series of two 90 minute sessions of lectures and tutorials a week throughout one semester.
Objectives: At the conclusion of the subject students should:
- understand the nature and sources of law, its administration and statutory interpretation;
- understand introductory Law of Property and introductory Law of Torts;
- understand the framework of Commonwealth Environmental Legislation, the Victorian Environmental Effects Act and the Victorian Environmental Protection Act.

Assessment: There will be two written assignments totalling not more than 4500 words (25 per cent) and one 3-hour examination at the end of the semester (50 per cent).


705-372 ENVIRONMENTAL PLANNING AND DESIGN
Credit points: 12.5
Coordinator: J. Schappcr.

Contact: Five hours of lectures and practical work a week throughout one semester. Approximately 50% of the contact hours are for project work designed to develop appropriate analytical and graphic presentation skills. Attendance at two one-day excursions at times to be stated at the start of the semester.

Objectives:
- To understand, plan and design for an environment in which the conflicting demands of urban development, industry and natural habitat compete.
- To introduce the student to the history, theory and principles of environmental design.
- To generate an awareness of the breadth of environmental issues and to provide a regional perspective on these which reflects local conditions.
- To develop a practical understanding of the environmental design process by expanding design skills using project work.

At the conclusion of the subject students should be able to extract and critically analyse the relevant data, including that relating to biophysical and social systems, to explore solutions to problems using creative design, and to effectively communicate these solutions in written, graphic and verbal presentations.

Content: Theories of environmental design. Review of ecological principles in relation to planning and design. An emphasis is placed on designing with environmental factors in mind and working with environmental constraints, ecosystem stability being a primary goal. Project work: Case studies in a range of environments selected to develop an understanding of the issues and to build knowledge and confidence in planning and designing in the context of natural systems.

Assessment: Individual presentations and written assignments equivalent to not more than 4800 words (60 per cent). Group presentations and written assignments equivalent to not more than 3200 words (40 per cent).

705-414 ENVIRONMENTAL PLANNING RESEARCH PROJECT
Credit points: 25.0
Coordinator: L. Cosgrove and S. Brizga.

Contact: A research project and writing of a report under supervision.

Objectives: At the conclusion of the subject students should:
- have prepared an acceptable honours research project on a topic chosen in consultation with staff of the School of Environmental Planning;
- have gained an insight into a specific area of environmental planning, and to give experience in basic research methods such as literature search, objective setting, data collection and problem-solving;
- have developed an ability to handle source materials and data, and to interpret and present them in a coherent manner in accordance with accepted conventions;
- have produced a report which is prepared in a professionally competent manner and which may usefully be made available to a potential employer.

Content: A project report between 15 000 and 20 000 words on a topic chosen in consultation with the staff of the School of Environmental Planning. Regular meetings will be held with the supervisor during second semester for advice on subject matter and technical execution of the work. Fortnightly meetings will be held with the project coordination team to monitor progress of the work. One oral progress report will be required at the end of first semester and two in second semester.

Assessment: Final project report 85 per cent; oral and written presentation 15 per cent.

121-259 ENVIRONMENTAL POLITICS AND MANAGEMENT (PLANNING)
Credit points: 12.5
Coordinator: Mr G. Missen, Department of Geography.

Prerequisite: Completion of first year.

Contact: Two one-hour lectures a week; three hours of seminars and practical work per week, two days of field work. (First semester.)

Objectives: To examine basic principles of environmental management and the process of environmental conflict. To investigate the ways by which environmental conflict may be resolved and scientific management principles implemented. Upon completion of this subject a student should:
- have an introductory knowledge of the main principles of environmental economics and sustainable development;
- Know some of the theoretical solutions to environmental problems and understand the difficulties in applying these principles;
- have gained a familiarity with the laws and formal institutions, from the international to the local scale, that affect the implementation of environmental management;
- have gained skills in analysing the relations amongst interest groups, organisations and the state which affect environmental management.

Content: Environmental degradation: technical and social dimensions. Land degradation, water management, air and water pollution and resource sustainability. Relations between the state, capital and pressure groups expressed in conflict over resource exploitation.

Assessment: A 3000 word essay (35 per cent), a report of up to 2000 words on practical assignments (25 per cent) and a 2-hour examination (40 per cent).

705-392 ENVIRONMENTAL RESOURCES AND POLLUTION
Credit points: 12.5
Coordinator: To be advised.

Contact: Three hours of lectures/tutorials a week throughout one semester. One all-day excursion will be held.

Objectives: At the conclusion of the subject students should:
• be knowledgeable about air, water, land and vegetation as environmental resources, and the causes of pollution therein;
• be knowledgeable about noise, loss of visual amenity, the health effects of pollutants and pollution control.


Assessment: Written assignments totalling not more than 4500 words and one 2-hour examination.

702-130 EUROPEAN ARCHITECTURE
Credit points: 25.0
Coordinator: Anne Neale
Contact: Up to six hours of lectures, tutorials and studio classes a week throughout the academic year.

Objectives: For students to establish a cultural context for architectural design through the study of European architectural history.

Content: A study of some formative aspects of Near Eastern and European architecture from the classical period to the 18th century. Detailed studies of various periods within this broad spectrum are made and coursework will explore architectural problems associated with spatial organisation, construction, architectural theory and architectural grammar, the social and economic context of building and the role of the architect in society.

Assessment: Two essays, class papers and exercises, plus a visual examination and a 3-hour paper to the equivalent of not more than 10,000 words. The weighting between the essays, class papers, exercises, visual and written examinations will be indicated on the subject noticeboard before the beginning of the semester.

702-131 EUROPEAN ARCHITECTURE A
Credit points: 12.5
Coordinator: Anne Neale
Contact: Up to six hours of lectures, tutorials and studio classes a week throughout the year.

Objectives: For students to develop skills in analysing and writing about buildings, and an enjoyment and understanding of buildings of the period.

Content: A study of some formative aspects of Near-Eastern and European architecture from the classical period to the medieval period. Detailed studies of various periods within this broad spectrum are made and coursework will explore issues of spatial organisation, construction, architectural theory, architectural grammar, the social and economic context of building, and the role of the architect in society.

Assessment: A 3-hour examination, a visual examination, two essays, and class papers. (Essays and class papers to the equivalent of 10,000 words.)

Note: This subject is not available to architecture students.

702-132 EUROPEAN ARCHITECTURE B
Credit points: 12.5
Coordinator: Anne Neale
Co requisite: 702-131 European Architecture A.
Contact: Up to six hours of lectures, tutorials and studio classes a week throughout one semester.

Objectives: For students to develop skills in analysing and writing about buildings, and an enjoyment and understanding of buildings of the period.

Content: A study of some formative aspects of European architecture from the medieval period to the eighteenth century. Detailed studies will be made of various periods within this broad spectrum and coursework will explore architectural problems associated with spatial organisation, construction, architectural theory and architectural grammar, the social and economic context of building and the role of the architect in society.

Assessment: An essay, class paper and exercises, plus a visual examination and a 90 minute written examination. The weighting between the essay, class paper, exercises, visual and written.

Note: This subject is not available to architecture students.

702-217 HISTORY OF BUILDING CONSTRUCTION
Credit points: 12.5
Coordinator: M. Lewis.
Corequisites: Building Structures and Services 2, Building Construction 2A. This subject is normally available only to students taking the Building stream.

Contact: Two lectures and one tutorial a week, or the equivalent time in field trips, requiring about 12 hours total work a week for one semester.

Objectives: To develop a general knowledge of traditional and early modern building construction, and skills in analysing and researching buildings and technical details.

Content: A historical study of the use of materials and the means of constructing buildings from antiquity to the twentieth century, including consideration of the evolution of structural engineering, urban development in Australia, labour conditions, the decoration of buildings and methods of investigation of buildings.

Assessment: An essay, class paper, reports and exercises of not more than 5000 words plus a 90 minute written examination. The weighting of the essay, class paper, reports, exercises and written examination will be posted before the beginning of the semester.


705-181 HUMAN ECOLOGY
Credit points: 12.5
Coordinator: L. Cosgrove and S. Brizga
Contact: Three hours of lectures/tutorials a week throughout one semester.

Objectives: At the conclusion of the subject students should:
• have an enhanced understanding of the complex inter-relationship between themselves and the natural environment;
• be knowledgeable about the principles of ecology;
• have explored the complex inter-relationships between human population growth, resource use, economic development and protection of the natural environment;
• understand concepts relating to the ecology of cities;
• have analysed the "environmental crisis";
• have a knowledge of concepts relating to environmental planning.

Content: Humans and their environments: Biological - ecosystems, bio-geophysical cycles, climate, flora, fauna, soil; Physical - materials and energy flows; Social and cultural - population growth and control; built - the ecology of cities; natural - environmental crisis, impact of humans on their environment. The subject takes a global perspective in introducing students to notions underpinning environmental planning.

Assessment: Written assignment of not more than 4500 words, a workbook and a 2-hour exam.

705-182 HUMAN SETTLEMENT
Credit points: 12.5
Coordinator: M. Gutkind.
Contact: Three hours of lectures and tutorials a week throughout one semester.
Objectives: Students should acquire:
- a knowledge and understanding of the history of urban planning and design of pre-industrial cities;
- an awareness of the historical dimension inherent in all planning and design activity as well as in students' own thoughts and actions;
- the ability to critically evaluate the effects of changing western (European) attitudes on the design of urban form in history;
- an introduction to the process of urbanisation and the spatial organisation of 19th century industrial cities;
- a better understanding of our present-day, built environment, and of appropriate solutions to its planning and design problems.
Content: Assumes the human (urban) environment stems from an historic process reflecting cultural, economic, political and social frameworks and interrelationships. A cultural and historical study of cities and urban design from pre-historic times to the 19th Century. Examines the social, economic, political, and environmental determinants of urban form, structure, and growth in history and includes critical analyses of cities and towns representative of major cultural periods. Covers pre-industrial (European) settlements and examines rapid industrialisation and urbanisation and its effects on 19th century cities. Considers the (sub)urbanisation of Melbourne.
Assessment: Written assignments (sketchbook, model, project, essay or class paper), as set throughout the semester, equivalent to no more than 4500 words, and a 3-hour examination at the end of the semester.

702-460 INDIVIDUAL RESEARCH PROJECT
Credit points: 25.0
Coordinator: R. Kenley
Contact: Individual research and supervised research in groups throughout the year.
Objectives: For students to gain an introductory understanding of research techniques through the investigation of a particular aspect of a wide range of building topics.
Content: Guided research in nominated areas selected to give the student experience in research techniques.
Assessment: Regular reports as required by the supervisor and minor thesis submitted at end of academic year (100 per cent).

705-171 INTRODUCTION TO PLANNING AND DESIGN
Credit points: 12.5
Coordinator: J. Pike
Contact: Up to five hours of lectures and practical work a week throughout one semester.
Objectives: At the conclusion of the subject students should:
- have knowledge of the theories and principles of design in architecture, landscape architecture and town planning, particularly with regard to landscape and urban design;
- be experienced in the design process, site design and documentation of designs;
- have some knowledge of the relevant literature.
Content: Introduction to the economic, political and cultural context of environmental planning and design; the place of design in environmental and urban planning, in urban design and in landscape architecture. Project work stressing methods of site analysis, and the design of small-scale open space. Techniques of graphic communication.
Assessment: Progressive assessment of project work, equivalent to not more than 8000 words.
introduction to geographic information systems; cadastral surveying, land tenure and subdivision principles. Surveying as applied to building and civil setting out works...

**Assessment:** A 2-hour examination (50 per cent) and practical work and staged assignments (50 per cent).

### 316-102 INTRODUCTORY MICROECONOMICS

**Credit points:** 12.5

**Coordinator:** Department of Economics.

**Contact:** Two one-hour lectures and one one-hour tutorial a week throughout first semester.

**Objectives:** On completion of this subject students should:

- understand elementary theories of the behaviour of firms, productive efficiency and the cost of production in both the short and the long run;
- recognise the characteristics of various market structures, such as competition, monopoly and oligopoly, and understand the meaning and significance of market concentration;
- explain the determinants of price and output under different market structures, and make predictions of price and output produced by firms operating under different market structures;
- appreciate the welfare implications of price and output outcomes under different market structures in both the short and the long run, i.e., the resource allocation outcome under these market structures;
- have a knowledge of the Australian Trade Practices legislation as it relates to market behaviour of firms, and also of some other institutions which can affect resource allocation in the economy.

**Content:** This unit provides an introduction to microeconomic theory and policy. Microeconomic theory deals with the economic behaviour of individual consumers and producers. The analysis is concerned with price determination and allocation of resources between various uses. It deals with basic demand and supply analysis, consumer behaviour, the characteristics of firms, costs of production and the output and price decisions of firms operating under different market conditions. It also deals with current government microeconomic policies.

**Assessment:** A 2-hour examination (80 per cent) at the end of the semester and two written assignments (20 per cent) not exceeding 2000 words in total. One assignment may take the form of a class test.

### 702-471 INVESTIGATION PROGRAM A1

**Credit points:** 12.5

**Coordinator:** To be advised.

**Prerequisite:** The student should have achieved a satisfactory standard in all available subjects in the course with a direct bearing upon the study.

**Contact:** Individual supervised work, with group meetings where appropriate, requiring about 12 hours a week for a period equivalent to one semester.

**Objectives, content and assessment:** As for 700-471 Investigation Program A1.

### 702-472 INVESTIGATION PROGRAM B1

**Credit points:** 12.5

**Coordinator:** To be advised.

**Prerequisite:** The student should have achieved a satisfactory standard in all available subjects in the course with a direct bearing upon the study.

**Contact:** Individual supervised work, with group meetings where appropriate, requiring about 12 hours a week for a period equivalent to one semester.

**Objectives, content and assessment:** As for 700-471 Investigation Program A1.

### 702-473 INVESTIGATION PROGRAM C1

**Credit points:** 12.5

**Coordinator:** To be advised.

**Prerequisite:** A satisfactory standard in subjects directly relevant to the study.

**Contact:** Individual supervised work, with group meetings where appropriate, requiring about 12 hours a week throughout one semester.

**Objectives, content and assessment:** As for 700-471 Investigation Program A1.

### 702-474 INVESTIGATION PROGRAM D1

**Credit points:** 12.5

**Coordinator:** To be advised.

**Prerequisite:** A satisfactory standard in subjects directly relevant to the study.

**Contact:** Individual supervised work, with group meetings where appropriate, requiring about 12 hours a week throughout one semester.

**Objectives, content and assessment:** As for 700-471 Investigation Program A1.

### 702-475 INVESTIGATION PROGRAM A2

**Credit points:** 25.0

**Coordinator:** To be advised.

**Prerequisite:** A satisfactory standard in subjects directly relevant to the study.

**Contact:** Individual supervised work, with group meetings where appropriate, requiring about 24 hours a week for a period equivalent to one semester.

**Objectives:** For students to gain an introductory understanding of research techniques through the investigation of a particular aspect of a wide range of architectural topics.

**Content:** Guided research in nominated areas, selected to give the student experience in different approaches and investigation tools. A program of study will be prescribed by the first week of semester; a bibliography will normally be submitted early in the semester. Regular reports and contact with the supervisor will be required throughout the semester. The reports must show evidence of the student's capacity to handle basic source material and data, analyse it reliably, interpret it imaginatively, and present it in a coherent manner in accordance with the prescribed conventions.

**Assessment:** Reports to the equivalent of 7500 words to be submitted throughout the semester in accordance with the program of study.
702-476 INVESTIGATION PROGRAM B2
Credit points: 25.0
Coordinator: To be advised.
Prerequisite: A satisfactory standard in subjects directly relevant to the study.
Contact: Individual supervised work, with group meetings where appropriate, requiring about 24 hours a week for a period equivalent to one semester.
Objectives, content and assessment: As for 700-475 Investigation Program A2.

702-477 INVESTIGATION PROGRAM C2
Credit points: 25.0
Coordinator: To be advised.
Prerequisite: A satisfactory standard in subjects directly relevant to the study.
Contact: Individual supervised work, with group meetings where appropriate, requiring about 24 hours a week for a period equivalent to one semester.
Objectives, content and assessment: As for 700-475 Investigation Program A2.

705-202 LAND DEVELOPMENT AND TRANSPORT
Credit points: 12.5
Coordinator: D. Yencken.
Contact: Lectures, seminars and practical work totalling about four contact hours a week throughout one semester.
Objectives:
• to introduce students to the basic elements of residential land development;
• to show the social, environmental and economic implications of different forms of land development;
• to introduce students to theories of suburbia;
• to illustrate the links between land development and transport systems;
• to introduce students to concepts of traffic calming, pedestrian systems and alternative transport uses.
At the conclusion of the subject students should have a general understanding of key issues related to land development and transport planning and more detailed understanding of the process of residential development.
Content: Typology and uses of allotments, houses, streets and open space; development and subdivision; alternative forms of subdivision; residential density and the nature of suburbia; studies and theories about suburbia (gender studies, privacy and community, the sociology of the street); transport systems and the street (traffic networks, freight, public transport, bicycles, pedestrians); traffic calming; energy and pollution implications of alternative transport systems; accessibility and social justice; urban form and car dependency; mathematical techniques appropriate to the subject content; implications for development planning and subdivision design.
Assessment: Written and practical assignments equivalent to not more than 7000 words.

702-418 LAND ECONOMY
Credit points: 12.5
Coordinator: R. Kenley.
Contact: Two hours of lectures and up to three hours of tutorials per week for one semester.
Objectives: The subject examines the real estate development and investment environment with particular emphasis on the application of quantitative methods in the analysis of real property. At the conclusion of this subject students should:
• understand the implications of property with respect to their chosen professions;
• model property development and investment cash flows;
• complete a feasibility study for a major property development proposal;
• understand the principles and techniques of property valuation.
Content: Property development and investment. Valuation of real estate. Economic, financial, legal, market, social and political factors applicable to real property. The place of property in the investment hierarchy. Discounted cash flow and development feasibility studies.
Assessment: One 2-hour examination (50 per cent). Assignments totalling not more than 5000 words (50 per cent).

705-477 LANDSCAPE ARCHITECTURE PRACTICE
Credit points: 12.5
Coordinator: J. Pike
Contact: Five hours of lectures and practical work a week throughout one semester.
Objectives: At the conclusion of the subject students should:
• have a clear understanding of the broad range of landscape architecture projects and work;
• have a knowledge and understanding of the professional responsibilities involved with the practice of landscape architecture;
• have experience in the preparation of the design, contract documents and costing of landscape works.
Content: This subject covers the design, documentation and professional practice responsibilities involved with the development of landscape architectural projects.
Assessment: Assignments, designs and reports set during the year to the equivalent of 10000 words. The timetable and weightings for the components of assessment will be published at the commencement of the subject.

705-484 LANDSCAPE HERITAGE
Credit points: 12.5
Coordinator: J. Schapper
Contact: Five hours of lectures and practical work a week throughout one semester. Attendance at two one-day excursions or four half-day excursions at times to be stated at the beginning of the semester.
Objectives: At the conclusion of the subject students should:
• understand the landscape as a product of natural and cultural forces over time, including the evolution and meanings attached to cultural landscapes;
• understand the importance of heritage to individuals and to cultural groups;
• understand the scope and variety of heritage landscapes, and the legislation and organisations which conserve and manage them;
• be able to confidently apply theory, techniques and design skills to a wide range of heritage conservation situations and be able to generate management decisions which will withstand scrutiny over time.
Content: Concepts of natural and cultural heritage. Heritage as a perception issue. Types of landscape heritage: wilderness and natural landscapes, aboriginal landscape, pastoral and agricultural landscapes, public and private gardens. Heritage legislation and
organisations, including the role of the Australian Heritage Commission. Techniques for the assessment of landscape heritage. Case studies are used to illustrate the theory and practice of planning and managing the conservation of landscape heritage.

Assessment: Individual presentations and written assignments equivalent to not more than 6000 words (60 per cent). Group presentations and written assignments equivalent to not more than 4000 words (40 per cent).

705-395 LANDSCAPE TECHNOLOGY
Credit points: 12.5
Coordinator: J. Pike.
Contact: Five hours of lectures and practical work a week throughout one semester.

Objectives: At the conclusion of the subject students should:
- have been introduced to the typical materials and methods of landscape construction and site engineering - paving materials, masonry, timber, lakes, ponds, levelling, contour interpolation, grading, drainage, earthwork computations and so forth;
- be experienced at producing construction plans, grading plans, layout plans and detailed drawings;
- have been introduced to the cost of landscape works;
- have developed their own landscape technology data and detailed files.

Content: Landscape Construction: landscape site work, construction of roads, paths, walls, timber structures and irrigation systems; specifications. Site Engineering: levelling, site surveys, grading, drainage earthwork, road and path alignment.

Assessment: Assignments equivalent to not more than 4500 words. These may include a class test at the end of the first part of the subject. A 2-hour examination at the end of the semester. Students will be required to demonstrate competence in both parts of the subject.

702-117 MANAGEMENT OF CONSTRUCTION 1
Credit points: 12.5
Coordinator: R. Kenley.
Prerequisite: Management of Construction 1

Contact: Two hours of lectures and one to three hours of tutorials and practical sessions per week for one semester.

Objectives: At the conclusion of the course students should be able to:
- understand the roles of the various people involved in the building process;
- understand manual time management mathematics and analyse simple schedules.

Content: Basic management techniques utilised in the building industry. Standard methods of communication on building projects; drawings, specifications, and their preparation and interpretation. Reading documentation and explaining construction details by means of sketch drawings in the manner of a site supervisor. Overview of the parties to the building process, from site staff through consultants to the client. The management of building projects will be explained by means of site visits. Mathematical concepts of time management, manual calculation of small critical path networks.

Assessment: One 2-hour examination. Tutorial exercises and assignments to the equivalent of not more than 3000 words. (Exam 50%, assignments 50%).

702-236 MANAGEMENT OF CONSTRUCTION 2
Credit points: 12.5
Coordinator: R. Kenley.
Prerequisite: Management of Construction 1

Contact: Two hours of lectures and one to three hours of tutorials and practical sessions per week for one semester.

Objectives: At the conclusion of the course students should be able to:
• interpret drawings and specifications and issue clear instructions to site staff;
• understand the site management issues relating to personnel and materials handling;
• understand the basic relationship between methods of construction and buildability;
• prepare a computer based construction schedule.

**Content:** Basic management techniques utilised in the building industry.

Interpretation of drawings and specifications.

Converting of design information into construction method. Methods of construction including the examination of the buildability of various methods.

Site visits and videos (when available) will be used to illustrate alternative methods. Site management issues will be addressed including the basic concepts of personnel management and materials handling.

Introduction to the computer based techniques of time management, computer calculation of initial project critical path networks of approximately 100 activities.

**Assessment:** One 2-hour examination. Tutorial exercises and assignments to the equivalent of not more than 3000 words. A critical path network. (Exam 50%, assignments 50%).

**702-316 MANAGEMENT OF CONSTRUCTION 3**

**Credit points:** 12.5

**Coordinator:** R. Kenley.

**Prerequisite:** Management of Construction 2

**Contact:** Two hours of lectures and one to three hours of tutorials and practical sessions a week for one semester.

**Objectives:** At the conclusion of the course students should be able to:

• discuss alternative methods of project procurement and site management;
• understand the types of site documentation required and establish a site administration system;
• plan for the construction of a project;
• manage the progress reporting of a project during construction.

**Content:** Management techniques utilised in the building industry. Alternative forms of contract and site management; alternative methods of project procurement; the differing relationships between the parties, and the effect upon the management of a site. Methods of construction including the examination of the buildability of various methods. Site visits and videos (when available) will be used to illustrate alternative methods.

Management of site information for the use of builders and for the direction of sub-contractors. Management of sub-contractors, their contracts and the relationship between the sub-contractor and the rest of the project team.

Advanced time management techniques including project planning, the use of a schedule as a target, project work sequencing, sub-contractor and site staff control in time management, updating a project schedule and reporting project progress.

Computer calculation of an initial project critical path network of approximately 100 activities of a real project of their selection, and inspection of a site on a regular basis through the semester including the production of monthly updates and reports of progress.

**Assessment:** One 2-hour examination. Assignments to the equivalent of not more than 3000 words. A construction schedule including updates and progress reporting. (Exam 50%, assignments 50%).

**705-394 MICROCOMPUTER PROGRAMMING APPLICATIONS**

**Credit points:** 12.5

**Coordinator:** H. Hossain.

**Contact:** Three hours of lectures and tutorial/practical sessions each week for one semester.

**Objectives:** To enhance programming skills necessary to develop software for professional problem solving. At the conclusion of the subject students should:

• have been introduced to structural programming in BASIC and PASCAL and its application to problem solving in architecture, building and planning;
• have been introduced to FORTRAN, C and other popular languages;
• have reviewed professional software in BASIC, PASCAL, FORTRAN and other languages;
• have solved some particular problem by developing a program or sometimes with the help of available packages.

**Content:** An introduction to structured programming in BASIC, FORTRAN, PASCAL, and C and their application to the analysis of problems in architecture, building, planning or other environmental fields. Review of existing professional software in languages relevant to above fields. Some use will be made of current software packages, but the emphasis will be on development of microcomputer based programs to solve problems arising in one or more of the above fields. The programming language will be one of the above. Students are expected to propose a particular problem which will need to be approved by the lecturer in charge.

**Assessment:** Four small assignments (40 per cent of assessment) and a major programming assignment (60 per cent of assessment) equivalent to not more than 8000 words altogether.

**Note:** This course assumes completion of 705-199 Computing and Statistics for Planning and Design, 705-115 Building Mathematics and Computing 1, or 702-108 Computers in Architecture 1, or equivalent.

**702-214 MODERN ARCHITECTURE**

**Credit points:** 25.0

**Coordinator:** Dr Philip Goad

**Contact:** Up to six hours of lectures, tutorials, and studio classes a week throughout the year.

**Objectives:** For students to understand the general historical traditions in 19th and 20th century architecture, be familiar with representative examples, and assist in establishing a critical and cultural context for architectural design.

**Content:** The formative aspects of architecture from the late 18th to the late 20th century. British architecture and associated activity in the fields of engineering and building construction, town development and landscape design. The formative aspects of contemporary architecture with special emphasis on European and North American architecture, including architectural theory and practice, the skyscraper, formative early modern movements, Expressionism, International Style and Functionalism, the Bauhaus, the work of Wright, Mies van der Rohe, Le Corbusier, Louis Kahn, the Venturis and their contemporaries, the New York Five, and selected recent work.

**Assessment:** One 3-hour examination, a visual examination, two essays, and class papers. (Essays and class papers to the equivalent of 10 000 words.)
702-231 MODERN ARCHITECTURE A  
Credit points: 12.5  
Coordinator: Dr Philip Goad  
Prerequisite: European Architecture.  
Contact: Up to six hours of lectures, tutorials and studio classes a week throughout one semester.  
Objectives: For students to understand the general historical traditions in 19th century architecture, be familiar with representative examples, and assist in establishing a critical and cultural context for architectural design.  
Content: The formative aspects of architecture from the late 18th to the early 20th centuries, with special emphasis on British architecture and associated activity in the fields of engineering and building construction, town development and landscape design.  
Assessment: An essay, class paper and exercises, plus a visual examination and a 90 minute paper to the equivalent of not more than 5000 words. The weighting between the essay, class paper, exercises, visual and written examinations will be indicated on the subject noticeboard before the beginning of the semester.  

702-232 MODERN ARCHITECTURE B  
Credit points: 12.5  
Coordinator: Dr Philip Goad  
Co requisite: Modern Architecture A.  
Contact: Up to six hours of lectures, tutorials, studio classes a week throughout one semester.  
Objectives: For students to understand the general historical traditions in 19th century architecture, be familiar with representative examples, and assist in establishing a critical and cultural context for architectural design.  
Content: The formative aspects of architecture from the early twentieth century to the present day, with special emphasis on European and North American architecture, including architectural theory and practice, the skyscraper, formative early modern movements, Expressionism, International Style and Functionalism, the Bauhaus, the work of Wright, Mies van der Rohe and Le Corbusier, Louis Kahn, the Venturis and their contemporaries, the New York Five, and selected recent work.  
Assessment: An essay, class paper and exercises, plus a visual examination and a 90 minute paper to the equivalent of not more than 5000 words. The weighting between the essay, class paper, exercises, visual and written examinations will be indicated on the subject noticeboard before the beginning of the semester.  
Note: This subject is not available to architecture students.

317-201 ORGANISATIONAL BEHAVIOUR  
Credit points: 12.5  
Coordinator: Graduate School of Management.  
Contact: One lecture and one two-hour workshop each week throughout one semester. (First semester.)  
Objectives: Students undertaking this subject will gain an understanding of the determinants of organisational behaviour and an appreciation of the scope to influence it.  
Upon completion of this subject students should:  
• identify aspects of individual personality relevant to organisations and understand how personality affects job performance;  
• outline what motivates individuals in organisations and how motivation contributes to job satisfaction;  
• describe processes of, and barriers to, effective communication in organisations;  
• analyse the effects of the leaders and cultures of organisations;  
• identify dimensions of organisational structure, different structural configurations and their behavioural implications;  
• understand the change process and techniques for introducing behavioural change in organisations.  
Content: This foundation unit addresses individual and group reactions to the process of organisation. Emphasis is on active participation in organisational simulations, and experiments, designed to provide insight into individual and social phenomena relevant to the management of people. Basic concepts include learning, personality, motivation, group dynamics, communication, power and social effects of change.  
Assessment: One 2-hour paper (60 per cent); one small group assignment of 1500 - 2000 words (40 per cent).  

705-441 ORIGINS OF MODERN URBAN PLANNING  
Credit points: 12.5  
Coordinator: M. Gutjahr.  
Contact: Three hours of lectures, tutorials, or seminars a week throughout one semester.  
Objectives: At the conclusion of the subject students should understand:  
• the major concepts, ideas and developments associated with the emergence of modern urban planning as a professional discipline and technocratic activity;  
• the evolution of urban planning as a response to the conflicts generated by the rapid industrialisation and urbanisation of the last 200 years. Specifically, they will have acquired a knowledge of the foundation period of modern urban planning, the 19th and early 20th centuries including: the interaction between public and private forces and State intervention; the development of planning method and machinery in the early decades of the 20th century; British, European, American, and Australian individuals, ideas and initiatives between the two World Wars;  
• the interrelationship between the physical (spatial) urban environment and its socio-cultural context;  
• the ‘historical dimensions’ of urban planning over the last two centuries by focussing on the relationship between the ‘agents’ and ‘victims’ of urban development and changing standards of perception and value systems.  
Content: A critical examination of the evolution of urban planning as a response to the conflicts generated by the rapid industrialisation and urbanisation of the last 200 years. The subject will focus on the 19th and early 20th centuries, the foundation period of modern urban planning, and include consideration of 19th Century responses to industrialisation and urbanisation in Northern Europe, North America, and Australia; alternative interpretations of 19th century planning; the interaction between public and private forces and the intervention of the State. The professionalisation of town planning and the development of planning method and machinery since 1914; British, European, American, and Australian ideas and initiatives between the two world wars.  
Assessment: Written assignments (project, essay, or class paper) totalling not more than 5000 words and one 2-hour examination paper.  
Prescribed text: Mumford L, The City in History Harmondsworth Penguin 1967  

200-419 PARK AND CATCHMENT MANAGEMENT  
(1993/94 ONLY)  
Credit points: 25.0  
Coordinators: Professor I. S. Ferguson and Dr L. J. Bren.  
Contact: 36 hours of lectures and 36 hours of practical work (some of which may be held in the field). (Semester to be advised.)
Objectives: On completion of this subject, students should have an appreciation of the complexities of issues involving park and catchment management, and some competence in preparing plans to meet the challenges of these issues.


Assessment: A 3-hour written examination at the end of the subject. Assignments and reports on practical work may be required.

121-251 PHYSICAL GEOGRAPHY (PLANNING)
Credit points: 25.0
Coordinators: Dr Bird and Professor Prescott, Department of Geography.
Prerequisites: A first year Geography subject or equivalent.
Contact: 63 one-hour lectures and 72 hours of practical work throughout the year. Up to 40% of the practical work will be in the form of field work.
Objectives: Students who have completed this course should be able to:
• understand how maps are made, their uses and limitations and how information can be added to them by means of field surveys or air photo interpretation;
• be aware of the problems representing the three dimensional curved surface of the Earth (or any part of it) two-dimensional as a map on a flat piece of paper, and of the errors and adjustments in so doing;
• comprehend the general nature of the Earth's atmosphere and the circulations that produce daily weather, and understand the basis for defining and classifying climate on a global scale;
• explain how landforms have evolved and how they are changing in response to defined and measured physical, chemical and biological processes.

Content: Aspects of physical geography and associated techniques. Topics include: map projections, history of cartography, surveying (and air photo interpretation); physical bases of climate - energy balances, atmospheric circulation, climatic classification; evolution and dynamics of landforms.

Assessment: Two 90 minute examinations (50 per cent); a practical examination in surveying (10 per cent); three projects of up to 2000 words each (40 per cent).

705-376 PLANNING AND DESIGN STUDIES A
Credit points: 12.5
Coordinator: Prof B McLoughlin
Contact: Work on special topics during one semester, to be determined after consultation with the chairman of the appropriate department.
Objectives: At the conclusion of the subject students will have acquired specialised skills related to the area of research of academic staff, or of academic visitors to the University, designed to complement core areas of teaching.

Content: A program of study and project work will be made available prior to the first week of the semester.

Assessment: Project work undertaken during the course and amounting to not more than 8000 words or equivalent.

705-476 PLANNING AND DESIGN STUDIES B
Credit points: 12.5
Coordinator: R. Wyatt.
Contact: Work on special topics during one semester, to be determined after consultation with the coordinator.
Objectives: At the conclusion of the subject students should have a deep understanding of their chosen topic area and its application to policy making.

Content: A program of study and project work. From 1993 onwards, an optional, specialised program of study will be available for interested students. It applies artificial intelligence methods such as expert systems, advisory systems and decision support systems, to enhance the quality of planning and design within socially sensitive domains.

Assessment: Project work undertaken during the course and amounting to not more than 8000 words or equivalent.

705-271 PLANNING AND COMMUNITY
Credit points: 12.5
Coordinator: N. Low.
Contact: Four hours of lectures and workshops a week throughout one semester.
Objectives: The aim is to help students increase their personal effectiveness as planners and organisers. At the conclusion of the subject students should have acquired:
• awareness and understanding of small group process and structure;
• awareness and understanding of intervention theories related to interpersonal communication, leadership, conflict management, negotiation, goal setting, problem solving and decision-making;
• an understanding of the issues involved in public consultation.

Content: Aims to increase the student's personal effectiveness as a planner and organiser. Looks at appropriate organisation for planners in project groups. The course is experiential, and learning is active and cumulative. Students will participate in group planning projects and submit an individual paper on the dynamics of their experiences. Mathematical techniques appropriate to the analysis and modelling of goals are introduced.

Assessment: Group project equivalent to not more than 5000 words (30 per cent) and written assignment of 5000 words (70 per cent).


705-443 PLANNING IN MODERN INDUSTRIAL SOCIETIES
Credit points: 12.5
Coordinator: B. McLoughlin.
Contact: Three hours of lectures and tutorials a week throughout one semester.
Objectives: At the conclusion of the subject students should:
• be familiar with the essential features of western strategic planning and be able to place them in their socio-historical contexts;
• understand the main political, administrative and technical aspects of planning, along with the differences between planning systems and the theoretical basis for and the issues raised by planning practices.
Content: The main characteristics of strategic land use planning in the post-war period using international comparisons between Australia, Western Europe, and North America. The interrelations of planning systems and policies to socioeconomic changes and land development. Planning in the Melbourne Metropolitan area since 1945 discussed in similar terms. Major shifts in Melbourne's planning policies in their socio-political context, including interstate comparisons (for example, with Sydney, Adelaide, Perth). The major theoretical underpinnings of these planning practices and how these have been related to the social context.

Assessment: Written assignments totalling not more than 5000 words and one 2-hour examination.

Prescribed texts: McLoughlin J Brian Shaping Melbourne's Future? Melbourne Cambridge U Press Hall Peter Urban and planning systems and policies to socioeconomic changes and land use. Western Europe and North America. The interrelations of

705-446 PLANNING INVESTIGATION PROJECT
Credit points: 25.0
Coordinator: N. Low
Contact: Individual supervised work, with group meetings when appropriate, throughout the year.

Objectives: At the conclusion of the subject students should:
- have gained insight into a specific area of urban or regional planning and have gained experience in basic investigation methods such as literature search, data collection and analysis;
- have developed an ability to handle source material and data and to interpret and present it in a coherent manner in accordance with accepted conventions;
- have produced a report which is prepared in a professionally competent manner and which may usefully be made available to a potential employer.

Content: Investigating a topic and writing a report on findings. Students will work to a brief on one of a number of topics offered by the subject coordinator. Students may work on a self-nominated topic if the prepared brief is acceptable to the coordinator.

Assessment: Because of the diversity of projects in this subject, assessment may be based either on the final report alone, or the final report and appropriate intermediate documentation as agreed with the supervisor. The total word count will be between 8000-10 000.

705-445 PLANNING LAW AND STATUTORY PLANNING
Credit points: 12.5
Coordinator: M. Gutjahr.
Prerequisite: 705-399 Environmental Law or equivalent.
Contact: Three hours of lectures and tutorials a week for one semester.

Objectives: At the conclusion of the subject students should:
- understand the Planning and Environment Act 1987, metropolitan regional planning schemes, local planning schemes and subdivision controls;
- understand positive statutory planning, planning appeals, judicial review and compensation;
- be able to work with constantly changing planning controls by understanding the framework of planning legislation in Victoria;
- understand the nature of the statutory planning process enough to be able to criticise existing controls and to formulate alternatives.

Content: Government powers and legislation. The Planning and Environment Act. The Administrative Appeals Tribunal Act. The structure and coordination of the administration of planning in Victoria. The Melbourne and Metropolitan Planning Scheme Ordi-


Assessment: Two written assignments equivalent to not more than 3000 words. One 3-hour examination.


705-294 PLANTS AND PLANTING DESIGN
Credit points: 12.5
Coordinator: J. Pike
Contact: Five hours of lectures and practical work a week throughout one semester.

Objectives: At the conclusion of the subject students should:
- have a working knowledge of 220 Australian and overseas plants which are often used by landscape architects in Melbourne;
- understand plant growth and maintenance;
- have been introduced to the tree and plant growing industries in Melbourne;
- have become experienced at preparing planting designs along with specifying, detailing and estimating the cost of such designs.

Content: Trees, shrubs, climbers and ground cover plants and factors influencing their growth and use.

Assessment: A 2-hour examination and assignments during the semester equivalent to not more than 4500 words. These may include class tests carried out during the semester.


702-413 PROJECT ADMINISTRATION
Credit points: 12.5
Prerequisite: Cost Management 3.
Coordinator: R. Kenley.
Contact: Up to three hours of lectures/seminars a week for one semester.

Objectives: The subject examines the administration of the contract documents. At the conclusion of the subject the student should:
- understand the general conditions for various types of Standard Forms of Contract;
- understand the role of different parties to the building contract in relation to cost and time throughout the construction stage;
- be able to make contract adjustments in relation to time and contract sum;
- be able to prepare claims for variations, progress payments and extensions of time;
- calculate rise and fall in construction contracts;
- understand project costing systems including management reporting, project cost, liquidity control and forecasting.

Content: The administration of financial and contractual issues of the building contract through the construction process. Risk and contingency, cash flows and capital management and disputes between the nominated sub-contractors and contractors.
Assessment: One 2-hour examination (50%). One written paper presented orally to class (oral is less than half of the assessment) (20%). One (4000 word equivalent) case study (30%).

**702-414 PROJECT ORGANISATION**

Credit points: 12.5  
Coordinator: R. Kenley.  
Prerequisite: BPD 3 (Architecture or Building).  
Contact: Up to three hours of lectures and tutorials and seminars a week for one semester.

Objectives: The subject covers the topic of planning of building projects primarily from the on-site construction perspective. At the conclusion of the subject the student should be able to:

- understand all facets of pre-planning of a building project;
- schedule a building project using computer scheduling techniques;
- understand quality control and quality assurance techniques and their application on building projects;
- understand the basics of negotiation as they apply to contract management.

Content: The management of the construction process including pre-construction project planning and development; management and planning of the on site construction process, considering such issues as productivity bargaining, site safety, communication patterns, decision making, quality control and quality assurance, project scheduling and techniques of negotiation.

Assessment: One 2-hour examination (40 percent) and one class paper (3000 word equivalent) including verbal presentation (30 percent) and staged assignments (3000 words equivalent) (30 percent).

**705-486 REGIONAL PLANNING AND DESIGN**

Credit points: 12.5  
Coordinator: B. Itami.  
Prerequisites: 705-481 Ecology and Environmental Assessment and 705-483 Environmental Information and Monitoring.  
Contact: Five hours of lectures and practical work a week throughout one semester. A one-day excursion will be organised for a weekend early in the semester.

Objectives: At the conclusion of the subject students should:

- be able to develop and integrate environmental and landscape assessment models for a region and use the results in the planning process;
- be able to formulate land management plans and designs which are in accord with land capability and local use demand;
- be able to evaluate plans and designs against recognised criteria.

Content: Integration of environmental and landscape assessments of a region in order to formulate land use plans and designs which are in accord with land capability and local use demand. The evaluation of the plans and designs against recognised criteria. Various conceptual approaches to issues of plan formulation and evaluation will be reviewed during the course of the subject but the actual procedure(s) followed in the case study will be decided by the class after analysis of the problem. Economic, social and environmental issues related to rural and urban fringe regions as context for regional planning and design.

Assessment: Presentations, written reports and projects, equivalent to not more than 15 000 words.

**702-482 RESEARCH PROGRAM**

Credit points: 25.0  
Coordinator: To be advised.  
Prerequisite: the student should have achieved a satisfactory standard (normally B) in all available subjects in the course with a direct bearing upon the field of study.  
Contact: Individual and group supervised work, with group meetings, requiring about 12 hours total work a week throughout the year. (Recommended as a preparation for students contemplating individual research work at the undergraduate or postgraduate level.)

Objectives: For students to gain an detailed understanding of research techniques necessary for post-graduate studies through the investigation of a particular aspect of a wide range of architectural topics.

Content: Guided research in a discipline or sub-discipline under the supervision of a staff member actively engaged in research in that discipline. A program of study and topics will be prescribed by the first week of the first semester, but the topics will be incidental to the principal aim of acquiring research expertise. The program will comprise a series of linked exercises, each one giving experience in a different research technique or category of source material, and the first of these will be a bibliography.

Assessment: Reports to the equivalent of 15 000 words to be submitted throughout the year in accordance with the program of study.

**702-235 RESIDENTIAL DEVELOPMENT DESIGN**

Credit points: 12.5  
Coordinator: K. Holt-Demant  
Contact: Up to six hours of lectures, tutorials, practical exercises, drawing office and site visits a week throughout the semester.

Objectives: At the conclusion of the subject students should:

- understand the principles of residential subdivision and siting;
- understand the range of future options for new housing in Australia;
- understand the principles of interior design, design of service areas and landscaping of houses.

Content: The subject is designed to provide a framework to enable students to take topics in residential design including interior design and landscape studies. The physical, technical social, functional and experiential aspects of successful residential design. Design as a process of mediating between conflicting demands for optimal conditions. The implications of social and governmental pressures for densification of residential development, especially in the areas of privacy and identity. The internal planning and design of successful houses in terms of the needs and desires of different household types and densities, with specific reference to formal and informal living areas, adult and child activity zones and indoor/outdoor physical integration. The design brief and construction documentation. A review of previous housing forms and styles as a response to changing social, cultural, political, technical and economic conditions. Establishing appropriate mood, image and character, proportion and form in residential design.
702-305 THEORIES OF ARCHITECTURE
Credit points: 12.5
Coordinator: Kim Dovey
Contact: Up to six hours of lectures, seminars, tutorials, and practical work a week for a period equivalent to one semester.
Objectives: For students to be able to demonstrate an appreciation of various philosophical, ideological, and theoretical positions as expressed in contemporary and recent architecture; and to develop techniques for evaluating these positions and applying them in architectural design.
Content: Introduction to: contemporary and historical theories relevant to architecture and urban design; their application to architectural practice; and techniques for evaluating and applying them.
Assessment: A review of all assignments set during the year. (Assignments to the equivalent of 7,500 words.)

705-545 TOWN PLANNING
Credit points: 12.5
Coordinator: N. Flannigan.
Contact: Twenty-six hours of lectures and 13 hours of tutorial throughout one semester.
Objectives: At the conclusion of the subject students should:
• have studied and understood the process by which urban development occurs in Australian cities, especially Melbourne, and the role of town planning and town planners in that process;
• be familiar with the legislation and regulations which are used to control the built form in Australian Cities;
• be aware of designers and developers existing and potential role in the process of urban development;
• have identified and explained the rationale behind the various plans which have been prepared for Metropolitan Melbourne, and the current status of those plans;
• have obtained the knowledge and skills which enable designers and developers to contribute more effectively to the process of urban development.
Content: The processes of urban development and the role of various individuals and groups in those processes; planning as intervention in those processes. The origins and evolution of town planning in Australia, and specifically in Victoria. The evolution of the concepts and philosophies underlying planning practice in Victoria and their influence on the built environment. The theory and practice of development regulation. Statutory planning in Victoria: the preparation, submission and examination of planning schemes; the administration and enforcement of planning schemes; the appeal mechanism. Site planning and development procedures; decision making procedures and techniques. Planning and development case studies: the planning for and development of industry, retailing, housing and other projects.
Assessment: Assignments of not more than 4000 words, and a 2-hour examination at the end of the semester.
Note: This subject is not for students intending to pursue professional qualifications in Town Planning. It is not available to students who have completed subject 705-172 Introduction to Planning and Development.

705-102 UNDERSTANDING CITIES, TOWNS AND REGIONS
Credit points: 12.5
Coordinator: A. Atkins.
Contact: A series of lectures and tutorials totalling not more than three hours per week throughout one semester.
Objectives: To provide an introduction to social, economic and political theory and reasoning, with relevant applications, necessary to understand the key forces at work in urban and regional systems and which affect management and design of the natural environment.

Content: An introduction and overview of socio-economic and political theory and its particular relevance to the urban planning and environmental disciplines; the historical evolution of these disciplines and their relation to politics and social philosophy. A brief outline of macro-economic and social forces affecting urban, regional, and national development in Australia. A perspective on national and international mechanisms and policies influencing Australian growth and structure.

Micro-economic theory - the neo-classical theory of prices and value which underpins economic, social and political structures of cities and regions. Fundamentals of demand and supply theory. Influencing Australian growth and structure.

Assessment: One 2-hour examination (50 per cent) and assignments totalling not more than 5000 words (50 per cent).

705-425 URBAN AND LANDSCAPE DESIGN THEORY
Credit points: 12.5
Coordinator: R. King.
Contact: Three hours of lectures and tutorials a week during one semester.
Prerequisites: Nil. It is anticipated however that the subject will be taken by students in conjunction with 705-488/671 Urban Landscape Planning and Design, and 705-412/672 Urban Design.
Objectives: At the conclusion of the subject students should:
• understand social theory as a context for urban and landscape design;
• be knowledgeable about aesthetic theory relevant to urban and landscape design;
• be critically aware of the theory and methods involved in the practice of urban and landscape design.

Content: Social and behavioural theory as context for urban and landscape design; aesthetic theory relevant to urban and landscape design. Theory and methods involved in the practice of urban design and of landscape planning and design, and their critique.

Assessment: Written and graphic assignments equivalent to 5000 words and one take-home examination, equivalent to 2500 words.

705-412 URBAN DESIGN
Credit points: 12.5
Coordinator: M. Gutjahr.
Prerequisites: 705-182 Human Settlement, 705-272 Urban Planning and Design, and 705-372 Environmental Planning and Design, or their equivalents.
Contact: Six hours a week of seminars and practical work throughout one semester.
Objectives: Students should acquire:
• an awareness of the scope, opportunities, complexities and responsibilities of urban design;
• an introductory knowledge of urban design issues, theory and methodology;
• analytical and design skills for generating and testing alternative approaches to the urban design development of specific sites;
• an understanding that urban design takes place within a given spatial, social, economic and political context.

Content: Opportunities and complexities of urban (landscape) design. Urban design theory and methodology. Analysis and design skills. Urban (landscape) design in its given social, economic and political context. Studio work will consist of a series of small exercises, followed by three or four larger projects of increasing degrees of complexity. Students will work on a project selected from current urban design proposals, in collaboration with private or public development agencies and with the assistance of professional consultants. Lectures/seminars devoted to urban design history, principles of methodology, and current urban design practice issues, will provide a substantive and procedural framework for the practical projects.

Assessment: Assessment will be progressive and based entirely on practical work (exercises, projects) to be submitted during the semester, the whole being equivalent to not more than 10 000 words.

702-421 URBAN DESIGN THEORY
Credit points: 12.5
Coordinator: Professor Graham Brawn

701-254 URBAN GEOGRAPHY (PLANNING)
Credit points: 12.5
Coordinator: Dr Fincher, Department of Geography.
Prerequisite: A first year geography subject or equivalent.
Contact: Two one-hour lectures and a tutorial each week. Two days of field work. (Second semester.)

Objectives: By the end of the course, the student should:
• have an understanding of contemporary debates in three substantial areas of urban geography (those being taught presently are housing, built environment change and public service provision) which encompasses knowledge of the major theoretical positions and the evidence used in their support;
• be aware of how Australian cities are described and analysed in urban geography;
• have gained experience in designing and undertaking some original empirical work in Melbourne, that takes up some of the conceptual and factual material discussed in the course.

Content: Consumption characteristics in cities and their expression in different built forms, eg. gentrified housing, spectacular retailing and tourist developments; the restructuring of contemporary urban labour markets to incorporate flexible production; the dismantling of the post-war welfare state and its implications for urban services provision. Issues in urban policy. Gender, class and ethnicity. Survey and case design.

Assessment: A 90 minute test (30%); written work of up to 3000 words (60%); verbal seminar presentations (10%).
705-488 URBAN LANDSCAPE PLANNING AND DESIGN
Credit points: 12.5
Coordinator: R. King.
Contact: Five hours of lectures and practical work a week throughout one semester.
Objectives: At the conclusion of the subject students should:

- have developed a systematic understanding of the economic, social and political context, and the material effects of urban landscape planning and design;
- have developed methods for analysing economic, social and political constraints and opportunities affecting the design and use of urban landscape;
- have explored the role of economics, political economy, social psychology and critical social theory in developing an understanding of urban landscape design in modern society;
- have analysed and designed neighbourhood and regional systems of open spaces, with a focus on the suburban landscape;
- be more skilled in graphic and verbal communication of design ideas.

Content: Social processes in Australia relevant to landscape planning and urban design: capital formation and accumulation, investment circuits and cycles, production and consumption, class formation and social reproduction, etc. Landscape planning and urban design in the context of social processes: theories of planning, theories of design, urban design as a social process. The class will be organised as teams, to address specific landscape planning and urban design projects, proceeding from questions of theory to appropriate methods of analysis, to physical planning and design solutions.

Assessment: Written and graphic assignments equivalent to not more than 10,000 words.

Note: This subject assumes a knowledge of 705-171 Introduction to Planning and Design, or equivalent.

705-272 URBAN PLANNING AND DESIGN
Credit points: 12.5
Coordinator: R. King.
Prerequisite: 705-171 Introduction to Planning and Design.
Contact: Five hours of lectures and practical classes per week throughout one semester.
Objectives: At the conclusion of the subject students should:

- have developed skills in the analysis of urban spaces and in the planning and design of such spaces given constraints and opportunities which apply;
- be able to extend such analysis to investigation of more complex groups of spaces;
- have been introduced to issues of economic, social and political context, and the material effects of urban landscape design;
- have developed skills in graphic and verbal communication of planning and design ideas.

Content: The natural and cultural forces and determinants that shape the built form of cities. The interrelationship between physical form and visual character of built environments and their social, economic, political and cultural context. Historical examples of urban form and design, classic and current urban design ideas, concepts and methodology. Project work: Skills and competence in designing for functional requirements, behavioural patterns, movement and transport systems, and aesthetic and symbolic dimensions of urban form will be developed in not more than three urban design projects. These projects will extend over the duration of the semester and integrate some of the skills and understanding attained in other second level subjects.

Assessment: Written and graphic assignments of not more than 8000 words equivalent.

705-382 URBAN SOCIOLOGY AND POLITICS
Credit points: 12.5
Coordinator: N. Low.
Contact: Three hours of lectures and tutorials throughout one semester.
Objectives: At the conclusion of the subject students should:

- have explored the sources of metropolitan social data and the theoretical concepts relevant to their use in identifying social needs and attacking environmental and social problems;
- have linked planning practice with political theory, to explore the varying roles environmental planners can play in society and in the polity.

Content: Urban society: the urban population and its socioeconomic structure, problems of socio-spatial segregation, accessibility and mobility, the urban environment, work, investment and employment, place/locality. Metropolitan government: systems of urban government, a brief history of the Victorian system of government, the Victorian structure of government today, public expenditure patterns and functions. Political role of the planner: bureaucrat, negotiator, advocate, reticulist, activist, entrepreneur, mediator; taking a critical view: stepping outside the 'planner' role. Appropriate mathematical techniques are introduced.

Assessment: Assignments set throughout the semester, equivalent to not more than 4500 words, and a 2-hour examination.

Prescribed text: Low N Planning, Politics and the State Unwin Hyman

421-240 URBAN TRANSPORT
Credit points: 12.5
Coordinator: L Ampt.
Contact: Three hours of lectures and practical classes per week. (Second semester.)
Objectives: At the end of this course, students should have a greater awareness of the relationships between the physical and social aspects of transport systems. This subject covers the theory and practice of transportation planning. It outlines the broad principles of transportation planning and then proceeds to examine in greater depth a number of scientific topics within the area, such as transport network modelling, travel behaviour modelling, travel data collection, the planning and design of public transport systems, and the traffic and transport impacts of land-use development.


Assessment: The subject will be assessed on the basis of three written assignments submitted during the semester, plus a 2-hour written examination at the end of the semester.
705-489 URBANISATION AND URBAN DEVELOPMENT
Credit points: 12.5
Coordinator: R. King.
Contact: Three hours of lectures and tutorials a week throughout one semester.
Objectives: At the conclusion of the subject students should:
• have explored alternative perspectives or theories through which to view processes of change in modern, capitalist society;
• have sought a critical understanding of urbanisation and of urban development in Australia, particularly in Melbourne after 1945;
• have developed methods for critically assessing the social effects of both public-sector and private-sector investments, public policies, planning decisions and technological changes;
• have achieved a critical understanding of, and a familiarity with the use of demographic, market and other social data in the exploration of trends in urbanisation and urban development processes and in the application of social impact assessments.
Content: Social change, modernisation and urbanisation. Conventional theories of urbanisation, and the new urban studies. The economic underpinning of urbanisation, land development and locational decisions, and the role of the transport system. Demographic and social changes in urban development. The main social and environmental effects of urban change. Social effects in environmental and social impact assessment.
Assessment: Written and graphic assignments equivalent to not more than 5000 words and one 2-hour examination.

705-281 URBANISATION AND URBAN STRUCTURE
Credit points: 12.5
Coordinator: B. McLoughlin.
Contact: Three hours of lectures, discussions or carrel sessions a week throughout one semester.
Objectives: At the conclusion of the subject students should:
• understand the theories of knowledge relevant to an understanding of cities and of planning;
• have been introduced to theories of urban settlement and patterns of land use;
• have discussed changing paradigms of urban theory.
Content: An historical introduction to theories of urban structure and urban planning. The course will include an overview of theories of knowledge relevant to an understanding of cities and planning, an introduction to theories of human settlement and patterns of land use, and discussion of changing paradigms of urban theory.
Assessment: An essay of 3000 words and a 2-hour examination at the end of the semester.
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